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Europe's response to today's challenges will be a game changer, argues Christine Lagarde

Guntram Wolff considers Europe's Green Deal and carbon border adjustments

Poul Thomsen discusses how to strengthen the international role of the euro as a reserve currency

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How to make the European Green Deal work

Ursula von der Leyen has proposed a European Green Deal to make Europe climate neutral by 2050. Grégory Claeys, Simone Tagliapietra and Georg Zachmann consider how this initiative could be made to work

European Commission president-designate Ursula von der Leyen has made climate change a top priority, promising to propose a European Green Deal that would make Europe climate neutral by 2050. The European Green Deal should be conceived as a reallocation mechanism, fostering investment shifts and labour substitution in key economic sectors, while supporting the most vulnerable segments of society throughout the decarbonisation process. The deal's four pillars would be carbon pricing, sustainable investment, industrial policy and a just transition.

First: a meaningful carbon price should be established for all sectors, by strengthening the EU emissions trading system (ETS) and by pushing EU countries to increase the price for emissions not covered by the ETS. To ensure a robust mechanism against carbon leakage, a carbon border tax should be prepared.

However, such a measure will be extremely politically challenging, and the EU's future climate policy should not rely on its successful implementation. Other instruments should therefore be put in place first, including subsidies for low-carbon exports and stricter environmental standards importers would have to comply with to access the EU market.

Second: the carbon price should be complemented by a sustainable investment strategy that pushes companies to switch technologies and promotes behavioural change among citizens, offsetting any rising costs they face because of higher carbon prices. Green investment should be promoted by shifting current EU funds towards this purpose while enabling EU countries to support green investment, and by incentivising private investment through regulatory measures and through support for European promotional banks.

Third: European industry should be strengthened through support for disruptive green innovation; by creating the conditions for innovative, green, European companies to flourish (for example through new product standards and via carbon-based contracts for difference to ensure competition between companies for the most efficient technologies); and through measures to export the European Green Deal on the back of a reform of EU neighbourhood and development policy.

Fourth: the adverse social consequences of climate policies should be taken into account and minimised in each European climate policy proposal. Unavoidable impacts should be addressed by targeted compensation measures. The scope of the European Globalisation Adjustment Fund can be broadened and the mechanism adjusted to aid the transition in coal-mining regions.

A single carbon price for all sectors and countries is economically efficient but implies substantial distributional effects

The contours of the European Green Deal

The European Union has stated repeatedly its aim to be at the forefront of global action against climate change. The EU has adopted policies to reduce its greenhouse gas emissions and support energy from clean sources, while being active in international climate negotiations.

However, the EU has not managed to reduce its greenhouse gas emissions convincingly, and has not done enough to tackle emissions in some sectors. In transport, greenhouse gas emissions are rising, while in electricity systems coal continues to play a persistent role. Energy efficiency improvements in buildings have been unsatisfactory and the decarbonisation of industry has proved difficult.

Meanwhile, climate policy has become one of the most divisive EU topics. The FridaysForFuture movement has mobilised mainly young people to demand stronger climate policies. In contrast, there has been a backlash against fossil-fuel price increases perceived as unfair, as seen with the *gilets jaunes* movement in France and beyond.

In this context, European Commission president-designate Ursula von der Leyen has promised to broaden and strengthen EU climate policy (von der Leyen, 2019). She intends to propose a European Climate Law that would require the EU to become climate neutral by 2050 – likely making Europe the first continent to do so.

To reach this ambitious goal, a comprehensive policy framework is required, encompassing the climate, energy, environmental, industrial, economic and social aspects of this unprecedented process. This is what the European Green Deal is all about.

Von der Leyen has put forward a broad concept of the European Green Deal, sketching out about 20 different proposals. They include an increase in the EU's 2030 emissions reduction target from 40 to 55 percent, the introduction of a carbon border tax, the drafting of a Sustainable Europe Investment Plan, the partial transformation of the European Investment Bank (EIB) into a climate bank, the extension of the EU emissions trading system (ETS) and the development of a new industrial policy for Europe (von der Leyen, 2019).

These proposals are preliminary and, at the time of writing, are still in the form of general policy guidelines. Von der Leyen has said she will come up with a detailed policy plan within the first 100 days of her mandate. So, while we have some general contours, the European Green Deal remains to be structured.

This *Policy Contribution* seeks to contribute to the design of the European Green Deal by outlining a realisable plan focused on what can be considered its four foundational pillars: carbon pricing, sustainable investment, industrial policy and a just transition.

How to price greenhouse gas emissions well

Putting a price on all emissions is essential because it incentivises all relevant parties to reduce their greenhouse gas footprints. Without such a price, other climate policy measures – such as subsidies or standards – cannot effectively reduce emissions[1]. The new Commission is therefore right to strive for a sensible price on all greenhouse gas emissions. A major reform of emission pricing in Europe will have to address three questions of principle:

A single price or differentiation between sectors/countries?

A key question when pricing greenhouse gas emissions is whether each unit of emissions (typically expressed as the greenhouse gas equivalent of one tonne of carbon dioxide) should have the same price, or whether prices in different sectors and/or different countries should be allowed to vary.

Currently, Europe has a hybrid system. Greenhouse gas emissions from large industrial emitters (including power generators) that fall under the EU ETS have a single price throughout Europe, while other emissions, such as from heating or road transport, are not explicitly priced.

Textbook economics would suggest putting the same price on all emissions. This would incentivise economic actors to reduce all emissions that can be mitigated at a cost below this emission price and would avoid inefficient circumvention (such as consumers preferring to use natural gas that is not covered by the current emission pricing system, instead of electricity which is). Consequently, harmonising emission prices across sectors reduces the total cost of emissions reduction[2].

But while a single carbon price for all sectors and countries is economically efficient, it implies substantial distributional effects. Two examples:

1. To decarbonise transport – which is essential to achieve a carbon-neutral continent – much higher carbon prices would be needed than the carbon price required to decarbonise most electricity production. Electricity prices will be determined by the most expensive unit that is needed to meet the demand – which will still often be a fossil-fuelled power plant (even though the bulk of electricity is produced carbon-free) – and might thus drastically increase without much impact on power-sector emissions. This will have massive distributional consequences as all electricity consumers will have to pay these higher prices.

2. A single carbon price will affect more poorer EU countries, which typically have higher emissions per unit of GDP. Therefore, in sectors with emissions that are not very sensitive to expected carbon prices[3], keeping carbon prices lower might reduce undesirable distributive effects little impact on emissions.

For efficiency reasons, the European Commission should strive to converge towards a single carbon price over time. Heating and transport emissions should be priced to provide economic actors with incentives to change their consumption behaviour and/or invest in cleaner technologies. And emissions in sectors with high levels of trade across EU country borders (eg. electricity and industry) should have the same price in each country to avoid distorting the single market[4].

But giving EU countries some flexibility to set prices for emissions that are price insensitive but have significant distributional consequences might have limited cost in terms of efficiency but high political value. The right tool would be a significant and rising European minimum tax rate on emissions, which those countries that want to cut emissions faster[5] can exceed if they want.

Carbon leakage has not represented a substantial issue for EU industry under the emissions trading system

Tax or trading permits?

There are two main instruments for putting a price on emissions. Either the government fixes a price – a tax – or the government issues a fixed volume of emission allowances and leaves the market to determine a price for these allowances. Economists have a slight preference for taxation because there is less risk of getting the price wrong than of getting the volume wrong.

But in practice, policymakers try to guide both the price and the volume by adjusting either if the system does not provide the expected results. Consequently, mixed systems (where some emissions are covered by carbon trading and others by taxes) and/or hybrid systems (where prices in trading systems are managed) are the norm rather than the exception.

The EU has a mixed system with half of the emissions falling under the EU ETS, and the other half being only partially covered by national taxes[6]. The EU ETS is also a hybrid system because the system is regularly adjusted to deliver 'sensible' prices[7].

The European Green Deal can retain the current mixed and hybrid system. But it should include proposals to push EU countries to put the right prices on emissions in some of the areas not covered by EU ETS: transport, heating and maybe agriculture. The right approach would be to revise the 2003 Energy Taxation Directive (2003/96/EC), which sets minimum tax rates for fuels.

A European agreement on minimum carbon prices in the non-ETS sectors would allow national governments to establish national carbon-pricing rules within their national fiscal systems, while reducing concerns about intra-EU carbon leakage. It will still be difficult to define a minimum tax rate that is equally acceptable to the poorest and richest countries. But as the fiscal revenues accrue at the national level, these revenues in principle allow each country to target compensation at the most affected national consumers.

The EU ETS can also be strengthened by providing investors with some clearer guidance on future prices. Our suggestion would be to give the European Investment Bank a mandate to sell guarantees that protect investors against low carbon prices in the future. This would create a liability for future governments in case of carbon prices that are too low[8].

What to do with the revenues

Emissions pricing in the EU can bring substantial revenues. Putting a price of €40/tonne[9] on all EU emissions (around 4.5 billion tonnes annually) would lead to €180 billion in revenues – significantly more than the current revenues from the EU ETS (around €25 billion[10]).

The first issue is how much of this money would accrue at the European level and how much at national level. This is a largely political question. While it might be more efficient to have more revenues available in the centre to enable compromises in difficult issues, EU countries in the past only allowed the European Commission to set up two relatively small centralised funds.

The second question is what to use these revenues for. They can be used for the general budget, returned to consumers to mitigate distributional effects, used to support the development of low-carbon alternatives, public investment in low-carbon infrastructure, or given to companies to compensate them for competitive disadvantage arising from stronger climate policies. Getting this balance right will be crucial for the political viability of any emissions pricing system[11].

Currently, most ETS revenue is given to national governments, which are bound by a relatively weakly monitored commitment to spend half of the money for climate and energy purposes. For the years 2021-30 two special European funds have been set up to centrally support innovation (Innovation fund: €20 billion) and lower-income EU countries (modernisation fund: 2 percent of issued allowances).

We would advise against using additional emissions pricing revenues in the general budgets of EU countries, and would suggest instead to use additional funds to support the development of the low-carbon economy through public funding of research, development and innovation, support for private investment in low-carbon alternatives, and compensation for the most-affected households that must increase their carbon-related spending (heating, electricity).

Dealing with leakage

If Europe puts in place a stringent climate policy while other parts of the world do not, there is a risk that emissions-intensive companies might leave the EU with its high emission prices, and relocate to places with significantly lower or no emission prices. This is called carbon leakage. This issue is set to become more relevant with the EU pursuing a more ambitious climate policy, but we do not know the exact order of magnitude of the issue (PMR, 2015).

Studies show that carbon leakage has not represented a substantial issue for EU industry under the ETS (Branger *et al* 2017; Ferguson and Sanctuary, 2019; Zachmann *et al* 2011). It is also important to consider that the carbon price represents one element among many others in an industrial strategy. Other considerations include energy prices, logistics, territorial legacy and innovation ecosystems.

Currently, carbon leakage is dealt with by giving emission allowances for free to companies in specific sectors. The allocation mechanism for free allowances is based on production benchmarks to ensure that companies have an incentive to reduce emissions but not to reduce production in the EU. But the mechanism has led to massive windfall profits for companies (they received allowances for free but included the cost of emissions in the price of their products). It is not desirable to continue with this method to deal with carbon leakage.

Part of the European Green Deal, according to von der Leyen, would be an alternative system: a carbon border tax (CBT). This has two aims: i) preventing carbon leakage by ensuring that all goods consumed in the EU, whether imported or produced domestically, are treated the same; ii) pushing other countries across the world to also decarbonise. This would be achieved by putting a tax or tariff on the emissions embedded in imported products. In addition, EU exporters might reclaim the cost of the emissions embedded in their products to ensure that European companies are not at a competitive disadvantage when selling abroad.

In reality, calculating the emissions content of imports is feasible[12] but difficult, as all emissions along the entire value chain would need to be considered. Even more challenging would be the risk of potential retaliation from trade partners. Von der Leyen already made clear that a CBT should be compatible with the rules of the World Trade Organization (WTO), to ensure that countries cannot retaliate based on WTO rules.

But even if the CBT is safe-guarded against formal objections, trade partners might still perceive a CBT as overreach and threaten/implement retaliatory measures (such as, for example, when the EU tried to introduce a unilateral carbon price on intercontinental flights)[13].

The ongoing fierce debate between proponents and opponents of such a tax[14] show that achieving a meaningful border tax will require the expenditure of a great deal of political capital in Brussels and the national capitals. There is a risk that discussing a complex solution to a potential problem will distract attention from more urgent issues and result in a weak compromise.

Any CBT proposal will be extremely politically challenging, and the EU's future climate policy should not rely on its successful implementation. This is particularly because the scale of the carbon leakage problem remains unknown.

Therefore, the EU should follow a trial-and-error approach, with the first priority being to do what is necessary to ensure an appropriate price on all greenhouse gas emissions in Europe. As far as the leakage risk is concerned, the EU should help domestic producers of steel, cement and chemicals (eg. the products most affected by higher carbon prices) to become cleaner – as it did in the past with renewable energy subsidies for the electricity sector.

The overarching objective of the Green Deal should not be to boost growth but to facilitate the reallocation of capital in and across sectors in order to decarbonise

Companies that produce internationally traded goods with significantly lower emissions than the average could be granted subsidies linked to the reduced emissions. The value of these subsidies per tonne of mitigated emissions might be significantly higher than the carbon price as long as the new technologies are not mature. This could help to build the competitive advantage of European industry for the global low-carbon economy.

In addition, carbon rebates for exports (ie. companies can reclaim the carbon price embedded in export products) can be applied, combined with a support scheme for low-carbon production of otherwise emissions-intensive products.

As far as the second aim of pushing other countries across the world towards decarbonisation is concerned, the EU should make better use of environmental standards. Requiring compliance with strict environmental regulations a condition of access to the EU market of 500 million people should be a strong incentive to all other countries to adapt and change their production processes.

In parallel, the European Commission should work on a WTO-compatible and acceptable CBT, but should hold off from implementing it[15]. The Commission should closely monitor the evolution of carbon leakage risks in Europe, and ultimately implement a CBT if the risks start to materialise.

Mobilising investment for the transition

How large is the 'green investment gap'?

Most estimates of the yearly average additional investment (public and private) necessary to achieve the EU's current 2030 climate and energy targets are in the range of €175 billion to €290 billion[16]. The European Commission's most recent estimate (European Commission, 2019a) of this 'green investment gap', taking into account the currently agreed target[17], is €260 billion per year. According to this estimate, the investment needs per sector would be: €125 billion for the residential sector, €71 billion for the service sector, €21 billion for the transport sector, €21 billion for power generation, €13 billion for the power grid, €4 billion for the industry sector, and €2 billion for boilers.

Whatever the exact aggregate number for the 'green investment gap', it is important to note that the models used in these estimations tend to underestimate investment that will be needed for the low-carbon transition[18]. In addition, the success of technologies in the long run is highly uncertain.

As a result, it might be preferable to over-invest in green R&D in the short-term to insure against potentially catastrophic events in the future. Also, scenarios involving less behavioural change on the part of citizens are generally the most expensive in terms of investment.

This means that if Europeans want to preserve their current way of life as much as possible they need to invest even more today. All in all, despite the high uncertainty surrounding these estimates, the desirable number for additional investment is probably nearer to the €250-300 billion per year range[19]. In this context, the Sustainable Europe Investment Plan mentioned by Ursula von der Leyen in her political guidelines and in her first speech (16 July 2019) to the European Parliament only envisages a €100 billion per year target.

What would be the macro consequences of the Green Deal? Despite the potentially significant size of the plan (and despite being a good selling point for the European Green Deal), the possibility of obtaining a so-called double dividend – both a positive environmental effect and a positive macroeconomic effect – seems to be overstated.

Even if the potential crowding-out effect of the investment pillar of the European Green Deal appears to be very low, especially in today's low interest rate environment, the aggregate macroeconomic effect of the transition, and of the investment plan to support it, is overall expected to be relatively modest[20] (around +0.1 percent of annual GDP growth according the literature review conducted by Gueret *et al* 2019)[21].

Besides, the overarching objective of the Green Deal should not be to boost growth[22] but to facilitate the necessary reallocation of capital in and across sectors in order to decarbonise, and to mitigate the resulting reallocation in employment.

A 'green golden rule' could make the European fiscal framework much more flexible by exempting from the fiscal rules public investment that mitigates or adapts to climate change

Having said that, even if the overall impact on growth is expected to be small over the whole period, a potential co-benefit from a macro perspective of having a 10-year investment plan ready would be to have a list of concrete off-the-shelf investment projects that can be rolled out more quickly if they are needed from a countercyclical perspective (which might come in handy quickly given the slowdown currently experienced by the European economy). This would boost the total macroeconomic effect of the plan, given that multipliers have been higher during recessions.

In terms of timing, political economy considerations dictate clear sequencing: green investments need to be made as soon as possible, before carbon prices rise to a high level, so households and companies can switch smoothly to green alternatives when this happens. The green investment push thus needs to start now. The temptation to procrastinate and to leave the burden of reaching the 2030 targets to the 2024-2029 Commission should be avoided.

The EU has very limited resources to conduct its own investments. Its main role in plugging the green investment gap will thus be to design an investment plan that will: 1) mobilise public funds through the EU budget and member states' national budgets and through the European Investment Bank in order to take advantage of the historically low interest rates from which European governments and institutions currently benefit, and 2) incentivise the private sector to invest in the transition.

How can the Commission boost public investment for the transition?

Public investment will be needed because of the public-good nature of some the investments. This will be particularly the case for deployment of a sustainable transportation system, which will involve, first, helping owners of old polluting vehicles to replace them by more environmental-friendly vehicles, and, more importantly, developing alternatives to car ownership.

This implies renovating the railway network or building bicycle facilities. Another important role for the public sector will be to renovate public buildings and social housing to make them energy efficient. Finally, public authorities will also have to invest in R&D in new technologies, especially carbon capture and storage.

More generally, direct public investment is also important for increasing the long-term credibility of other climate-mitigation instruments and to reduce the potential regulatory risk perceived by private investors. From an incentive perspective, it is important also that governments should bear some of the losses in case of failure resulting from a change in environmental regulation to convince investors the regulation is definitive.

The role of the Commission will be twofold: greening the EU's own investments, and encouraging EU countries green their public investments.

Greening the EU's own investments

At the European level, the main tool to invest directly will remain the EU budget. The European Commission (2018c) has already proposed to increase the share of EU spending that contributes to the EU's climate objectives from 20 percent in the 2014-20 Multiannual Financial Framework (MFF) to at least 25 percent in the next MFF (ie. from about €30 billion to about €45 billion per year over 7 years). This is a good first step, but there are two important caveats.

First, given the total size of the EU budget (around 1 percent of GDP), it will always remain a marginal source of green investment compared to the overall needs. But even if the overall effect is small, the share of cohesion policy funding in public investment per EU country is very variable (from zero in Luxembourg to 84 percent in Portugal[23]), which means that a shift towards green investment in the EU budget could still play a catalyst role in some countries in which cohesion funds play a significant role.

Second, increasing the target goes in the right direction, but for the EU budget to be significant in filling the green investment gap, it is also crucial to review how EU expenditures are accounted for as contributing to the fight against climate change. The current methodology tends to overestimate substantially the contribution of the EU budget, in particular of agricultural funds (European Court of Auditors, 2016).

Each expenditure item is given a climate coefficient of 0 percent, 40 percent or 100 percent depending on its contribution to climate change mitigation or adaptation. This method has the advantage of being simple and pragmatic, but can be highly misleading: for instance, expenditure that leads to an increase in emissions does not have a negative coefficient for negative impact. A more demanding but much more accurate methodology that would try to estimate carbon content of each action would help make the EU budget genuinely greener.

Encouraging and enabling green public investment by EU countries

Despite the EU budget's significant role in some countries, most public investment is still carried out at the national level in the EU. As a result, the strategic goals and the funds allocated to them are in the hands of national governments and not under the control of the EU.

If the European Commission wants to foster investment to accelerate the transition, it must find a way to encourage public investment in member states and then use indirect measures to steer it so it contributes to the climate objective. For this, the Commission has two main tools at its disposal.

The first is the country-specific recommendations made under the European Semester, which have recently highlighted the need for investment in some particular sectors at the local level to fulfil common objectives, including the fight against climate change (European Commission, 2019b).

Even though EU countries have often not followed through on the country-specific recommendations in recent years (Efstathiou and Wolff, 2018), this represents at least a welcome first attempt to coordinate investment across member states around some European priorities.

The second, and probably more influential, tool for the EU to steer investment is the European fiscal framework. In general, fiscal rules should be reformed to deter countries from slashing public investment when they consolidate their public finances, and to ensure that they are able to take advantage of favourable interest rates to invest in public goods.

One way to do that would be to include some form of golden rule in the European fiscal framework to allow the financing of investments through the issuing of debt. At the very least, as proposed by Claeys *et al* (2016), public investment could be accounted for in the same way that corporate investment is accounted for: its costs could be distributed over the whole service life of the investment, rather than smoothed over four years, as is the case now.

If an agreement cannot be found to reform thoroughly the fiscal rules to make them more investment-friendly in general, a reform focused on authorising deficit-financed green investment during the transition should be pursued as part of the European Green Deal. One way to put in place a form of 'green golden rule' would be to revise the investment clause of the European fiscal framework to make it much more flexible in order to exempt from the fiscal rules public investment that mitigates or adapts to climate change.

In fact, the current clause already allows for deviation from the structural balance medium-term objective to finance investments *"with positive, direct and verifiable long-term effects on growth and on the sustainability of public finances."* Given the potentially high risk in the long run of climate change for public finances, it would not be a stretch to apply the clause to green investment.

However, other refinements would be necessary to transform the clause from a temporary exemption that can only be used in bad times[24] to a more permanent exemption for green investment from the rules, even in good times.

To avoid any abuse of such a green investment clause by EU countries that might be tempted to apply the exemption to their current expenditures, two safeguards could be introduced.

First, the maximum amount of green investment exempted could be related to the level of the green investment gap in each country, which would be determined each year as part of the European Semester.

Private investment will drive electrification and improved energy efficiency, and will also represent most of the investment in the transport sector

Second, clear accounting rules would be needed to separate investment in the low-carbon transition from other expenditures. This could be facilitated by the introduction of an ambitious taxonomy for sustainable finance[25] and clear rules concerning the issuance of green bonds. Well-defined green investments financed through the issuance of green bonds could thus be clearly separated from the rest of the budget and exempted from the rules.

How can the Commission encourage private investment in the transition?

Corporations and households will be responsible for the vast majority of investment needed for the transition[26], as the sectoral distribution of investment needs also suggests.

Private investment will drive the electrification and improved energy efficiency of the privately-owned segment of the residential sector, and of the service and industry sectors. Private investment will also represent most of the investment in the transport sector given that replacement of private vehicles will be covered by households.

In the energy sector, investment in renewable power generation or electricity storage will mainly be financed by the private sector. The Commission thus needs to find a way to mobilise significant resources from the private sector and redirect financing from brown towards green activities to fill the green investment gap.

The role of the Commission will be twofold: to create a conducive regulatory framework, and to improve the financing conditions for green investment.

Creating a conducive regulatory framework

The most important tool to push companies and households away from brown activities will be a high carbon price. Another important step will be to put in place as soon as possible an ambitious investment taxonomy that will make brown activities unattractive to investors.

But these tools will not be enough to encourage the efficient deployment of immature low-carbon technologies, which are confronted with several market failures. Private deployment of low-carbon technologies will help to bring down the cost of these technologies (as was the case for photovoltaic, wind, batteries and electric vehicles) and will therefore enable large-scale take-up in the EU and beyond.

Hence, public support instruments beyond carbon pricing will be crucial for an efficient decarbonisation pathway. Particularly important will be public support for private R&D investment, pilot projects and first deployment. Much of the monetary incentives will have to come from the member states. But the Commission must enable and encourage such incentives by allowing EU countries (especially in terms of state aid rules) to experiment with support programmes.

Improving the financing conditions for green private investment

Many green technologies are more capital intensive than brown technologies. Consequently, financing conditions play an important role in the technology choices of economic actors.

In other words, there are many sectors in which, depending on the interest rate and on their access to finance, households and companies can choose either green (for example an electric vehicle with a high capital cost but lower fuel costs) or brown (for example a conventional car with a lower upfront cost but higher fuel costs)[27].

Direct support for private investment is thus complementary to the price and regulatory incentives needed to solve market failures. In particular, it is crucial to provide assistance to valuable projects that face financing constraints because their social desirability arises from positive externalities that are not internalised by private investors or manifests itself beyond the maturity of traditional financial instruments – scenarios that are particularly the case for green investment.

The best instrument for this would be to use more actively public development banks – the EIB and national public finance institutions – to finance the transition.

On that front, the Commission's main tool to crowd-in private investment will remain InvestEU, the upgraded version of the Juncker Plan, which at time of writing is planned to continue to be part of the EU Multiannual Financial Framework for 2021-2027.

The Juncker Plan was originally intended as a short-term demand stimulus to substantially leverage the Commission's limited resources through private investment. The European Fund for Strategic Investments (EFSI) – the formal name of the main instrument of the Juncker Plan – received a €16 billion guarantee from the EU budget and €5 billion of the EIB's own resources to enable the EIB Group to invest in riskier projects that have difficulty finding other sources of financing, and to reduce the potential crowding-out effect, without risking its AAA rating.

This was supposed to generate at least €315 billion of additional investment before mid-2018 by crowding-in private investors. EFSI was extended in 2017 until 2020 and the guarantee increased to €33.5 billion (€26 billion from the EU guarantee and €7.5 billion from the EIB) with the goal of mobilising €500 billion in additional investment by 2020.

For 2021-2027, the proposed size of the InvestEU guarantee is €38 billion, which is expected to mobilise €650 billion in investment, with 30 percent of this overall budget contributing to climate objectives.

It is difficult to assess if the Juncker Plan has achieved its goal and contributed significantly to an increase in investment in Europe, but the European Court of Auditors (2019) and Claeys and Leandro (2016) were sceptical about the additionality of investments decided under the plan.

According to the European Court of Auditors (2019), at least one third of the projects were not additional, ie. they could have been executed without EFSI, either by the EIB without EU budget support, or via alternative private financing sources.

Another issue with the plan is the slow disbursement of the funds. According to the EIB's own model (EIB, 2018), the peak impact of the plan will be in 2020-2021, six years after its design and 12 years after the beginning of the crisis. The Juncker Plan could not function as a stimulus tool.

However, despite its flaws as a stimulus plan, the Juncker Plan was a smart attempt to leverage the very limited EU resources using private capital markets. Moreover, improvements were made when the plan was renewed in 2017, and others improvements are envisaged as part of the InvestEU proposal. The new approach is to put less emphasis on volume and more emphasis on investing in the EU's top priorities, in particular fighting climate change.

For InvestEU to become the main financial vehicle of the European Green Deal, its guidelines need to be much stricter in terms of sustainability

However, to ensure InvestEU succeeds, additional changes to the programme and its governance should be made. In particular, the additionality criteria in the choice of projects that can benefit from the EU guarantee should be improved. To ensure that these projects are additional, they need to be different to the usual EIB projects, otherwise the green investment gap will not be reduced. The EIB's internal rating currently plays an important role in determining whether projects can be submitted to the independent committee in charge of granting the EFSI label.

However, the ratings themselves are provided by the EIB team, creating a risk that the EIB has an incentive to under-rate projects to make them eligible for the EU guarantee and to reduce its own risks. As a safeguard against this, the rating could be delegated to an independent team.

Other changes could also be considered to ensure that financed projects are different from traditional EIB projects, such as the systematic use of subordinated instruments or of instruments with longer maturities. Furthermore, to be truly additional, InvestEU should focus on projects that really lack financing options.

In addition, for InvestEU to become the main financial vehicle of the European Green Deal, the guidelines need to be much stricter in terms of sustainability. For instance, almost three quarters of the projects supported by EFSI in the transport sector in the first three years of the programme were high-carbon projects, and EFSI still supports fossil-fuel projects in the energy sector (Roggenbuck and Sol, 2019). The selection of projects thus needs to be much stricter and in line with climate goals.

A more radical approach could be for the Commission to push for the reform of the European Investment Bank in order to adapt its mission and transform it into the EU's climate bank. In her political guidelines, von der Leyen said she wanted to increase the share of total EIB financing dedicated to climate investment from 25 percent to 50 percent by 2025. To do this, the Commission must convince the EIB board of governors – the finance ministers of EU countries – to change how the EIB functions and the projects it invests in[28].

If the Commission wants the EIB to contribute to filling the green investment gap, it must avoid duplication of investment already committed under national budgets or EU Structural Funds, or that could be financed by the private sector. Instead, to best use limited EU funds, the EIB should be refocused on financing investments that are strategic, in particular in the energy transition.

In addition, the EIB – even without the EU budget guarantee for EFSI – should be able to do more to finance the transition. Its volume of new lending disbursed has gone down every year since 2015, and its total outstanding amount of loans has fallen as well.

The EIB has clearly some margin of manoeuvre to act more forcefully: its capital ratio has gone up in recent years, its leverage has been going down since 2012, and according to its statutes (article 16.5), it can lend as much as two and a half times its level of subscribed capital, plus reserves and profits, which means its portfolio of loans could reach around €600 billion, compared to about €450 billion today.

The EIB currently benefits from very favourable rates for its borrowing from capital markets[29] and it would be a shame not to use this opportunity to finance worthwhile projects that can contribute to the fight against climate change.

If EU countries are (unduly) afraid for the EIB's rating, the Commission should propose a new capital increase, similar to that which was done at the beginning of 2013 to increase the EIB's firepower to fulfil its enhanced mission as the EU's climate bank.

An additional important part of transforming the EIB into the EU's climate bank is scaling-up its technical assistance activities, which are important for supporting local governments across Europe in developing (ie. procuring) and structuring clean energy projects.

An industrial policy for the European Green Deal

To be politically and socially accepted and supported, the European Green Deal must make decarbonisation into an opportunity to revitalise European industry, and thus to ensure long- term economic growth and jobs. That is, while heading towards climate neutrality by 2050, the European economy has to remain highly competitive at global level, in the context of increasing competition from China and other big players.

While EU countries implement their own industrial policies, it is important to also have a broader EU-level industrial policy, in order to prevent market distortions and to allow synergies and economies of scale.

An EU industrial policy for the European Green Deal should be structured according to a three concentric circles strategy.

Circle 1: foster disruptive innovation

Innovation is the driving force for decarbonisation, and will be at the core of the decarbonisation of industry. To achieve climate neutrality while leading global decarbonisation from an industrial standpoint, Europe must become a global innovation powerhouse for clean energy, clean mobility and smart buildings technologies. To do so, Europe must invest more in R&D, and must invest better.

- Investing more: Europe's R&D spending in relation to GDP remains lower than in other major economies. In 2015, Europe's private and public sectors combined spent 2.04 percent of GDP on R&D, compared to 2.07

percent in China, 2.79 percent in the US, 3.29 percent in Japan and 4.2 percent in South Korea (Eurostat, 2019). Europe will thus not meet the target it set itself in 2010 to spend 3 percent of GDP on R&D by 2020. The EU business enterprise sector in particular needs to invest more. Its share of total R&D expenditure is much lower in Europe (64 percent) than in the US (72 percent), or China, Japan and South Korea (almost 80 percent) (Eurostat, 2019).

- Investing better: Europe is a global innovation leader in sectors such as automotive and biopharma, but is less present in the fast-growing technological, electronics and digital sectors that will increasingly underpin clean energy, clean mobility and smart buildings solutions. To turn decarbonisation into an industrial opportunity, the EU must push the business enterprise sector to scale-up its R&D investment also in these disruptive sectors.

In the framework of the European Green Deal, two existing EU initiatives could be enhanced and used to stimulate more R&D investment by the business enterprise sector in clean disruptive technologies.

The first tool is the European Innovation Council (EIC), currently in pilot phase. This is inspired by the US Defense Advanced Research Projects Agency (DARPA), an agency of the US Department of Defense that has significantly contributed towards many technologies, including the internet and GPS.

DARPA has a rather limited budget of about $3 billion per year and focuses on the identification and recruitment of, and provision of support to, top innovators. Likewise, the EIC is designed to financially support – through a combination of grants and equity – innovators who are developing high-risk, disruptive innovations with the potential to create new markets.

The EIC could become the core innovation tool of the European Green Deal, with a strong mandate in the areas of clean energy, clean mobility and smart buildings. To enable this, and to make the EIC truly comparable to DARPA, the EIC will have to be endowed with at least €15 billion from 2021 to 2027 under Horizon Europe[30].

The second tool is the Innovation Fund (IF). Established under the EU ETS for the period 2021-2030, the IF supports the demonstration of low-carbon technologies and processes in energy-intensive industries, carbon capture and utilisation and storage of carbon dioxide (CCU and CCS), innovative renewable energy and energy storage technologies.

The IF has been endowed with at least 450 million carbon allowances, amounting at current carbon price levels to about €11 billion. A sensible way to further scale-up the IF would be to rapidly reduce the number of allowances allocated for free under the ETS, and to use the resulting revenues for the IF.

In general terms, it must be emphasised that fostering disruptive innovation will require a significant dose of risk-taking and an acceptance that there will be failures. New support models that provide numerous and still sizeable grants in a relatively non-bureaucratic way are crucial to enable disruptive ideas to emerge.

Accepting that a significant proportion of these ideas will fail is better than putting money on safe but non-disruptive bets[31]. As Rodrik (2014) put it *"failure is part and parcel of a successful industrial policy effort"*[32].

Circle 2: create the conditions for innovative European companies to flourish in a receptive market

Public funding for disruptive technological innovation does not by itself guarantee industrial development. The success of DARPA strongly relates to the overall US economic ecosystem, which strongly favours innovation, and to its ability to turn disruptive innovations into marketable products. DARPA's limited budget shows that creating the conditions for making innovative products marketable can be more important than public funding for innovation itself.

The EU has three main tools to create the conditions for innovative, green, European companies to flourish in a receptive market.

The first, more general, tool is the completion of the EU internal market. Fragmentation in environmental standards, energy taxation and support measures for clean technologies prevent innovative European cleantech companies from scaling up in the way that their US and Chinese competitors do on their domestic markets.

It is vital to develop a solid regulatory framework, focused on ensuring competition and access to a truly single market, with common environmental standards. To do this, national industrial policies need to be coordinated – otherwise they create distortions that lead to further fragmentation of the EU single market. As Altomonte and Veugelers (2019) put it: *"failing to coordinate would hamper the full exploitation of the size of the EU market and the related economies of scale."*

The second, more specific, tool is public procurement. In the EU, this is estimated to amount to about 16 percent of GDP (European Commission, 2018). Given its scale, public procurement represents a unique tool to foster innovation.

For example, requiring clean mobility solutions in public procurement tenders could provide a solid boost to the demand for electric cars and buses, helping transform the European automotive industry. To become the global leader in electric cars, China did not focus on public funding for innovation, but rather on creating demand for them through supportive government policy, including public procurement programmes (Fredriksson *et al* 2018).

The third tool is carbon-based contracts for difference, which could be a technology-neutral support mechanism for the deployment of low-carbon technologies. As in the renewables sector with auctioned feed-in premiums, industrial producers of carbon-intensive products would obtain a public subsidy for each unit sold.

For example, a steel producer that only needs 0.5 tonnes of CO_2 to produce one tonne of steel (compare to a benchmark of 1.5 tonnes of CO_2/tonne of steel), and that managed to secure a carbon price of €50 per tonne through the system of carbon-based contracts for difference, would receive €25 for each tonne of its low carbon steel when the EU ETS price is at €25. These contracts for difference can be auctioned to ensure competition between companies for the most efficient technologies.

Fragmentation in environmental standards, energy taxation and support measures for clean technologies continue to prevent innovative European cleantech companies from scaling up

These three complementary tools can foster the emergence of the necessary ecosystem that will enable innovative green European companies to grow in a receptive market.

Circle 3: export the European Green Deal

The EU produces less than 10 percent of global greenhouse-gas emissions. This implies that to have an impact on global temperature levels, the EU needs to push the European Green Deal beyond its borders. To do so, a two-step strategy is needed.

The first step would be the rapid establishment of the Neighbourhood, Development and International Cooperation Instrument (NDICI), which has been proposed by the European Commission as part of the EU's 2021-2027 budget discussions (ongoing at time of writing). NDICI would bring together EU funding for its external policies in a single instrument.

The Commission has proposed a budget of €89.2 billion for the NDICI for 2021-2027, while the European Parliament has called for a budget of €93 billion. A quarter of the NDICI budget would be earmarked for climate action – about €3 billion/year over the period.

NDICI should be put in place quickly because the sooner it is in place, the sooner the EU can increase its visibility and leverage in developing countries, while pooling existing resources would favour internal efficiency and – most importantly – impact in the field (Tagliapietra, 2017a). Meanwhile, the climate component of NDICI should be scaled-up, to reach, say, a minimum of €5 billion/year.

A higher amount would give NDICI more leverage to stimulate recipient countries to implement the energy-market reforms that are necessary to attract international (and thus also European) private investors.

The second step would be to further consolidate and streamline EU development finance and climate activities outside Europe, which are today divided between the European Commission, the EIB, the European Bank for Reconstruction and Development (EBRD) and EU countries.

Streamlining could be done by creating a single entity such as a European Climate and Sustainable Development Bank, as proposed by Council of the European Union (2019), which strongly made the case for fixing the current system of European multilateral finance, which is characterised by overlaps, gaps and inefficiencies.

It will be important to use the revenues from climate policies to compensate the citizens most affected by the rise in carbon prices

Council of the European Union (2019) outlined three options for creating a European Climate and Sustainable Development Bank: i) building on the EBRD and the external financing activities of the EIB; ii) creating a new, well-capitalised, institution with mixed ownership (including the European Commission, EIB, EBRD, EU countries and others); iii) creating it as an EIB subsidiary. Together with NDICI, a European Climate and Sustainable Development Bank could become a key tool to export the European Green Deal.

Such an approach would represent a triple win for the EU. First, it would help meet the EU's climate finance obligations and thus help to achieve the 'conditional' emission-reduction commitments assumed by most developing countries under the Paris Agreement.

Second, it would enable EU industry to enter into new, rapidly growing, markets. And third, it would help economic development in the EU's partner countries, providing an invaluable foreign policy dividend for the EU.

How to make the transition inclusive and just

Climate policies including emissions standards for cars, renewables support financed through levies on households' electricity consumption and carbon pricing for heating fuels disproportionately affect poor households, and might thus lead to an increase in inequality (Zachmann *et al* 2018).

The impact will be particularly significant for the lowest deciles of the income scale, for those in rural and suburban areas (who will be affected by the rise in fuel prices) and for regions that are particularly dependent on the production of fossil fuels, such as coal, and will thus be affected by the disappearance of some industries and jobs. This means that some segments of the population and some regions particularly affected by the transition will require special assistance.

However, while climate policies can have adverse distributional consequences, inaction cannot be the answer. Not acting would make everybody worse off, ultimately with a greater negative affect on low-income households compared to high-income households. There is hence no trade-off between climate and equity.

From a political perspective, what makes the situation more difficult is that the gains from climate policies will mostly be invisible if these policies succeed and disaster is avoided, while the costs of climate policies are immediate and tangible, especially for the most vulnerable population groups.

To avoid a dangerous backlash against climate policies (such as the reaction that was at the root of the *gilets jaunes* movement, which led the French government to abandon an expected carbon tax increase), the question is therefore how climate policies and compensation schemes should be designed to counterbalance these adverse distributional effects.

Designing less-regressive climate policies

The first solution is to prioritise less-regressive policies and focus on less-regressive sectors first. Climate policies for different products/services have different distributional impacts. In order to reduce the regressive effects, climate policymakers might prioritise the least-regressive elements.

For example, putting high prices on carbon in transport, and in particular on aviation, will have less dramatic distributional consequences than a similar price for heating or electricity.

Policymakers should also focus on less-regressive policy tools. Different instruments can be used to decarbonise a sector and some policy instruments are more regressive than others. Policy choices should therefore be concerned not only by effectiveness and efficiency considerations, but should also take distributional aspects into account.

In the discussion on taxes versus technology standards, distributional concerns provide an additional argument for the former.

Most importantly, policy design should seek to minimise regressive effects. For example, giving free allowances to companies whose face-value is priced in for consumers is an unnecessarily regressive instrument.

Correcting regressive climate policies through compensation

Policies dealing with the social consequences of the transition and ensuring that no one is left behind will take two complementary forms.

Countries strongly reliant on coal use employment as an argument to delay the necessary transformation, though coal jobs in Europe no longer represent a sizable issue

First it will be important to use the revenues from climate policies (and in particular the increased revenues resulting from a more comprehensive carbon pricing system) to compensate the citizens most affected by the rise in carbon prices.

To do this, money raised from taxing emissions could be returned to citizens in the form of a so-called dividend[33]. This could take the form of lump sum transfers like in Switzerland, where two thirds of the revenues from carbon levies go back to the population through this means[34].

Money can also be targeted at the lower deciles of the income distribution. This is the case, for example, in British Columbia in Canada, where revenues from the carbon tax have been used to reduce taxes for the lowest paid, plus provide an additional transfer conditional on low income levels.

In the light of the fiasco of the increase in the French carbon tax in 2017-18, which resulted (in combination with a large increase in oil prices) in the emergence of the *gilets jaunes* movement, Bureau *et al* (2019) made a detailed proposal for France that could be used as a blueprint in many EU countries.

They proposed to redistribute fully the French carbon tax revenues, through transfers based on income and geographical criteria, targeting the most affected locations such as rural and small urban areas with limited access to public transport. Using this combination of criteria would minimise the number of people negatively affected by the rise in carbon prices – in the French case such a system of transfers would compensate fully the six lowest deciles of the income distribution.

From a political perspective, it appears that well-designed compensation mechanisms are crucial if the population is to accept climate policies. This is what the Swiss, Canadian and French (in a negative way) examples suggest.

What should the European Commission do on that front? Given that most of the revenues from the ETS and from national carbon taxes go directly to member states, the EU cannot directly put in place such a compensation scheme.

However, as part of the European Green Deal, the Commission should at least raise awareness about this issue among EU countries, encourage them to share best practices and even make recommendations in the context of the European Semester for such schemes that could be put in place at national level.

Second, given that the reallocation of capital resulting from the fight against climate change will also result in a reallocation of employment, it is crucial to put in place policies to facilitate the transition towards new jobs for those whose jobs are at risk. Even if overall the net effect on employment is neutral or even slightly positive, the transition will make some jobs disappear, while creating new ones[35].

The transitional issue related to climate change is not very different to the challenges from globalisation or technological change, so the solution could be the same: if a change in the demand for skills is rapid, there is a role for authorities to play to ensure that the workforce (and in particular displaced workers with low skills) can be retrained successfully and quickly.

It is thus crucial to invest heavily in human capital: adult education, re-training, and policies to improve the labour mobility of older workers, to avoid a high level of unemployment in some particularly affected regions.

At the EU level, Claeys and Sapir (2018) and Tagliapietra (2017) proposed broadening the scope of the European Globalisation Adjustment Fund so it can also finance active labour market policies to help workers who have lost their jobs as a result of the implementation of EU climate policies.

Managing the transition in coal and energy-intensive regions

Over the last few years it has become evident that supporting coal and energy-intensive regions is of vital importance to ensure the social viability and political feasibility of the transition to climate neutrality. Countries strongly reliant on coal keep using employment as an argument to delay the necessary transformation. But this argument is hollow, because coal jobs in Europe no longer represent a sizable issue, either at national or regional level.

Production of coal in the EU has been decreasing since 1990. Alves Dias *et al* (2018) estimated that by 2030 the closure of coal mines and coal-fired power plants across the EU could lead to a loss of 160,000 jobs (or 0.06 percent of the current EU workforce). It should also be noted that 109,000 of these jobs are already considered at high risk, because of a lack of competitiveness.

While coal jobs are objectively not substantial from EU or national perspectives, their loss could have a substantial impact from a regional perspective. By 2030 several regions are expected to be particularly hard hit by the transition: one region in Poland could lose up to 41,000 jobs, and a further three (in the Czech Republic, Romania and Bulgaria) could each lose more than 10,000 jobs (Alves Dias *et al* 2018).

Given the limited and regional nature of this challenge, the EU could well provide a solution for the coal jobs that will be lost in the transition. Offering such a solution would be beneficial in terms of: i) refocusing the coal transition debate on the only area it should belong to – energy policy; ii) providing an incentive to coal-reliant countries to implement or accelerate coal phase-out plans.

The EU should propose to member countries a speedy coal phase-out and should con- currently put in place a scheme, such as the Just Transition Fund proposed by von der Leyen (2019), to support workers who would face losing their jobs. This would reflect what it is already being done in the United States[36], and what was done in Europe during the coal-mining transformation of the 1950s[37].

In 2017, the European Parliament proposed the creation of a Just Transition Fund, which would use 2 percent of the revenues from the auctioning of emission allowances to support regions with a high share of workers in carbon-dependent sectors and where per capita GDP is well below the EU average.

This proposal was rapidly dismissed, however, notably because of opposition from the European Commission.
In 2018, the European Parliament put forward a new proposal to establish a Just Transition Fund, this time in the context of the MFF negotiations, and with a proposed endowment of €4.8 billion for 2021-2027.

The EU does not need to establish a new Just Transition Fund to support coal-mining regions; it only needs to make a better use of the existing European Globalisation Adjustment Fund

But the EU does not need to establish a new Just Transition Fund to support the transition in coal-mining regions. It only needs to make a better use of the existing European Globalisation Adjustment Fund (EGF), which was established in 2006 and has a maximum annual budget of €150 million for 2014-2020 – a budget that has so far not been fully employed, with on average €40 million disbursed from the EGF each year.

The EGF supports workers who lose their jobs because of major structural changes in world trade patterns arising from globalisation. It can be triggered when more than 500 workers are made redundant by a single company, or if a large number of workers are laid off in a particular sector in one or more neighbouring regions. The EGF provides up to 60 percent of the funding for projects, lasting up to two years, to help workers who have been made redundant find new employment or set up their own businesses. EU countries apply for finance from the EGF and national or regional authorities oversee the deployment of project funds.

The EGF has been transformed over time. In 2009, its scope was broadened to cover also people losing their jobs as a result of the global financial and economic crisis. In 2014, the categories of workers eligible for support were broadened to include young people not in employment, education or training (NEETs).

In short, the EGF has been adapted to new economic and social challenges emerging in Europe. The EGF should now be extended to people losing their jobs in coal-mining regions as a result of the decarbonisation process[38].

This can be done quickly by amending the regulation governing the EGF, as was done in 2009 in response to the negative impact on employment of the global financial and economic crisis. The amendment could increase the use of the currently under-utilised EGF (Claeys and Sapir, 2018). The amendment should:

- Broaden the scope of the EGF, to include support for EU coal-mining regions that commit to a timely coal phase-out;

- Modify the redundancies requirements, to allow the EGF to be used not only once workers lose their jobs, but also before this happens. This would allow the planning of an orderly transition, limiting the socio-economic effects of the coal phase-out in these regions;

- Extend the implementation period from 24 to 36 months, to allow for proper implementation in complex cases, such as the closure of coal mines.

Under the 2021-2027 EU budget, the focus of the EGF on coal-mining regions could be further strengthened, transforming it into a European Globalisation and Climate Adjustment Fund (EGCF).

In order to ensure coal mining is phased out across the EU by the end of the 2021-2027 EU budget cycle, the EGCF would need to be endowed with adequate financial resources, with additional resources taken from the European Social Fund. The 'coal-item' in the EGCF budget for 2021-2027 should be €150 million per year, a total of €1 billion over the period (Tagliapietra, 2017).

By mobilising about 0.1 percent of its total budget, the EU could thus provide a significant incentive to coal-reliant EU countries to complete the coal phase-out, generating substantial benefits in terms of climate, environment and human health. Doing so on the basis of the existing EGF could speed up the overall process by avoiding the bureaucratic hurdles related to a new institutional set-up.

Concluding remarks

The recipe for the success of the European Green Deal is as simple as it is breath-taking: to intelligently promote deep decarbonisation by accompanying the economic and industrial transformation this necessarily implies, and by ensuring the social inclusiveness of the overall process.

Should the strategy succeed, the European Green Deal might become a blueprint for other countries and a tangible example that pursuing climate neutrality is technically feasible and economically and politically viable.

To be clear, this will not be an easy ride. As in any revolution, there will be winners and losers. What a European Green Deal should do is provide a clear sense of direction to citizens and companies, and put in place mechanisms to ensure that the most vulnerable segments of society are supported and not left behind.

But to be politically sustainable, policymakers must be honest about the nature of the European Green Deal.

The European Green Deal does not need to redefine EU economics. All it needs to do is to shift our economy from fossil fuels to zero-carbon in a way that's socially and politically viable.

The European Green Deal should thus not be promoted as a powerful economic bazooka, but rather as an efficient reallocation mechanism, fostering investment shifts and labour substitution in key economic sectors, while helping the most vulnerable segments of society throughout the process.

In practice this means promoting a shift from fossil fuels to renewables, turning combustion-engine car jobs into electric car jobs, compensating low-income households for higher fuel prices and re-training coal miners to get new jobs.

This is how President designate von der Leyen should present the European Green Deal to make it socio-economically successful and politically sustainable. ■

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Endnotes

[1] *Without a carbon price, falling fossil-fuel prices might make it attractive to use fossil fuels in unregulated sectors, while greater efficiency of devices might encourage increased usage (rebound effect).*

[2] *This is becoming more important as electrification is seen as a main avenue for decarbonisation. When fossil fuels in heating, cooling, mobility and other energy services compete with electricity, they should not be subject to (too) different carbon prices.*

[3] *That is, when the level of the carbon price is very far from the marginal abatement cost in this sector.*

[4] *This should also include the harmonisation/cancellation of existing national compensation schemes for indirect emission costs in the EU ETS.*

[5] *For example, those EU countries that have above-average 'effort sharing' targets for 2030.*

[6] *There is a complex national patchwork of explicit or implicit taxation of fossil fuel use in transport and heating (Kettner-Marx and Kletsen-Slamanig, 2018).*

[7] *A surplus of emission allowances has built up in the ETS since 2009, as a consequence of the economic crisis and high imports of international credits. This led to low carbon prices. This problem was addressed by introducing in January 2019 a market stability reserve: a system under which 900 million allowances are transferring into a reserve rather than*

auctioned. As a consequence of this intervention, the price of emission allowances quickly increased from below €10 in early 2018 to about €25 per tonne of CO_2 at the time of writing.

8. For more details on such guarantees, see Zachmann (2013).

9. There is no European Commission modelling on what carbon price would be needed to achieve 50-55 percent decarbonisation by 2030. Existing modelling for policies that imply a 45 percent emissions cut by 2030 compared to 1990 indicate a carbon price of at least €28. But targeting to go from 4300 million tons of CO_2 equivalent of greenhouse gases (mt) in 2020 to 2600 mt (a 55 percent reduction compared to 1990) instead of 3100 mt (minus 45 percent compared to 1990) implies an almost 50 percent increase in mitigation (from 1200 mt to 1700 mt), which arguably comes at strongly increasing marginal cost. See https://ec.europa.eu/energy/sites/ener/files/technical_note_on_the_euco3232_final_14062019.pdf

10. The EU ETS covers less than half of all emissions. Only about 60 percent of the allowances are auctioned, and the price at time of writing is around €25.

11. By definition, carbon tax revenues would go into the general budget. But implicit linkage to expenditure is a common practice when introducing new taxes. For revenues from the ETS, the EU and member states would be relatively free to dedicate it to specific purposes.

12. The EU could use standardised norms such as ISO 14067 that have been created to measure the carbon footprint of products (for details, see https://www.iso.org/obp/ui#iso:std:iso:14067:ed-1:v1:en).

13. In 2012 the EU tried to make intercontinental flights leaving from or arriving in the EU buy emission allowances for the whole emissions of each flight. It was seen as a relatively simple case. Nevertheless, WTO compliance of the scheme was challenged and fierce opposition from the US and China (which threatened to retaliate by no longer buying Airbuses) killed the project politically.

14. See, for example, Horn and Sapir (2019) and Wolff (2019).

15. Our proposals would actually give time to the European Commission to prepare a ready-made solution for a CBT if it is needed in the future.

[16] See for instance European Commission (2018a).

[17] However, this estimate corresponds to a -40 percent emission reduction target, not to the more ambitious -55 percent proposed by Ursula von der Leyen. As abatement costs are typically non-linear, the green investment gap to reach that target could even be larger.

[18] For instance, the PRIMES model used by the European Commission "does not include investment in roads, railways, ports and airports infrastructure and in systems facilitating sharing of vehicles etc., as these are out of the scope of the model. Investment or hidden costs related to behavioural or organisation structural changes or in sectors outside energy are not part of the calculation of investment expenditures either. Generally, the model does not include the full investment expenditure of industrial plants and buildings, but only the parts that relate to energy and efficiency and to a certain extent to the additional investment expenditure to change process technology in the industry" (European Commission, 2018b, p330).

[19] This number increases further if the international climate finance promises of developed countries from the 2015 Paris Agreement are added ($100 billion per year).

[20] This is probably the case because the models used assume a low multiplier on average over the next decade.

[21] This does not take into account, however, that averting climate change soon enough would lead to the avoidance of (hardly quantifiable) costs related to health care, climate-related damage, the loss of value of stranded assets, migration, and to compensation for distributional effects.

[22] Actually, boosting growth significantly could make the climate targets harder to achieve, unless a full decoupling of economic growth and greenhouse gas emissions is achieved thanks to technological progress.

[23] https://cohesiondata.ec.europa.eu/Other/-of-cohesion-policy-funding-in-public-investment-p/7bw6-2dw3

[24] Today, the investment clause is subject to the following conditions: that the member state's GDP growth is forecast to be negative or to remain well below its potential (resulting in negative output gap greater than 1.5 percent of potential GDP) and that the member state remains in the preventive arm and that an appropriate safety margin with respect to

the 3 percent of GDP deficit reference value is preserved (European Commission, 2019c). As a result of these restrictive conditions, only two countries, Italy and Finland, have so far applied to the use the investment clause.

[25] *Such a taxonomy is at time of writing under discussion; see https://ec.europa.eu/info/business-economy-euro/banking-and-finance/green-finance_en*

[26] *Overall, it is useful to remember as an order of magnitude that public investment represents around 3 percent of EU GDP, while private investment represents 17 percent of EU GDP in 2019 (AMECO).*

[27] *The current low interest rates are thus good news for low-carbon technologies but there is no guarantee that interest rates will remain as low as now throughout the whole transition.*

[28] *The EIB has proposed to its member to stop lending to fossil fuel projects by 2020, but this crucial move is currently blocked by some countries which still want gas projects to be financed by the EIB. If this might help to reach the 2030 target, it is however important not to forget the final objective of reaching carbon neutrality by 2050, which has some implications for the investments made before 2030. This 'path dependence' should rule out substituting carbon with gas, which might be good enough for reducing 2030 emissions, but is incompatible with the 2050 neutrality.*

[29] *The EIB issued on 18 September 2019 bonds with a 15-year maturity worth €3 billion at 0.05 percent.*

[30] *Horizon Europe is the EU's research and innovation framework programme for the period 2021-2027. The European Commission proposed to endow it with a budget of €100 billion, while the European Parliament has proposed €120 billion. Of the eventual budget, 35 percent is due to be earmarked for climate-related research.*

[31] *The European Research Council is a good example of the value of risk-taking, as so far it has funded seven Nobel Prize laureates.*

[32] *Rodrik also recalls an anecdote about Thomas Watson, the founder of IBM, who supposedly advised cautious managers that: "if you want to succeed, raise your error rate."*

[33] *It is true that tax revenues are generally fungible in the overall budget, but some mechanisms should be put in place to ensure transparency of the level of revenues generated by the carbon tax, so that governments can show that they use the revenues to compensate those most affected by the tax.*

34. Another interesting policy put in place in Switzerland is the mechanism by which the carbon price increases automatically if emission targets are not met, but price rises are postponed if they targets are exceeded. This provides citizens with an incentive to control their emissions, as noted by Bureau et al (2019).

35. Sectors in which jobs could be lost include power generation using fossil fuels (including coal mines, fossil-fuel power plants an refineries), energy-intensive manufacturing, transport, the equipment sector for fossil-fuel technologies and retail sales of fossil fuels (eg. gas stations). In principle these job losses will be compensated for by new jobs in sectors including renewable energy installation, maintenance and operation, and construction (because of the need to renovate the building stock). The renewable energy sector should create more domestic jobs than the fossil-fuel energy sector (see Zachmann et al 2018).

36. The concept of a 'just transition' was developed by North American unions in the 1990s, with a focus on support for workers who lost their jobs as a result of environmental protection policies. Examples of US federal just transition initiatives include President Obama's Partnerships for Opportunity and Workforce and Economic Revitalisation and President Trump's Assistance to Coal Communities programme.

37. Europe's 1950s transition mechanism for coal-mining regions was the European Coal and Steel Community (ECSC) Fund for the Retraining and Resettlement of Workers. With the 1957 Treaty of Rome, this fund was transformed into the European Social Fund, which in its early stages was used to support workers who lost their jobs in sectors that were modernising, such as coal mining.

38. In 2017, a first coal-related project was financed by the EGF, to support the Spanish coal-mining region of Castilla y León. Spain applied for a €1 million to help redundant coal miners and young NEETs in the region find new jobs, following the dismissal of 339 coal workers in five coal mines. In order to be eligible, Spain had to establish a link between the redundancies and major structural changes in world trade patterns resulting from globalisation. Spain successfully argued that the European coal industry is increasingly suffering from competition from cheaper coal from non-European countries.

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The European Green Deal needs a reformed fiscal framework

Europe needs to change behaviour and technologies. Grégory Claeys argues that to do so the EU needs to adapt its fiscal rules to encourage the transition

The European Commission is set to present the outline of its European Green Deal plan. As discussed in our recent paper, the plan should include a sustainable investment strategy that will help companies switch technologies and citizens change behaviour, offsetting the rising costs they will face because of higher carbon prices.

The European Commission's most recent estimate of the 'green investment gap' – ie. the additional investments necessary to achieve the EU's 2030 climate target – is €260 billion per year. Given the more ambitious target proposed by Ursula von der Leyen (-50 to 55 percent percent emission reduction target compared to 1990, instead of -40) and the high uncertainty surrounding these estimates, the desirable number for additional investment is probably nearer or even above €300 billion per year.

Corporations and households will be responsible for the majority of these investments, but public investment will also be needed because of the public-good nature of some of the investments (eg. to deploy a sustainable transportation system, or to renovate public buildings and social housing to make them energy efficient).

Given the relatively small size of the EU budget, most of these public investments will have to be carried out at the national level. But this means that decisions, and the allocation of funds will be in the hands of national governments and not under the control of the EU.

So, if the European Commission wants to foster investment to accelerate the transition, it must find a way to encourage green public investment in member states.

The main tool for the EU Commission to do this is the European fiscal framework.

In general, the European fiscal rules should be reformed to deter countries from slashing public investment when they consolidate their public finances and to ensure that they are able to take advantage of favourable interest rates to invest in public goods.

One way to do that would be to include some form of golden rule in the European fiscal framework to allow the financing of investments through the issuing of debt.

The European Green Deal should include a sustainable investment strategy that will help citizens change behaviour and companies switch technologies. But to finance it, the EU will have to increase the flexibility of its fiscal rules to encourage member states to invest in the transition

And yet, if an agreement cannot be found to reform thoroughly the European fiscal rules to make them more investment-friendly in general, a reform focused on authorising deficit-financed green investment during the transition should be part of the European Green Deal.

One way to put in place a form of 'green golden rule' would be to revise the investment clause of the European fiscal framework to make it much more flexible in order to exempt from the fiscal rules public investment that mitigates or adapts to climate change.

In fact, the current clause already allows for deviation from the structural balance medium-term objective (MTO) to finance investments *"with positive, direct and verifiable long-term effects on growth and on the sustainability of public finances."* Given the potentially high risk in the long run of climate change for public finances, it would not be a stretch to apply the clause to green investments.

However, other refinements would be necessary to transform the clause from a small and temporary exemption that can only be used in bad times to a more significant and permanent exemption for green investment from the rules, also in good times.

Indeed, the current version of the investment clause is subject to the following conditions:

- The member state's GDP growth is forecast to be negative or to remain well below its potential (resulting in negative output gap greater than 1.5 percent of potential GDP)

- The member state remains in the preventive arm and an appropriate safety margin with respect to the 3 percent of GDP deficit reference value is preserved

- The projects should be co-financed by EU funds, including through EFSI

- The deviation should not exceed 0.5 percent of GDP, and in cumulative with the structural reform clause it should not exceed 0.75 percent of GDP

- Co-financed expenditures should not substitute for national investments

- The MTO should be reached during the 4-years of the Stability or Convergence programme

- The exemption is granted for one-time only during the adjustment path towards the MTO

As a result of these restrictive conditions, only two countries, Italy and Finland, have so far used the investment clause. Some legislative changes will be needed to revise the clause to exempt public investment that mitigates or adapts to climate change from the fiscal rules.

The current investment clause is established in the Code of Conduct of the Stability and Growth Pact (SGP), modified for the last time in 2017. The clause actually provides guidance on the application of Articles 5.1 and 9.1 of Regulation (EC) 1466/97, which is the legislation (amended in 2005 and 2011) authorising 'temporary deviations' from the adjustment path towards the MTO in case of actions that have long-term positive budgetary effects.

Given the more permanent nature of the current reason to invest (to accelerate the transition in the next 10 years), the revision of the SGP Code of Conduct will probably not be enough this time, and a revision of the Regulation will also have to be pursued to increase the flexibility.

However, to avoid any abuse of such a green investment clause by countries that might be tempted to apply the exemption to their current expenditures, two safeguards could be introduced in the new legislation:

- First, the maximum amount of green investment exempted could be related to the level of the 'green investment gap' in each country, which would be discussed and determined each year as part of the European Semester.

- Second, clear accounting rules would be needed to separate investment in the low-carbon transition from other expenditures. This should be facilitated by the introduction of an ambitious taxonomy for sustainable finance (which is currently finalised) and clear rules concerning the issuance of green bonds.

Hence, well-defined green investments, financed through the issuance of green bonds, could be clearly separated from the rest of the budget and exempted from the rules.

This reform, limited to the investment clause, would not put an end to the debate about the European fiscal framework and would not solve its many flaws, but it would be a good first step, as it would help encourage EU countries to invest in the decarbonisation. ■

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Demystifying carbon border adjustment for Europe’s green deal

The European Green Deal has many critics. Guntram Wolff says some adjustments to the deal could make domestic manufacturers more carbon efficient and foreign producers more friendly to the environment

European Commission President-Elect Ursula von der Leyen has made a strong plea to accelerate Europe's transition to a 'green' economy with the goal of achieving ambitious targets of reduction of greenhouse gas (GHG) emissions by 2030 and a reduction to zero net emissions by 2050. A central element in achieving this transition is to put a significant price on all GHG emissions that will incentive producers and consumers to switch to less greenhouse gas-intensive alternatives.

But if domestic producers were taxed heavily on their emissions, they would be put at a disadvantage to foreign producers. The president-elect, in line with a group of more than 3,000 distinguished American economists, has therefore proposed to introduce border carbon adjustment. But this proposal has been heavily criticised from various angles. In this post, I first discuss the problem before exploring the three main criticisms. Finally, I sketch a way forward.

Toying with the problem

Taxing domestic producers on their GHG emissions without taxing foreign producers would disadvantage domestic production. The incentive for consumers would be to continue buying the same products but shift to suppliers from abroad instead of switching to more efficient domestic producers.

Imagine a plastic toy. Suppose there are two toy producers in the EU. One (A) uses an efficient production process and therefore only emits 1kg of CO_2 while the other (B) needs 2kg to produce the same toy. There is also a third producer (C) in a country outside of the EU that provides the same toy with 3kg of CO_2. Finally, there is an efficient foreign producer (D) that also needs only 1kg. Suppose the price of the four toys is equivalent to 10 euros. Consumers will be indifferent to the four toys based on the price and will choose the toy that they like most for its colour or other characteristics.

Now suppose the EU introduces a tax of 1 euro per kg of CO_2, but only on the domestic producers (this would be a very high price but for sake of simplicity, I use that. The described logic fully applies also at lower prices, for example at 100 euro per ton, ie. 1/10th of the price used here). The result would be the following prices documented in the Table below showing that the foreign producers C&D would gain a significant advantage relative to the two domestic producers. Domestic producer A would gain a price advantage relative to domestic producer B and consumers would be incentivised to shift to A.

The practical problem of solving BCA is substantial and likely to keep the Commission and the EU busy for some time to come

However, only consumers that have a strong preference for domestic production would continue sticking to A while all others would shift to C&D. Depending on the respective elasticities, the domestic CO_2 tax might achieve very little in terms of consumption of CO_2 but it would destroy the domestic industry.

The obvious solution to this problem is to introduce a tax that would also apply to the foreign producer. The result is given in the last row and illustrates the power of border carbon adjustment. Dirty producers, domestic or foreign, would be penalised. Producers B and C would have to quickly render their production more efficient or risk losing their EU market share. Meanwhile, producers A and D would both gain market share.

The table nicely illustrates why on first principle grounds, the introduction of a CO_2 tax is a powerful instrument to change production patterns. It also shows why first principles require some form of border carbon adjustment if the tax is supposed to be effective in changing the consumption of CO_2 and not just in shifting production abroad.

Obviously, moving production abroad would not only be bad for domestic industries but also be bad for the climate in that the relevant global greenhouse gas emissions would barely change with the introduction of the EU tax. In contrast, a tax combined with some form of border adjustment would not only reduce domestic CO_2 consumption in the EU but also prevent carbon leakage. It would also provide a strong incentive —due to the big size of the EU market to foreign producers —to innovate and update their production processes. Over time, these efficiencies would also reduce CO_2 consumption in third countries, in which there is no tax on CO_2.

Finally, the Border Carbon Adjustment (BCA) would also relieve the domestic producers of the tax when they export abroad. The BCA would provide a tax rebate for those exported goods so that in the foreign market, the domestic producers would not be put at a disadvantage.

	Domestic producer A	Domestic producer B	Foreign producer C	Foreign producer D
Amount of CO_2 emitted per toy	1kg	2kg	3kg	1kg
Current price without taxing CO_2	10 euros	10 euros	10 euros	10 euros
Domestic price after a 1 euro/kg CO_2 tax on domestic producers	11 euros	12 euros	10 euros	10 euros
Domestic price after a 1 euro/kg tax on all producers	11 euros	12 euros	13 euros	11 euros

The strength of the described effects, ie. the amount of carbon leakage, obviously depends on the price of carbon, the amount of carbon content in the respective products and the elasticities of demand to price changes. All three are a matter of empirical research.

For some products, the respective numbers may be such that border carbon adjustment is irrelevant. But those products would likely also be the products for which the carbon content is rather low, thereby making them less of a problem for climate policy.

Or put differently, to the extent that the carbon price will matter in decarbonising, it will also matter in putting a wedge between domestic and foreign producers in the absence of BCA.

Three criticisms of border carbon adjustment

There are three fundamental critiques of border carbon adjustment:

- The first criticism is that emerging economies would be put at a disadvantage and will therefore oppose the EU's BCA. This argument is undoubtedly wrong in theory but may be right in practice. The table above illustrates that the argument is wrong in theory. Foreign producer D is not put at a disadvantage to domestic producer A. The relative price of their products does not change as a result of the introduction of the BCA.

  On the contrary, only introducing a domestic tax would have been putting the emerging market producer at an unfair advantage relative to the domestic producer. In practice, however, the argument may still be right, in that emerging market industrial processes might be less efficient than domestic ones. On a practical level, this will lead to opposition from emerging markets to the EU introducing such a measure.

  But as argued above, the point of introducing the BCA is also to provide incentives to producers elsewhere to make their production more efficient.

- The second criticism is that BCA would not be compatible with the WTO and be a form of green protectionism. This criticism is discussed in some detail by my colleagues Horn and Sapir. In my view, there are two main replies to this critique.

The first is that WTO compatibility depends on the precise design of BCA. A well-designed BCA can be made WTO compatible. The second and more fundamental reply is that even if BCA was not WTO compatible, it may still be the right political choice to introduce BCA. The EU is a strong advocate of the global multilateral and rules-based trading system.

However, it is a political choice whether it is more important to support the WTO or to achieve ambitious reductions in GHG emissions. If there were to be a trade-off between the two and the global multilateral rules-based system were incompatible with achieving the necessary reductions in GHG emissions, couldn't and shouldn't even the EU's choice be to pursue the latter?

Of course, the ideal solution would be to make the BCA WTO compatible, which is possible as argued by Jennifer Hillman, a former WTO appellate body judge.

- The third, and perhaps most pertinent criticism of BCA is that it is practically unfeasible. The core of that practical argument is that it is relatively easy to measure the emissions domestically while it is difficult or even impossible to measure them in third countries.

Domestically, the factory would be fully taxed based on the amount of all CO_2 emitted, which is relatively easy to measure as one can measure the input into the production of cement, chemicals, electricity etc…

Should one ask foreign producers to report on their emissions? Who would verify those reports? How deep into the value chain is one looking? Where did a car producer buy its steel? From which power plant did the electricity for a ton of steel come from? Could one find an international treaty framework establishing

> standards of measurement? Should there be a form of carbon rating measuring and confirm the CO_2 content of all products in the world? So how could one tax the foreign producer according to its true emissions?

A related criticism is that there might be retaliation from our trade partners, including from the US and China, even if the measure is WTO compliant and even if objectively there will be no discrimination of foreign producers. Trade partners may still see a BCA as an 'extraterritorial overreach'.

The corresponding negotiations could be lengthy and complicated and a big worry is that a lot of time and political capital will have to be spent with possibly little effective result in the end. So politically, the question is whether the EU is ready to have very tough negotiations.

Towards a practical solution?

A practical way to design BCA could be a form of a GHG value-added tax. In other words, for every product sold in the EU, a tax would be levied depending on the amount of GHG that was needed to produce that product (I do not discuss here the issue that tax authority in EU is decentralised and the complex interactions between a GHG tax and the emission trading system).

The fundamental question is how one would establish the GHG content of the product. Since there are millions of different products, this is a significant challenge. It would essentially require every producer to not only establish a price for every product sold but to record the CO_2 content of its production.

The pretty detailed description that every product already contains would also have to be complemented with a clear number of the amount of GHG that was emitted in producing that product. It would be on that number that the tax is applied.

Domestically, such a system appears burdensome but not overly burdensome. Our toy producers A and B would have to record all emissions during the year needed to produce the toys and would have to divide it by the number of toys produced. The public authorities that already do occasional quality checks on the products would also randomly check compliance with the overall emission reporting.

If the numbers reported significantly diverge from the amount of CO_2 emitted, the producer would be liable to pay a fine. In fact, the EU could use standardised norms such as ISO 14067 that have been created to measure the carbon footprint of products (see details).

Such a system would be burdensome, subject to fraud and less efficient than taxing production directly. However, it would make it possible to address the problem of carbon leakage. Foreign producers could automatically be treated like the least efficient domestic producer unless they prove to be better.

In our example, the domestic authorities would, by default, tax toy C and toy D as if they were produced by producer B, ie. with 2kg of CO_2. This tax would be grossly unfair on producer D and be overly generous to producer C. Such a BCA would amount to protectionism of domestic industry and unduly penalise producer D while subsidising producer C.

One would, therefore, have to establish a way for the foreign producers to report their carbon content in the same way as domestic producers. The efficient foreign producer D would have a strong incentive to do so. They will be ready to collaborate with domestic authorities (just as foreign producers are willing to collaborate with domestic authorities in proving that their toy is safe to use etc).

One could imagine that such a strong price mechanism would then give rise to private agencies (carbon rating agencies) that monitor compliance and accuracy of reporting. In fact, there are already numerous consultancies that provide such services. One often mentioned criticism is that that would be unfair to small and medium-sized companies relative to big companies. To address this criticism, one could even agree that the EU would pay the price of certification.

Concluding remarks

The purpose of this post was to demystify the debate on BCA, debunk some false beliefs and trigger debate on the way forward. The practical problem of solving BCA is substantial and likely to keep the Commission and the EU busy for some time to come.

It is an important empirical question, how important carbon leakage is in practice, but for the EU with its strong reliance on industrial production and exports, carbon leakage is likely to be of relevance. If a carbon tax is supposed to change behaviour, then it is likely that leakage will also be a problem – but more empirical research here would be welcome. BCA therefore rightly figures prominently in the Commission's agenda. ■

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The future of the euro area economy

Europe needs to strengthen common institutions and empower the European economy to respond to today's challenges, says Christine Lagarde. This would be a game changer for Europe's stability and prosperity and for that of the global economy, too

TS Eliot said that *"every moment is a fresh beginning"* and it certainly feels that way for me today. But in many respects it feels that way for Europe, too. The idea of European renewal may, for some, elicit feelings of cynicism.

We have heard it many times before: *"Europe is at a crossroads"*; *"now is Europe's moment."* Often that has not proven to be the case. But this time does in fact seem different.

Turnout at the latest European elections was the highest in a quarter of a century. A new Commission is about to begin its term with an agenda to strengthen Europe in areas like environmental policies, digitalisation and defence. Discussions are moving forward on completing banking union and building a capital markets union. This is essential because, all the while, the world around us does not stand still.

In recent years, the global environment has been transformed in ways that none of us could have imagined. We have seen the post-war global order fracturing, the rise of new – and some old – powers, rapid changes in technology, and an uncertain outlook for global trade and finance.

Uncertainty abounds and conventional wisdom is being challenged, in politics, in diplomacy and in economics. And, unavoidably, this calls on Europe to consider its place in the world and reset its ambitions. I would like to focus on the economic dimension of this question. As the global economy evolves, how can Europe best position itself?

Challenges in the global economy

This question is prompted by two main challenges in the global economy today. The first relates to the changing nature of world trade, which has multiple causes.

Ongoing trade tensions and geopolitical uncertainties are contributing to a slowdown in world trade growth, which has more than halved since last year. This has in turn depressed global growth to its lowest level since the great financial crisis.

These uncertainties have proven to be more persistent than expected, and this is clearly impacting on the euro area. Growth is expected to be 1.1% this year, ie. 0.7 percentage points lower than we projected a year ago[1].

> *We face a global environment that is marked by uncertainty. We have a unique possibility to respond to a changing and challenging world by investing in our future, strengthening our common institutions and empowering the world's second largest economy*

At the same time, there are also changes of a more structural nature. We are starting to see a global shift – driven mainly by emerging markets – from external demand to domestic demand, from investment to consumption and from manufacturing to services[2].

In parallel, world trade is being reordered as new technologies disrupt conventional supply chains and workplace organisation, and as potential new risks emerge from climate change. All this obviously has implications for our external sector, not least because the euro area's exports are intense in capital and intermediate goods.

It suggests that Europe needs to innovate and invest to respond to these challenges and preserve its competitiveness in the longer run. But it also suggests that the high rates of trade growth that we are used to seeing are no longer an absolute certainty.

The second challenge relates to domestic growth in advanced economies. Advanced economies are in the midst of a long-term deceleration in growth rates, which have roughly halved since the late 1980s. This is reflected in the long-term decline of global interest rates. As growth rates are a fundamental driver of interest rates, even countries that have tried to raise interest rates have gradually lowered them again.

Supply-side factors, such as productivity and demographics, are clearly one driver behind this. Labour productivity growth has fallen by almost two-thirds in advanced economies since the early 1990s.

In 2015, there were four working-age people for every person over the age of 65 in advanced economies. By 2050, that ratio will be less than two to one. But there is evidence that demand-side factors are playing a role as well.

In the euro area, domestic demand has contributed to the recovery, helping to create 11.4 million new jobs since mid-2013. But over the past ten years, domestic demand growth has been almost 2 percentage points lower on average than it was in the decade before the crisis, and it has been slower than that of our main trading partners[3].

This is reflected in the shift in our current account position, which has moved from being broadly balanced before the crisis to showing a surplus since, as well as in the relatively subdued performance of underlying inflation. So, these twin external and domestic challenges call on us to consider – as Europeans – how we should respond to the new environment.

The answer lies in converting the world's second largest economy into one that is open to the world but confident in itself – an economy that makes full use of Europe's potential to unleash higher rates of domestic demand and long-term growth.

There are two reasons why this would be beneficial: *resilience* and *rebalancing*.

Resilience and rebalancing

Resilience rests on two pillars. It relies on having firms that are competitive globally and can export to the world when domestic growth falls; and it relies on having a strong internal economy which can sustain demand when the global economy weakens.

Open trade is therefore a platform for resilience, as we saw clearly during the sovereign debt crisis. From 2010 to 2013, the share of extra-euro area goods exports in GDP increased by about 20%, while the share of intra-euro area exports grew by just 5%.

The global competitiveness of many euro area firms was a vital shock absorber in that period, and the benefits were spread across the monetary union via value chain linkages. Without a strong export sector, our crisis would plainly have been worse.

At the same time, it is also clear that stronger domestic demand puts economies in better position to withstand swings in the global business cycle and disruptions in world trade – like those we are seeing at the moment – and to keep their growth trajectories on course.

One sign of this can be found by looking at the correlation between global growth and domestic growth over the past 40 years for countries with different trade exposures, as captured by their current account positions.

It turns out that the group of surplus countries tends to grow faster than the world economy during periods of global upswings, but also to contract more sharply during periods of global downturns. For the group of deficit countries, the opposite is the case[4].

And when global growth falls, stronger internal demand can help protect jobs, too. This is because domestic demand is linked more to services – which are more labour-intensive – while external demand is linked more to manufacturing, which is less labour-intensive[5].

We are seeing that shield in action in the euro area today: the resilience of services is the key reason why employment has not yet been affected by the global manufacturing slowdown[6].

But there is also a second benefit to strengthening the domestic economy, which is that it facilitates *rebalancing*. More dynamic internal growth offers a way to improve the functioning of the euro area and to accelerate crisis recovery. Since countries in a monetary union do not have their own exchange rates, they have to adjust to crises through prices.

This is easier to achieve when growth is strong at the euro area level and inflation is in line with the ECB's objective. Adjusting countries can quickly improve their relative prices and export more to other members of the union.

But if internal demand is too weak and inflation too low, such rebalancing across countries obviously becomes harder. And to some extent, this is what we saw in the euro area after the crisis. As demand was stronger in our trading partners, vulnerable countries had to reverse their imbalances mainly by increasing net exports outside the euro area.

Importantly, strengthening internal growth is fully consistent with all countries maintaining their competitiveness. If countries boost growth by investing in productive areas of the economy, it not only lifts demand in the short run. It also provides the ingredients for maintaining competitiveness in the face of long-run global challenges.

So the question is, what can public policies do to further develop our domestic demand and growth potential, while also encouraging dynamic and globally competitive firms?

Policies to boost internal growth

In my view, since our challenges are common ones, we must meet them with a common response. This involves moving towards a new European policy mix, which has a number of key elements.

The first is monetary policy, which I start with because it is my area of responsibility and which will undergo a strategic review due to begin in the near future.

The ECB's accommodative policy stance has been a key driver of domestic demand during the recovery, and that stance remains in place. As laid out in the ECB's forward guidance, monetary policy will continue to support the economy and respond to future risks in line with our price stability mandate. And we will continuously monitor the side effects of our policies.

But it is clear that monetary policy could achieve its goal faster and with fewer side effects if other policies were supporting growth alongside it. One key element here is euro area fiscal policy, which is not just about the aggregate stance of public spending, but also its composition. Investment is a particularly important part of the response to today's challenges, because it is both today's demand and tomorrow's supply.

While investment needs are of course country-specific, there is today a cross-cutting case for investment in a common future that is more productive, more digital and greener.

Public investment in the euro area remains some way below its pre-crisis levels. The share of productive expenditure in total primary expenditure – which in addition to infrastructure includes R&D and education – has also dropped in nearly all euro area economies since the crisis[7]. And new investment needs are emerging.

Both national policies and European programmes like InvestEU have a role to play. And the Budgetary Instrument for Convergence and Competitiveness is also a good start. This tool acknowledges that, even when governments need to consolidate their finances, we have a common interest in maintaining sufficient levels of public investment.

But a stronger domestic economy also rests on higher business investment, and for that raising productivity is equally important. Firms need to be confident in future growth if they are to commit long-range capital.

Though all advanced economies are facing a growth challenge, the euro area has been slower to embrace innovation and capitalise on the digital age than others such as the United States. This is also reflected in differences in total factor productivity growth, which has risen by only half as much in the euro area as it has in the United States since 2000.

To help us close this gap, we have a very potent tool at our disposal: empowering our internal market. The private sector calls it: scale. Completing the digital single market, the capital markets union and the single market in services can provide the impetus Europe needs to launch new and innovative firms and to spread new technologies faster around the union. These are the building blocks of the European economy of the future.

And the projected gains are significant: new studies find that the full implementation of the Services Directive would lead to gains in the order of €380 billion[8], while completing the digital single market would yield annual benefits of more than €170 billion[9].

This growth dividend would in turn help close the circle with public investment by ensuring that public debt is sustainable. Finally, empowering our internal market also means completing our Economic and Monetary Union. The design of EMU – and in particular the balance between risk reduction and risk sharing – is closely linked to the propensity to save and spend in Europe.

On the one hand, a monetary union focused too much on risk sharing is likely to produce moral hazard and too little saving, which harms the union as a whole. But on the other hand, prioritising risk reduction alone is likely to lead to the opposite problem: excess saving and fragile growth as countries are forced to self-insure by running persistent surpluses.

The solution to the famous *"paradox of thrift"* is institutions. Good institutions exist to ensure that people are not forced into actions that are rational at the individual level but self-defeating collectively.

So, completing EMU is about finding the right trade-off: enough protection against moral hazard to discourage under-saving, but enough mutual insurance to prevent over-saving. In this way, we could tap into new sources of growth that would otherwise be suppressed. And that would truly represent a *"new approach"* for Europe.

Conclusion

We face a global environment that is marked by uncertainty. But I believe that, if we approach this challenge in the right way, it can also be a moment of opportunity.

We have a unique possibility to respond to a changing and challenging world by investing in our future, strengthening our common institutions and empowering the world's second largest economy.

All of this would be a game changer, not just for our own stability and prosperity, but for that of the global economy, too. It does require us to think differently about Europe. It will almost certainly not be easy. But as St Francis of Assisi once said, *"Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible."* ■

Christine Lagarde is President of the European Central Bank

Endnotes

1. September 2019 ECB staff projections.

2. See ECB (2017), "China's economic growth and rebalancing and the implications for the global and euro area economies", Economic Bulletin, Issue 7.

3. Since the onset of the financial crisis, domestic demand growth in the euro area has averaged 0.5%, compared with average growth of 2.3% in the decade before 2008.

4. Internal ECB analysis.

5. See Anderton, R, Aranki, T, Bonthuis, B and Jarvis, V (2014), "Disaggregating Okun's law? Decomposing the impact of the expenditure components of GDP on euro area unemployment", Working Paper Series, No 1747, ECB, Frankfurt am Main, December.

6. See Lane, P (2019), "Europe's role in a changing global economy", presentation at the European Commission's Annual Research Conference in Brussels, 15 November.

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8. Pelkmans, J (2019), "Contribution to Growth: The Single Market for Services", study prepared for the European Parliament's Committee on the Internal Market and Consumer Protection.

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A challenging path ahead

Reuben Borg, Marco Buti, Oliver Dieckmann, Björn Döhring, and Alexandru Zeana consider the European Commission’s Autumn 2019 forecast

The current weakness of GDP growth and low inflation in the euro area are unlikely to be reversed, by themselves, in the next two years. The near-term outlook will much depend on whether the rest of the economy, in particular the services sector, will remain resilient to the persistent slowdown in manufacturing, and on the continued robustness of employment.

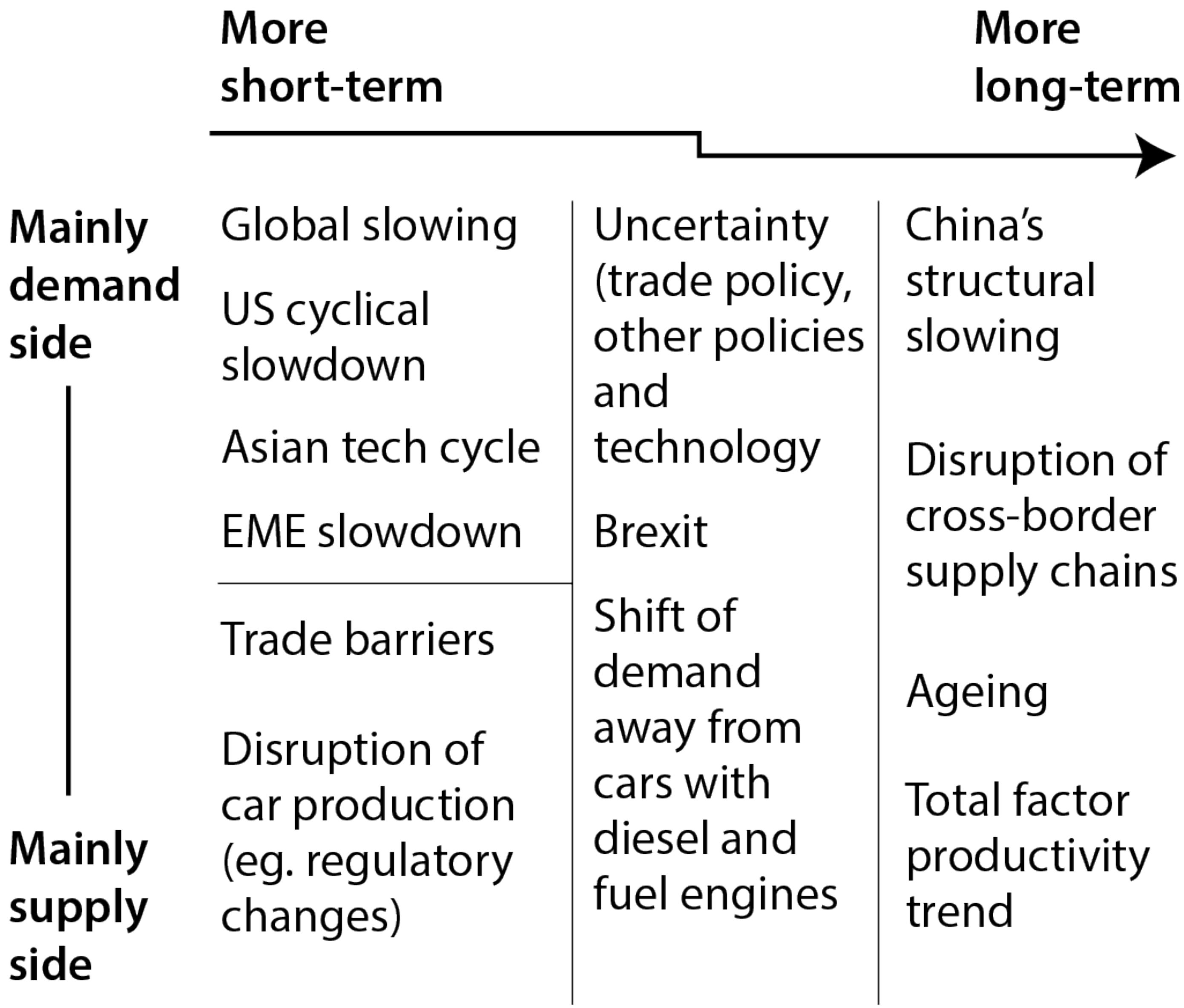
This column introduces the European Commission's Autumn 2019 Forecast, which suggests that while a recession is not in the cards unless major risks were to materialise in the near future, a prolonged period of very low growth and inflation might loom for the medium term.

A more supportive economic policy mix is needed to stabilise the economy in the near term, to prevent the risk of protracted sluggishness in the medium term, and to provide impetus to the transition towards an environmentally and socially sustainable economy.

Economic activity in the euro area has decelerated over the past year, reflecting both a global growth slowdown and domestic growth impediments. More recently, the global economy has turned out even weaker than expected, with flat-lining world trade amid high policy uncertainty (IMF 2019). The deteriorating global environment has hit European manufacturing and investment.

A closer look at the factors that are currently dampening economic growth in the euro area (Figure 1) reveals a combination of interacting supply shocks (eg. trade tensions), cyclical developments (eg. the maturing cycle in the US), structural shifts (eg. the transition in China), and long-term developments (eg. trend towards lower productivity growth).

Figure 1. Factors impacting on economic growth and inflation in the euro area



More short-term

More long-term

Mainly demand side

Mainly supply side

Global slowing

US cyclical slowdown

Asian tech cycle

EME slowdown

Trade barriers

Disruption of car production (eg. regulatory changes)

Uncertainty (trade policy, other policies and technology

Brexit

Shift of demand away from cars with diesel and fuel engines

China’s structural slowing

Disruption of cross-border supply chains

Ageing

Total factor productivity trend

The key question for the euro area outlook is whether the various negative shocks will fade and allow an even modest rebound, whether growth will remain subdued, or whether the negative factors might interact in a way that would push the economy in the direction of recession.

The European Commission's just released Autumn 2019 European Economic Forecast projects a protracted period of slow growth and muted inflation, arguing that the impact of several factors holding back growth will not fade swiftly. GDP growth in the euro area is projected at 1.1% this year and 1.2% in both 2020 and 2021 (Table 1).

... today's policy decisions concerning education, digitalisation and research will shape the fairness, technological edge and growth potential of the economy over the coming decades

Table 1. Forecast for the euro area

Annual percentage change

	2016	2017	2018	**2019**	**2020**	**2021**
GDP	1.9	2.5	1.9	**1.1**	**1.2**	**1.2**
Private consumption	2.0	1.7	1.4	**1.1**	**1.2**	**1.2**
Public consumption	1.9	1.3	1.1	**1.6**	**1.5**	**1.3**
Gross fixed capital formation	4.0	3.5	2.3	**4.3**	**2.0**	**1.9**
of which: equipment	5.8	4.0	4.3	**2.5**	**1.6**	**1.9**
Exports (goods and services)	2.9	5.5	3.3	**2.4**	**2.1**	**2.3**
Imports (goods and services)	4.1	5.0	2.7	**3.2**	**2.6**	**2.7**
Contribution to GDP growth:						
Domestic demand	2.3	1.9	1.5	**1.8**	**1.4**	**1.3**
Inventories	0.0	0.2	0.0	**-0.4**	**0.0**	**0.0**
Net exports	-0.4	0.5	0.4	**-0.3**	**-0.1**	**-0.1**
Employment	1.4	1.5	1.5	**1.1**	**0.5**	**0.5**
Unemployment rate (a)	10.0	9.1	8.2	**7.6**	**7.4**	**7.3**
Harmonised index of consumer prices	0.2	1.5	1.8	**1.2**	**1.2**	**1.3**
General government balance (b)	-1.4	-0.9	-0.5	**-0.8**	**-0.9**	**-1.0**
General government gross debt (b)	92.2	89.8	87.9	**86.4**	**85.1**	**84.1**

(a) as % of total labour force. (b) as a % of GDP

Source: AMECO

While downside risks remain large, a movement into recession is not in the baseline. The outlook for a subdued expansion without a rebound is a change of assessment compared to previous Commission forecasts.

Equipment investment growth dropping due to weak foreign demand and uncertainty

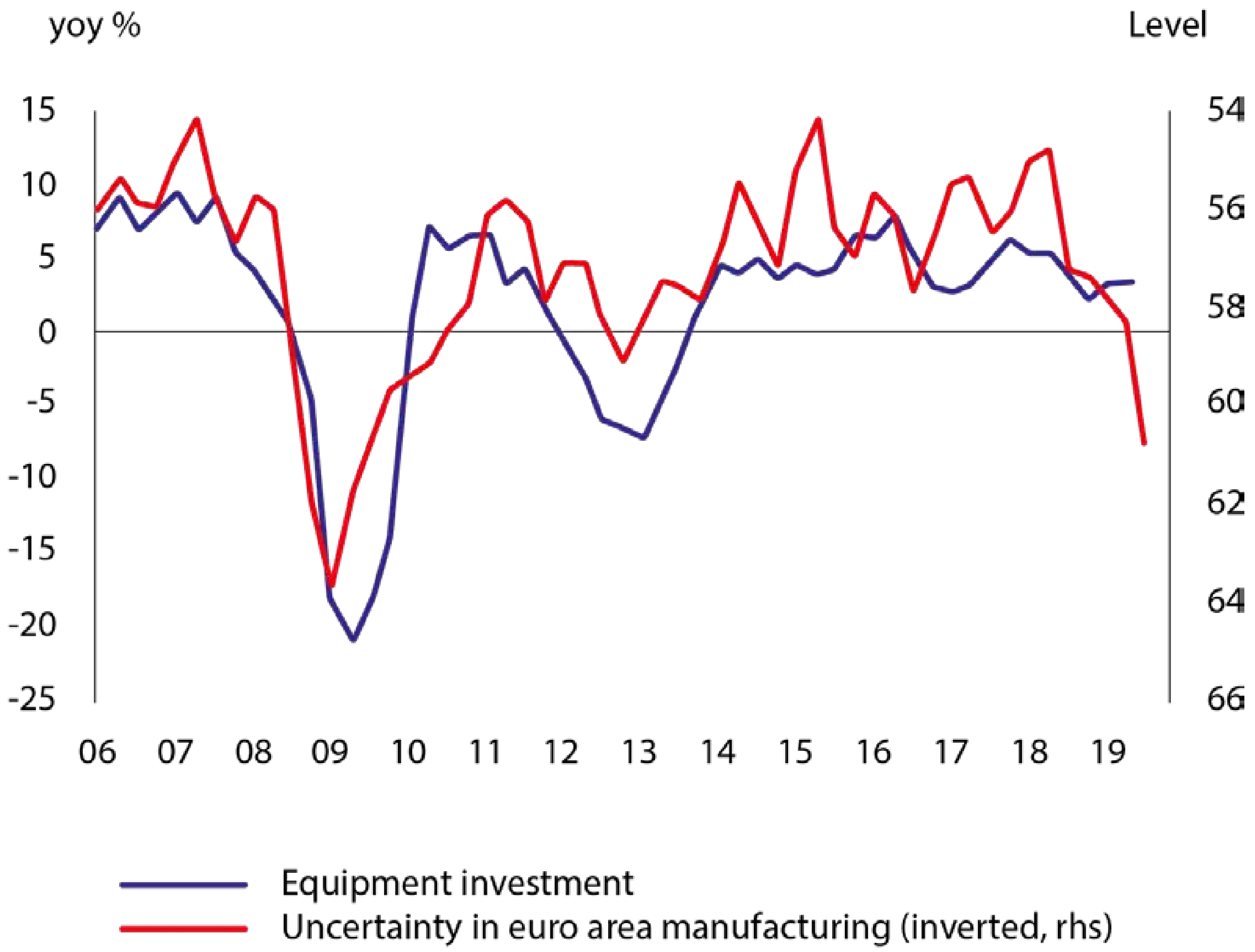
Extraordinarily high uncertainty and the implementation of tariffs by Europe's two biggest trading partners on their bilateral trade is having a large impact on investment. Global trade policy uncertainty is at a record high, and the uncertainty reflected in the dispersion of replies to the European Commission's manufacturing industry surveys has also surged (Figure 2, inverted scale).

Uncertainty at such high levels is bound to dampen investment (Baker *et al*. 2016). As it is driven by potentially persistent factors such as a lack of reliability of agreed trade rules and an uncertain outlook for cross-border activity (eg. foreign trade, FDIs, global value chains), the impact of uncertainty on the real economy may also be longer lasting. Companies might not only delay investment plans but cancel them or redirect investments into regional production chains.

Recent studies examining the impact of the current trade tensions highlight the negative impact of uncertainty (Caldara *et al*. 2019), also as a transmission channel to countries not directly involved in the trade conflict (IMF 2019: Box 1.2).

The impact of tariffs and trade policy uncertainty may be amplified through global value chains (Wozniak and Galar 2018). The geographical fragmentation of production implies that intermediate goods cross borders several times, making the production process more vulnerable to trade restrictions at each production stage and increasing the cumulative tariff incorporated in final goods prices. If persistent trade policy uncertainty were to induce firms to

Figure 2. Equipment investment and uncertainty in industry, euro area



Source: Eurostat, DG ECFIN

shorten and reshape their supply chains, the recent drop in the trade elasticity of global GDP growth could become more persistent.

Against the backdrop of the probably protracted weakness of world trade, the euro area outlook for the coming years depends on four main factors:

- if and for how long the rest of the economy, in particular the services sector, can remain resilient amid the manufacturing weakness;
- whether the negative impulse delivered through trade will spread geographically;
- if the labour market continues to hold up; and
- how wage growth will feed through to inflation.

We first raised this issue (with respect to three of these 'divergences') back in spring (Buti *et al*. 2019). By now, there are more indications of the weakness spreading, motivating the projection that the slowdown will be more persistent.

The longer the manufacturing weakness lasts, the more likely it is to spread across sectors and geographically

Not all manufacturing recessions lead to a contraction of the whole economy. While manufacturing output in the euro area as a whole has been declining since mid-2018, output growth in the rest of the economy has been holding up (Figure 3), expanding at an annual rate of around 1.7% in the first half of 2019.

Looking ahead, the services PMI has remained in expansion territory, but decreased somewhat in recent months. The Commission's services sentiment indicator has fallen below its long-term average this summer, also pointing to limits to a continued divergence of manufacturing and services.

Among the large Member States, the slowdown from buoyant GDP growth in 2017 to 2019 was particularly sharp in Germany (from 2½% to less than ½%), due to its export dependency and large manufacturing base. Despite their strong integration into the value chains of German manufacturing, some neighbouring countries have so far shown remarkable resilience.

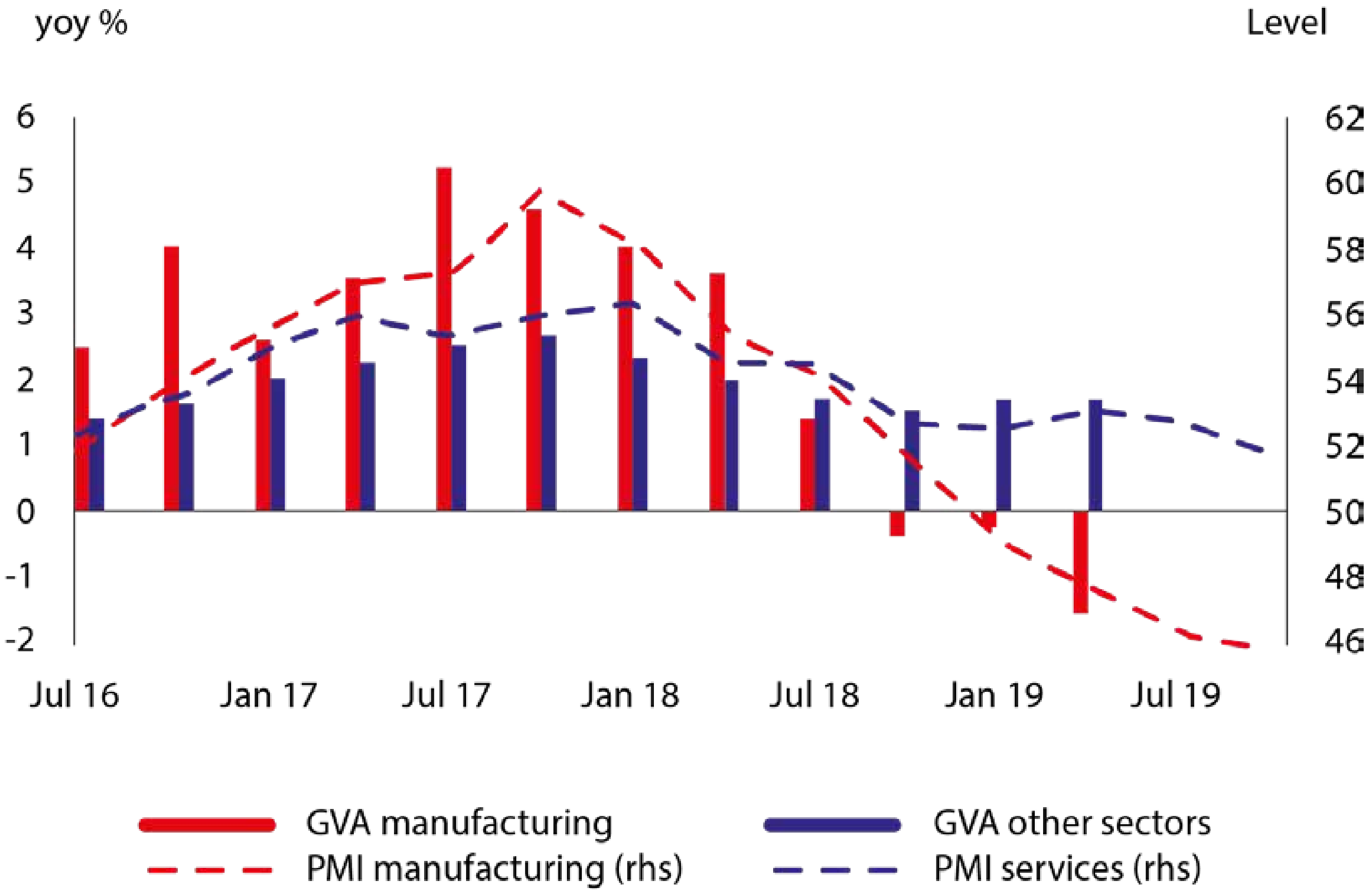
However, some convergence towards lower growth is expected for 2020. Even so, the growth rates of Central and Eastern European countries are projected to remain well above the EU average in 2020 and 2021 on account of booming labour markets, strong construction activity, and in some countries the opening of new factories and the switch to new product lines.

The strength of the labour market should prevent a worse outcome and wage growth should eventually feed through to inflation

The situation of European labour markets has improved further despite the economic slowdown. Both the number of persons employed and the number of hours worked continued to increase this year, while unemployment rates fell further.

However, near-term employment indicators have moderated over the last few months suggesting that the economy's weakness has started affecting labour markets (Figure 4). For the moment, the only indications of employment growth coming to a halt come from the manufacturing sector. Employment in the services sector and construction is still on the rise and weighs significantly more in aggregate employment.

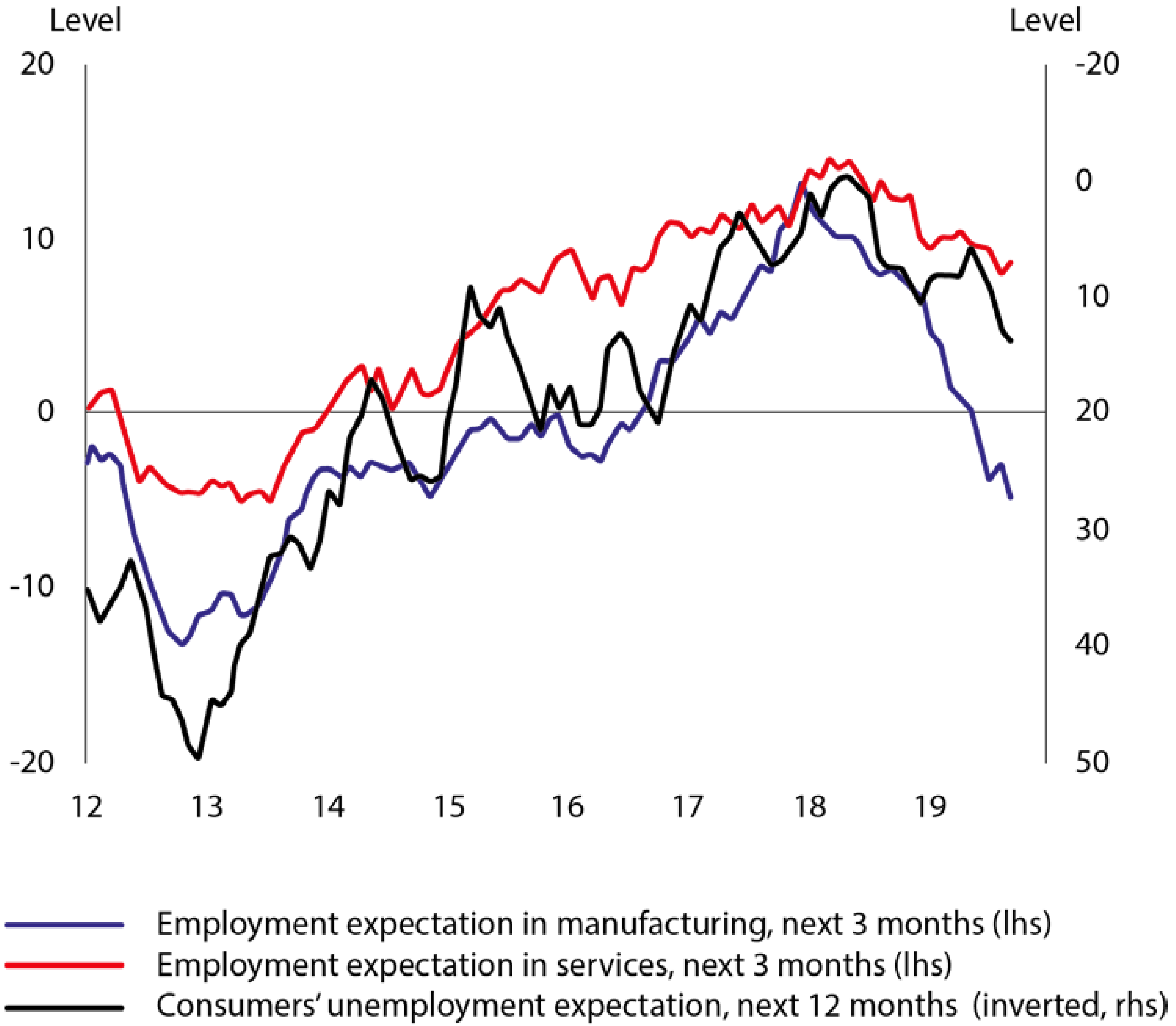
Figure 3. Gross value added and PMIs by sector, euro area



Last observation for GVA: 2019Q2; last observation PMI: October 2019

Source: Eurostat, DG ECFIN

Figure 4. Employment expectations, Commission surveys, euro area



Source: DG ECFIN

The reasons behind the slight decrease in employment growth are similar to those impacting GDP growth. An analysis of the contributors to employment growth using the Commission's Global Multi-country model (Albonico *et al*. 2017) suggests that external demand has contributed negatively to employment growth in 2019, which was only partly compensated by domestic demand.

Supply factors, including the impact of past labour market reforms and possibly some labour hoarding, have also contributed positively and are set to continue supporting employment next year, although to a lesser degree.

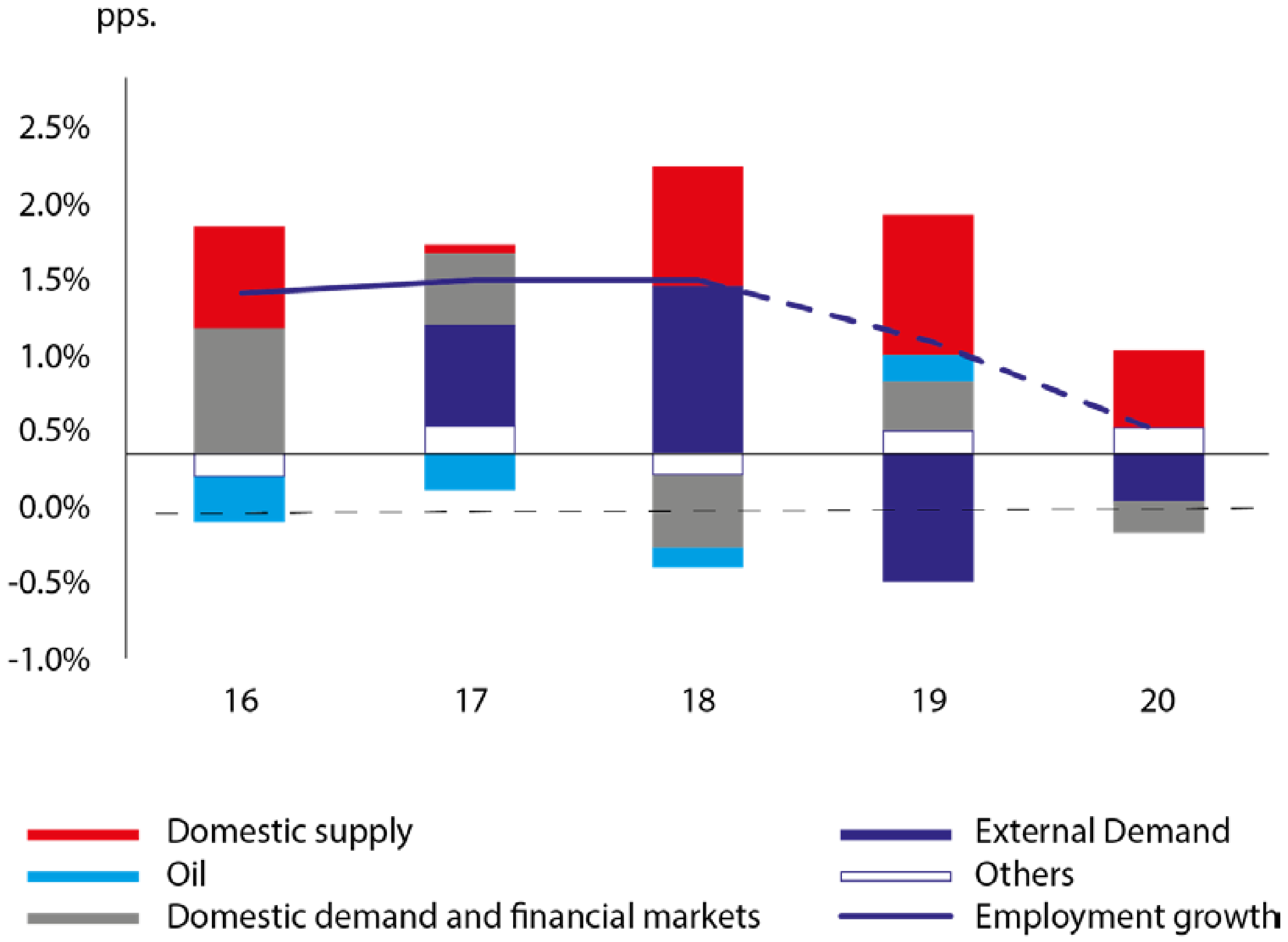
Overall, over the next two years, employment growth is expected to continue but at a moderate pace, reflecting the lagged effect of the GDP slowdown. The relationship between economic activity and the labour market thus remains consistent with traditional views such as Okun's law (Ball *et al*. 2017).

If anything, the expansion so far has been rather job-rich (Botelho and Dias da Silva 2019). As a corollary, productivity growth has declined, in part due to shifts in the sectoral composition of the economy towards services. This suggests that the rate of GDP growth at which employment growth drops to zero may now be lower than in the past.

Finally, some labour hoarding in countries and sectors where labour markets had recently turned particularly tight is expected to limit headcount reductions as long as employers perceive the current economic weakness as temporary.

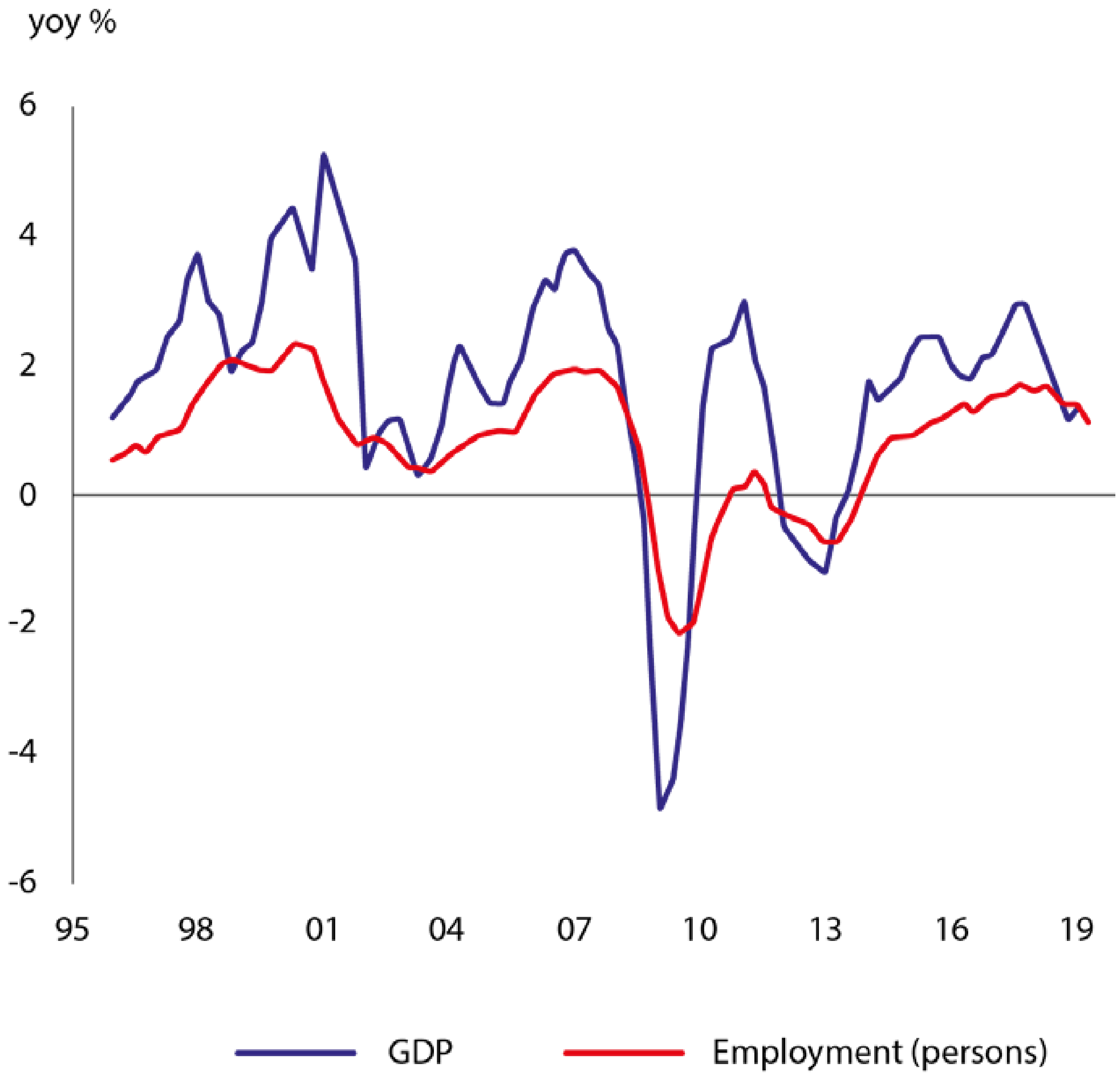
Reflecting the lagged impact of labour-market tightening, wage growth has picked up in 2017 and 2018. Aggregate data suggest that firms have absorbed higher wage costs in their profit margins rather than passing them on in higher selling prices to consumers, and core inflation has hardly reacted to higher wage growth (Figure 7).

Figure 5. Contributors to employment growth in the euro area (expressed as deviations from long-term trends)



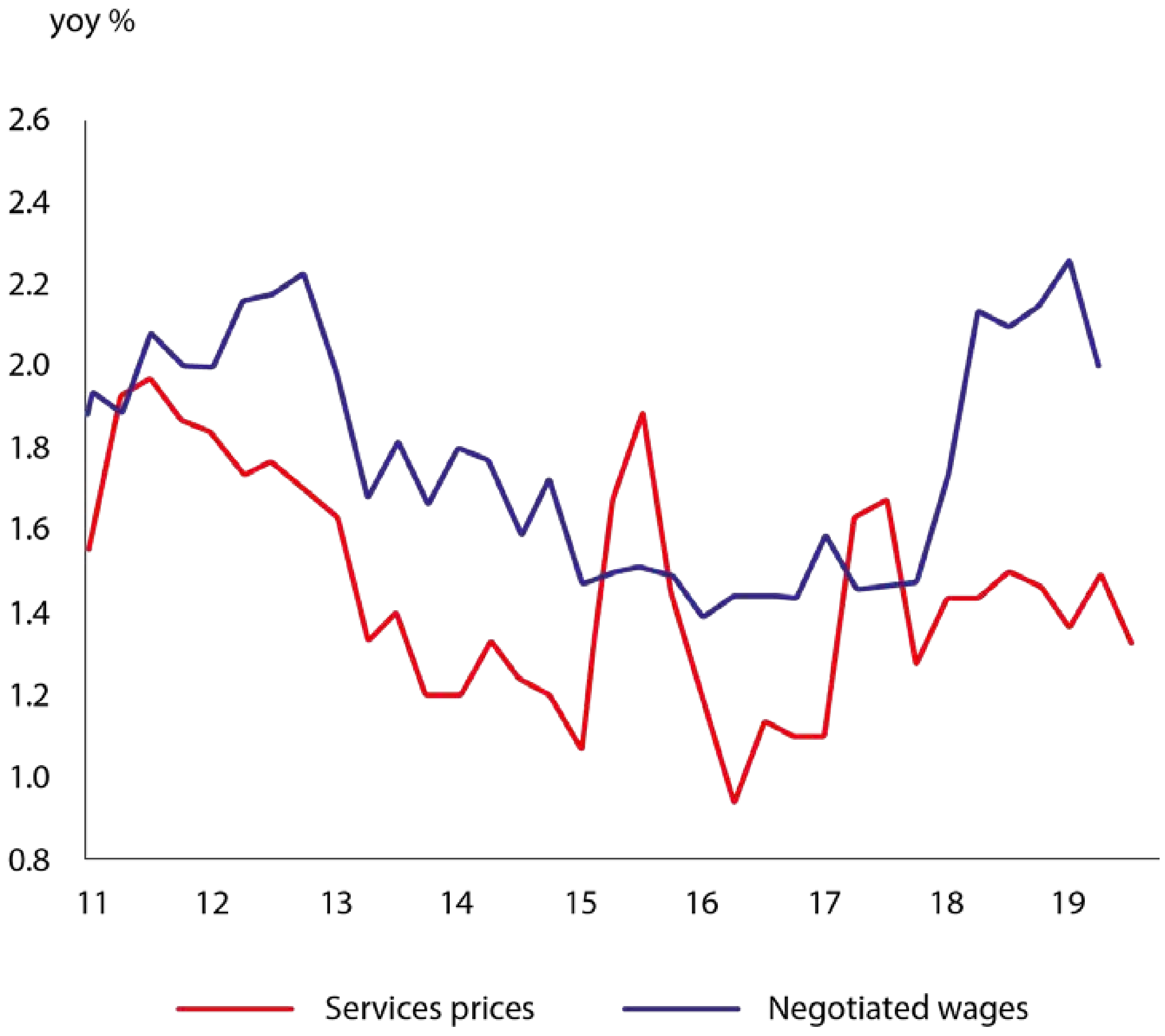
Source: DG ECFIN
Note: The bars represent deviations from the long-term trend rate of employment growth (0.3%). A bar above (below) the horizontal axis represents a positive (negative) contribution.

Figure 6. Employment and GDP growth



Source: Eurostat

Figure 7. Wage growth and services inflation, euro area



Source: Eurostat, ECB

The positive momentum in wages may last for some time, to the extent that wages have been agreed for several years, or that labour shortages persist in some sectors (eg. construction). Data for 2019 suggest, however, that wage growth may not further increase. This contributes to the expectation of only modest inflation increases as projected in the forecast.

The combination of persistent shocks and long-standing structural issues could prolong the weakness into the medium term

In the absence of further negative shocks, the negative cyclical and structural factors discussed above are unlikely to be strong enough to draw the European economy into a recession.

However, slowing productivity growth was already evident before the Great Recession, and Europe is now entering a phase where demographic ageing is felt more strongly. The combination of recent shocks with these underlying impediments to trend growth might well lead to an equilibrium with more or less stagnating aggregate economic output and very low inflation in the medium term.

Persistently low growth and inflation amid very low interest rates have implications for potential output and equilibrium real interest rates (natural rate). In the euro area, the equilibrium interest rate may have declined (Jordà and Taylor 2019; see also Holston *et al*. 2017). Both a lower natural rate and low inflation expectations decrease the policy interest rate that is needed for effective monetary policy and imply that central banks find themselves more often at an effective lower bound of policy interest rates.

Discussions about a related risk of secular stagnation (Rachel and Summers 2019) are not new. Recently, new momentum has been added to the discussion by the very low or negative long-term bond yields on most euro area sovereign bonds, which have been interpreted as an indication of reduced growth and inflation expectations and a prolonged period of very accommodative monetary policy (eg. Darvas 2019).

However, other analyses have seen the subdued pace of growth since the Great Recession largely as a legacy of the crisis, and empirical analysis has not been able to provide strong evidence in favour of the secular stagnation hypothesis (eg. Roeger 2014).

In conclusion, some of the recent shocks – such as the impact of trade policy uncertainty on global value chains or structural shifts in demand for cars – are unlikely to be reversed soon. They might interact with longer-standing weaknesses of trend growth and dampen medium-term growth to an extent where they trap the European economy in an equilibrium of very low growth and inflation.

Economic policies need to become more effective and better coordinated

The prospect of a prolonged phase of subdued GDP growth and muted inflation has prompted the ECB to implement additional easing measures in September, calling at the same time for fiscal and structural policies to be stepped up (European Commission 2019) in order to reach an overall more supportive policy mix.

The weak near-term outlook and the substantial downside risks call for the deployment of stabilising macroeconomic policies, while the risk of a prolonged period of low growth in the medium term calls for addressing the causes of low productivity growth. At the same time, policymakers must not be distracted from the challenge of steering the transition to a socially and environmentally sustainable economy.

A more supportive fiscal stance for the euro area as a whole is justified in the current situation by the sharp slowdown of manufacturing and the drop of GDP growth below trend. More importantly, the risks surrounding this outlook are large and negative, including a further escalation of trade and geopolitical tensions, and a more substantial spillover of the manufacturing slump to the rest of the economy.

Therefore, the risk associated with deploying fiscal support unnecessarily now appears smaller than the risk associated with inaction (Boone and Buti 2019). In the absence of a euro area budget for stabilisation, fiscal stabilisation requires a more coordinated response.

For the member states with fiscal space, using it actively and pre-emptively would allow not only a fiscal stimulus to be provided, but also the public capital stock to be refreshed and modernised, thereby boosting potential growth. Member states with high public debt should enact prudent policies that put their debt credibly on a sustainable downward path. But they should also prioritise investment and improve the quality of taxation and expenditure.

Intertemporal coherence is also important. A targeted package of fiscal and structural policies must at the same time contribute to the transition to an environmentally and socially sustainable and productive economy. Physical investment undertaken today must contribute to the ecological transition.

The buildings, transport and energy infrastructure built today, for example, will still be in use in 2050 – a date by which the European economy should be fully de-carbonised.

Likewise, today’s policy decisions concerning education, digitalisation and research will shape the fairness, technological edge and growth potential of the economy over the coming decades. The economic setback makes it no easier to deliver such a package. But at the same time, very low or negative financing costs provide an opportunity to bring forward projects with a high social, environmental and economic return. This window of opportunity should be used now. ■

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The international role of the euro

The euro is 20 years old. Poul Thomsen considers what can be done to further strengthen the role of the euro as an international reserve currency

Introduction

I am going to talk about what can be done to strengthen the euro's role as a reserve currency. This is a timely question, for at least two reasons:

- First, this being the 20th anniversary of the euro, it is a good time to take stock of the use of the euro as a global currency.

- Second, many European policymakers have been calling for strengthening the international role of the euro, including President Juncker in his State of the Union address last year. With a new Commission assuming office, it is an opportune time to ask what more policymakers can do.

The desire to boost the international role of the euro is motivated by a number of factors. One is the sense among European policymakers—rightly or wrongly—that the US benefits from an 'exorbitant privilege', and that an increased role for the euro could reduce what is perceived by some as European vulnerabilities stemming from the dominance of the dollar.

In a speech at the Fed's recent Jackson Hole Symposium, Bank of England Governor Mark Carney discussed the imbalances in the international monetary and financial system created by the dominance of the US dollar[1].

He argued that the high share of trade invoicing and financial activities denominated in dollars increases spillovers from US policies and weakens the effectiveness of monetary policy in other countries, undermining their ability to focus on domestic objectives.

He noted that growth in dollar-denominated borrowing by nonfinancial firms globally has increased vulnerabilities to fluctuations in the dollar exchange rate and caused central banks to continue building up costly dollar reserves.

This is especially true in emerging markets, which represent a growing share of the global economy. This dynamic reinforces the strong network effects of trade invoicing in dollars and continued dominance of the dollar as an international reserve currency.

Enhancing the global role of the euro is a welcome by-product of changes needed to make the euro work better for Europe

Governor Carney concluded that *"ultimately a multi-polar global economy requires a new international monetary and financial system to realize its full potential."* This includes a diversification of international reserve currencies and reduced reliance on the dollar[2].

Carney focused in particular on the Chinese renminbi's potential. I will focus on the potential for the euro. As a starting point, we should remind ourselves that the euro already is an important reserve currency. In fact, it is the second most utilized international reserve currency—a role it inherited in large measure from the deutsche mark yet subsequently expanded on[3].

My remarks will be from the perspective of what can be done to further strengthen the role of the euro as an international reserve currency. But, you will see that the policy conclusions are to a considerable degree similar to what we have been arguing will be needed to strengthen the resilience of the euro area in any event: namely, to reduce the zone's vulnerability to country-specific shocks and to foster convergence within the monetary union.

You could say that—in my view—strengthening the role of the euro as a reserve currency would be a by-product of much-needed reforms to make the euro area work better for all its citizens.

What makes a good international reserve currency and how does the euro stack up?

Let us start by reminding ourselves of some of the main findings from the large body of economic research on the key features that an international reserve currency should possess.

First, the currency should have a large transaction area. This is important for providing a sufficient underlying demand for its use, both in trade and in finance. The British Empire provided such a basis for the use of sterling up to WWII, and the US has been the world's largest economy since the late 19th century.

The euro area clearly qualifies here. At current exchange rates, the eurozone accounted for 16 percent of global GDP in 2018, making it the second largest single currency zone in the world in terms of output.

The second feature is good institutions. This includes things like a stable monetary policy and respect for the rule of law. Users of an international reserve currency need to be confident that they will not be arbitrarily expropriated, whether through violent swings in inflation and the exchange rate or through outright seizure of assets. Having a stable monetary policy also helps to generate lower interest rates, which makes it attractive to foreigners to borrow in the currency.

On institutions, the euro area and its member states measure up pretty well. According to the World Governance Indicators, euro area countries rank in the top 20 percent of all countries on the rule of law, with just a few exceptions.

Moreover, the EU has been a strong defender of multilateralism and dispute resolution through global institutions such as the WTO. And the experience of the last 20 years has shown the ECB's strong commitment to its inflation objective and strong independence even in the face of considerable criticism, at times from powerful member states.

The third feature a reserve currency needs is deep, liquid, and open financial markets. Financial markets need to be deep to provide enough assets denominated in the currency to satisfy the demand of foreign investors and central banks. And markets need to be liquid and open—meaning few controls on the currency—so that foreign holders of assets denominated in the reserve currency feel confident that they can move in and out of their positions easily and without excessively moving prices and exchange rates.

For example, research on the history of reserve currencies shows that the development of deep and liquid financial markets was critical to the US dollar gaining parity with sterling as an international currency before WWII[4].

While euro area financial markets are open—with strong safeguards against capital controls— they are not nearly as deep and liquid as US financial markets. For example, in 2018, euro area bond and equity markets were worth about 20 trillion dollars compared to over 50 trillion dollars in the US.

Moreover, the choice of euro-denominated assets is more limited than dollar-denominated assets. For instance, less than 30 percent of euro area nonfinancial corporations' financing comes from tradable debt and listed equity versus about 70 percent for US firms. One issue here is clearly the much higher reliance on relationship-based lending than on arm's-length capital markets in the euro area.

Overall, euro area financial markets are also much more fragmented than in the US, including for sovereign debt. The market for US Treasury bonds is one of the deepest and most liquid in the world. There is no single comparable market in the euro area.

The fourth important feature of an international reserve currency, according to some literature, is the backing of a strong central state, in part to give the currency true permanence. As Robert Mundell put it 20 years ago, and I quote: *"You have to have a belief that the euro is going to be there not just tomorrow and 10 years from now, or 30 years from now, but 100 years from now."*[5]

Obviously, there is no strong central state for the euro area as whole. It is an economic and monetary union, but *it is not a political union*. I want to emphasize this, because this is of course the defining feature of the euro area—the feature that makes this area fundamentally different from other major currency areas, which all are political unions with a strong centre.

This, I will argue—the fact that it is not a political union—is clearly the limiting feature when it comes to the ability of the euro to seriously challenge the dollar.

The global financial crisis and the euro area debt crisis that followed exposed the fact that national policies in some euro area member states were not always consistent with membership in a monetary union. It also highlighted a number of weaknesses in the architecture of the monetary union itself.

It is therefore not surprising that after climbing considerably in its first decade, international use of the euro declined sharply as the euro area debt crisis caused investors to question the sustainability of the zone in its current form.

Of course, much has been done since the crisis to address the architectural shortcomings of the monetary union. The establishment of the ESM and the creation of the banking union were important steps. As we all know, however, the architecture remains incomplete.

And, perhaps even more importantly, national policies in important areas still fall well short of what is needed for countries to thrive within the euro area. In particular, several countries with high public debt levels have done too little to put their debt burdens on a downward path and reduce their vulnerability to country-specific shocks and attendant shifts in market sentiment. Most of these high-debt countries also have low productivity and competitiveness gaps and have failed to implement many of the structural reforms they need to overcome these problems.

At the same time, euro area countries running large and persistent external and fiscal surpluses have done too little to boost domestic investment and demand, which would of course also contribute to a healthy rebalancing within the region.

In light of this, let me now turn to what I see as the prospects for improving the functioning of the euro area and increasing the international role of the euro.

Prospects for improving the functioning of the euro area and increasing the international role of the euro

In line with what I just said, I see three important issues critical to increasing the international role of the euro. The first is the balance between the network effects of using a single currency in trade and finance and the desire for greater diversification in international reserve currencies.

I will only briefly comment on this. The second is the depth and liquidity of euro area financial markets. The third, and most important, is how well the euro area functions for its members and the attendant impact on its attractiveness as a reserve currency.

As mentioned, there are often strong network effects and efficiency gains from transacting in one currency[6]. But, history shows that there is nothing inevitable about having a single dominant global currency. The growth in the international use of the euro in its first decade—when it was essentially taking market share from the dollar—is evidence of the appetite for more than one major international currency.

This desire for diversification in reserve currencies and for reducing the vulnerabilities and spillovers created by the dominance of just one serves as a counterweight to the network benefits of transacting in a single currency.

European policymakers are of course interested in increasing the invoicing of international trade in euros. How to do this is still not entirely clear to me though—this is usually a decision taken by individual actors, and depends on various factors, including the strength of the network effects already discussed.

European policymakers have argued for pricing more commodities in euros. I remain to be convinced about the success of such efforts. For commodities with a truly global market, such as oil, the efficiency gains from everyone pricing in a single currency seem to be quite strong. In those markets it is hard to see the euro making significant inroads into the dollar's dominance anytime soon.

Let me turn now to the second point: enhancing the role of the euro by developing deeper and more liquid euro area financial markets looks more promising. Here prospects are better.

For the banking union, the biggest element still missing is a common deposit insurance scheme for banks. At the same time, further work is also needed to strengthen the bank resolution and bank supervision frameworks. This includes reducing the still-excessive fragmentation of rules and regulations along national lines.

As to capital market union, I believe that there is a growing sense among member states that capital market integration offers an opportunity for EMU deepening that could be politically easier than some other reforms. By this I mean that many of the necessary steps do not run into the concerns about risk-sharing versus risk-reduction that have stalled other parts of the architectural reform agenda.

Thus, while completing the banking union and building a capital market union are undoubtedly still long-term projects, I do sense an encouraging political willingness to reinvigorate some of these efforts. A caveat though: realistically, euro area financial markets will never be as integrated as those in the US. This reflects in part that some of the necessary measures—like harmonization of bankruptcy procedures—are highly political and will run into the familiar obstacles to EMU deepening.

But it also reflects the prevalence of SMEs in Europe compared to the US, which suggest that relationship banking will always be more important in Europe. Thus, while the prospects for making progress on BU and CMU suggest to me that it is realistic to envisage an expanded role for the euro as an international reserve currency, these considerations also suggest the limitations for such an expansion.

But, the main limitation—and this brings me to the third point—remains the inconsistencies of policies at the national level with being member of a currency union and limitation in the euro area's architecture.

Of course, the architectural reforms needed to improve how the euro area serves its members entail more than just developing a deeper financial union. The fiscal rules need to be overhauled and a central fiscal capacity needs to be created to provide insurance against country-specific risks.

Even more important than architectural reforms—in my view—is the need for member states to have policies that are consistent with membership in a monetary union. As I mentioned before, this means reducing fiscal vulnerabilities where they are high and seeing countries with low productivity growth and competitiveness gaps implement structural reforms to improve the resilience and efficiency of their domestic economies.

And again: countries with sizable external surpluses need to do their part by investing more at home and supporting faster wage growth, including to help engineer a healthy rebalancing within the euro area. Here, in my view, we have the main limitation when we discussed the prospect for a stronger role for the euro. Without much stronger coherence in policies at the national level with the limitations of belonging to a currency union, and without architectural changes to help weather country-specific shocks, the euro area will remain more vulnerable to shocks.

I don't see how one can seriously dream about the euro seriously rivalling the dollar without making much more progress in ensuring policy-consistency and completing the architecture.

The problems the Commission is having in enforcing the fiscal rules is on open display every day. So is the failure to seriously advance the architectural reforms in the face of this inability to enforce the rules as key architectural reforms appear stuck over concerns that increased risk sharing creates serious moral hazard problems and therefore should be contingent on first making progress on risk reduction.

These issues lie outside of what we are discussing today. But again: I don't see how we can imagine the euro seriously rivaling the dollar without first solving these fundamental problems inside the euro area.

Before I conclude, let me briefly comment on one special issue: the supply of euro-denominated safe assets. As I mentioned, the euro area does not have a single safe asset comparable to US Treasuries. I agree that it would be desirable to have an increased supply for safe assets and that this would help enhance the euro's global role.

But what are the prospects for this? Some observers have called on Germany and other AAA-rated countries to issue more debt. While there are good reasons for Germany and other countries with fiscal space to issue more debt in order to finance infrastructure and other reforms to boost their long-term growth potential, the notion that fiscal objectives should factor-in the need to feed more safe assets into world financial markets is tough to sell even under the most ambitious notions about giving greater weight to area-wide objectives in national fiscal policy.

The fact is that the discussion of safe assets quickly runs into the familiar conflict between risk-sharing and risk-reduction. On the one hand, we have the proposal to create a common euro area safe asset, perhaps some sort of debt instrument jointly backed by all euro area member states. On the other hand, we have the concerns that such 'mutualization' will cause moral hazard problems.

Here the counter-argument is that poor policies at the national level have caused some countries to lose their high credit ratings and that the logical conclusion is to create more safe assets by making lower-rated assets safer. From this perspective, the solution is for countries that are currently considered less safe to pursue better policies—more prudent fiscal policies and more ambitious structural reforms.

Thus, a safe asset is not a silver bullet that will somehow allow the euro area to bypass the fundamental challenges regarding risk-sharing versus risk-reduction that are hampering the development of a more resilient euro area—there and no easy shortcuts to creating a stronger role for the euro as a reserve currency.

To conclude, I believe that further progress on banking, and in particular capital market union, could help strengthen the euro's global role. But I also believe that this role will be limited as long as we have not overcome the fundamental problems in policies at the national level and the shortcomings in the architecture that have been evident since the GFC. Enhancing the global role of the euro is a welcome by-product of changes needed to make the euro work better for Europe. ■

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Endnotes

1. Carney (2019). “The Growing Challenges for Monetary Policy in the Current International Monetary and Financial System.” Speech at the Federal Reserve’s Jackson Hole Economic Policy Symposium.

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3. See ECB (2019) “The International Role of the Euro” for details on the international use of the euro.

4. See for example, Eichengreen and Flandreau (2009). “The rise and fall of the dollar (or when did the dollar replace sterling as the leading reserve currency?)” European Review of Economic History, 13(3), p. 377-411.

5. See Mundell (1999). “The Euro: How Important?” Cato Journal, 18(3), p. 441-444.

6. For a theoretical explanation of how a dominant currency emerges see Gopinath and Stein (2018), “Banking, Trade, and the Making of a Dominant Currency,” Harvard Working Paper

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Financial innovation for inclusive growth

The benefits of financial innovation should be available for all. Luis de Guindos outlines a European approach that is fit for the global challenges ahead

Introduction

The benefits of technological innovation are tangible: we can see them and experience them in our everyday lives. Financial services are an integral part of our daily activities and are deeply affected by advances in technology. Payment services have changed considerably in recent years, driven by new technologies and shifts in consumer preferences.

Instant person-to-person (P2P) retail payment solutions are now a reality in many countries[1] and are increasingly available for consumers and businesses to use around the clock. Mobile P2P payment solutions allow people to simply use a smartphone to transfer money and only require the phone number or email address of the recipient to complete a transaction.

At the point-of-sale, large global schemes such as Google Pay and Apple Pay use contactless technologies to enable quick and easy payments. In some markets, Quick Response (QR) codes mean making a payment as easy as taking a picture with a smartphone. Meanwhile, new service providers piggyback on existing banking and payment infrastructures to offer online payment solutions that cater to our digital lifestyle.

While I am convinced that technological progress needs to be fostered and not hindered, I can't but notice that its benefits have failed to reach all corners of our societies – in particular underprivileged populations and vulnerable groups, for whom financial innovation has not yet made a difference.

And while in certain regions mobile money has given millions of customers access to our financial systems, more work is needed to ensure access for the 1.7 billion adults who currently do not have a transaction account[2].

Furthermore, in stark contrast to other ubiquitous technologies, existing cross-border payments are not always 'up to speed' and cost-efficient. In fact, while the global average cost of remittances has decreased, it is still well above the 3% target indicator for sustainable development by 2030[3].

At the same time, the importance of remittances has grown: they have overtaken foreign direct investment as the largest source of external financing to emerging economies[4]. These facts and figures should not come as a surprise to anyone reading this article. Yet they caused quite a stir earlier this year, and rightly so, when global stablecoin initiatives made headlines by pledging to address these long-standing issues.

European stakeholders should join forces or brace themselves for external disruption with potentially far-reaching implications for public policy

"Same business, same risk, same rules"

So can stablecoins deliver on their promises? Retail stablecoins could be accessed and used for making payments irrespective of whether their users have a bank account. In principle, retail stablecoins could provide a functional means of payment and even serve as a gateway for other financial services[5] – two of the three fundamental functions of transaction accounts[6]. The third is to safely store value, but I will cover that separately.

Global stablecoin initiatives are built on a sufficiently broad network to maximise acceptance for a wide range of use cases and are designed to work across country borders. Stablecoin ecosystems could also potentially integrate additional financial products offered by financial institutions acting as partners, should the latter decide to play an important role in this area.

However, to increase financial inclusion, retail stablecoins must successfully address outstanding issues such as high costs, a cash-in/cash-out infrastructure, identification and know-your-customer requirements. These are formidable barriers to overcome. Moreover, stablecoins must be designed and implemented so that they do not compromise other public objectives such as anti-money laundering and consumer protection –to name just two.

We must also recognise that a stablecoin's business model is based, first and foremost, on its ability to minimise fluctuations in its price relative to fiat currencies. Stablecoins therefore promise users a stable value and the possibility to exchange their holdings at all times[7].

But these are not bank deposits in your fiat currency. The value of a stablecoin will crucially depend on its governance, risk management and the value of the underlying assets or funds portfolio. A mere promise that proceeds from the sales of coins will be invested in low-risk financial instruments will not be enough to ensure the stability of the coin.

The industry should therefore responsibly manage users' expectations, making it clear that losses could occur and they would not be covered by the traditional financial stability net, which includes deposit guarantee schemes and central banks' role as lenders of last resort. In this respect, the term stablecoin is a misnomer. They are not stable and they are not coins, for that matter.

So it is far from certain that stablecoins can deliver on their promises, and it is clear that they could pose risks to consumers and the financial system. It is therefore understandable that authorities around the world are calling for stablecoins to be regulated[8].

The same rules must be applied to all activities that give rise to the same risks, irrespective of the technologies used or the identity of the service providers. In other words, we should uphold the principle of *"same business, same risk, same rules"*, which is at the core of technology-neutral regulation. Providers of innovative services should not be penalised just because they use new technologies.

Similarly, portraying existing financial products as something new by using innovative technologies to circumvent regulation must not be rewarded.

Challenges for both private and public sectors

The announcement of the 'Libra' global stablecoin initiative was a wake-up call for both the private and the public sectors to press ahead and make further progress on issues such as cross-border payments. We must admit that there is indeed an unmet consumer demand for payment services that are faster, cheaper and easier to use and that can work across borders.

The combination of rapid technological progress and the entrance into the market of large global digital firms is putting established banks and payment service providers under pressure to innovate and compete on scale and user convenience.

For instance, the combined volume of new credit provided by fintech and bigtech in 2017 exceeded 500 billion US dollars – a tenfold increase from 2014[9]. Financial institutions will need to rise to the challenge. However, to date, European payment service providers have struggled to develop a common solution that can match up to large global digital firms' initiatives in terms of immediacy, convenience, scale and branding power. In particular, the European instant payments landscape remains fragmented, with no European solution emerging for point-of-sale and online payments[10].

The public sector is already responding to the advent of stablecoins in a coordinated manner. Work is underway under the umbrella of the G20 to assess their risks, examine the applicability of the existing rules, and identify gaps in the current regulatory and oversight framework.

Given the cross-border nature of global stablecoin arrangements, such international coordination is crucial to ensure consistency across borders and prevent regulatory arbitrage. Otherwise, providers of stablecoins, or any new financial services for that matter, will have every incentive to operate in the most lenient regulatory environment.

We have to make sure that there is no scope for regulatory arbitrage. For this reason, we need to have information-sharing arrangements in place and rely on cooperative oversight where appropriate.

Putting the response to stablecoins aside, there is no shortage of initiatives from central banks' and standard-setting bodies to increase their knowledge of technological innovations and their implications for the financial sector.

Indeed, a number of internationally coordinated efforts have tackled issues related to financial inclusion and remittances. Nevertheless, I have to admit that the latest developments have raised more fundamental questions about the suitability of existing forms of money for meeting the new and emerging needs of economic actors, the role of the public sector and, more recently, the possibility that central banks could issue their own digital currencies.

In this environment, fulfilling the central bank's mandate has taken on a new dimension and requires an active role in driving change.

Eurosystem initiatives

The ECB is not the only driver of change in this field, but we are determined to play a proactive role. Our efforts, are focused on four main areas:

- First, we are investing in instant payments infrastructure. Since 2014, the ECB has fostered the development of a pan-European instant payments scheme under the European Payments Council. The Euro Retail Payments Board – a high-level strategic body tasked with fostering integration, innovation and competitiveness of euro retail payments – continues to build momentum on instant payments, by identifying outstanding challenges to adoption and recommending measures to overcome these challenges.

  Last year, the ECB launched TARGET Instant Payment Settlement (TIPS), a platform that enables payment service providers to transfer funds to their customers in real time, on a 24/7/365 basis – and that settles in central bank money.

- Second, we are treading new ground. The ECB has been exploring how to apply new technologies, particularly distributed ledger technologies, to financial market infrastructures both within the European central banking community and globally through 'Stella' – our joint research project with the Bank of Japan.

  We are also assessing the value of central bank digital currencies (CBDC) for European citizens and the economy. We are analysing the forms CBDC could take with a view to fulfilling its underlying motivations while mitigating possible negative consequences for monetary stability and financial intermediation.

- Third, we are reviewing our oversight of payments. The aim is to future-proof the existing Eurosystem oversight frameworks for payment instruments, schemes and arrangements by applying a holistic, agile and functional approach. In accordance with its mandate the ECB, together with Eurosystem central banks, is preparing to apply its oversight framework for payment systems to innovative projects, including stablecoin arrangements.

  As the payments landscape continues to evolve, we will work with other international authorities to ensure that the Eurosystem requirements remain relevant by closing any gaps that innovative solutions might create. We also support the creation of cooperative oversight frameworks whenever a payment arrangement is relevant to multiple jurisdictions.

- Fourth and finally, we are reforming the European retail payments strategy. Earlier this month the ECB's Governing Council decided to relaunch its retail payments strategy. One of our aims is to actively foster pan-European market initiatives for retail payments at the location of the purchase or interaction[11].

Conclusion

The benefits of financial innovation should be available for all to see and experience. Financial institutions have a window of opportunity to leverage technological advances to deliver innovative payment and financial solutions that meet consumers' expectations of convenience, affordability, safety and global acceptance.

European stakeholders should join forces or brace themselves for external disruption with potentially far-reaching implications for public policy.

There is strong political momentum to make the financial system more inclusive – starting with access to transaction accounts and cross-border payments. Central banks have an important role to play both individually and collectively in the international community.

The ECB is drawing on this momentum to give new impetus to a European strategy on retail payments that is fit for the global challenges ahead.

As a central bank, we will continue to monitor how new technologies are changing payment behaviour and project the potential of innovative ways of making payments cheaper, more efficient and more inclusive onto our tasks and activities to the benefit of the European people and beyond. ■

Luis de Guindos is Vice-President of the ECB

Endnotes

1. Currently, fast retail payment systems operate in 45 jurisdictions. This is projected to rise towards 60 in the near future. Source: CPMI statistics, October 2019.

2. Source: The Global Findex Database 2017.

3. According to the United Nations Member States' Sustainable Development Goals to be achieved by 2030. See Remittance Prices Worldwide.

4. Excluding China. Source: World Bank.

5. See G7 Working Group on Stablecoins (2019), "Investigating the impact of global stablecoins", October.

6. See Committee on Payments and Market Infrastructures and World Bank Group (2016), "Payment aspects of financial inclusion", April.

7. Ibid.

8. Ibid. See also "Joint statement by the Council and the Commission on 'stablecoins'", 5 December 2019.

9. See Frost, J, Gambacorta, L, Huang Y, Shin, H and Zbinden, P (2019), "BigTech and the changing structure of financial intermediation", BIS Working Papers, No 779, Bank for International Settlements, April.

10. See Cœuré, B (2019), "Towards the retail payments of tomorrow: a European strategy", speech at the Joint Conference of the ECB and the National Bank of Belgium on "Crossing the chasm to the retail payments of tomorrow", Brussels, 26 November.

11.Ibid

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How to stabilise the euro area

We need more supportive fiscal policy alongside monetary policy for a faster return to price stability with fewer side effects, says Mario Draghi. Acting too late leads to a longer period of accommodative policies

The resilience of the euro area through many years of crisis has proven its critics to be wrong. Several countries, not least Greece, have undertaken remarkable efforts in order to thrive as members of the monetary union. Important institutional reforms have taken place to strengthen the euro area, notably the creation of the banking union and the European Stability Mechanism (ESM). As I have outlined elsewhere, the euro has been beneficial in many ways[1], and today the single currency is more popular than ever[2].

But the fact that the crisis lasted much longer here than in other advanced economies – and came with a substantial social cost – still weighs on perceptions of our monetary union. Have we learned the lessons of that episode? And have we taken the necessary steps to prevent such an outcome in the future? These are the questions I would like to address.

The answer comes down to whether the euro area has increased its ability to stabilise macroeconomic shocks. In this regard, there are two key dimensions that matter.

The first is the ability to ensure stabilisation across countries. This is about finding the right balance between convergence and insurance. The second is the ability to ensure stabilisation over the cycle. This is about all policies playing an appropriate role in contributing to euro area growth.

Stabilisation across countries

The classical perspective on stabilisation in a monetary union is provided by the optimum currency area (OCA) theory. This principally focuses on the cross-country dimension, ie. how to ensure that sharing a single monetary policy and exchange rate does not deprive some members of the capacity to adjust to shocks. While the literature lists several criteria that are important, the key is the balance between *convergence* and *insurance*[3].

There needs to be enough convergence across states such that they largely face common shocks, and so a single monetary policy is broadly appropriate for all members. However, effective insurance mechanisms also need to be in place – based on diversification across the currency union – so that states can still stabilise their economies when their local cycles diverge. In such situations, by design, insurance becomes more effective.

Take the US as an example. Shocks are relatively similar across states, which underpins the common monetary policy[4]. But local cycles still deviate from the aggregate cycle[5]. So, both private and public insurance are in place to compensate.

Policymakers have a responsibility to learn the lessons of the past, to study the experiences of others, and to avoid foreseeable risks to the public by altering their policies today

In the private sector, integrated credit markets allow cross-border banks to offset losses in one region against gains in another, which helps maintain the provision of credit in all regions throughout the cycle. Portfolio diversification through capital markets allows households to support their income during downturns via gains on financial holdings in better performing parts of the union. It is estimated that around 70% of a local shock is smoothed in this way[6].

Public insurance works through similar principles. The Federal Deposit Insurance Corporation (FDIC) allows banks in different states to insure each other against failure, backstopped by a credit line from the US Treasury. The federal budget complements the state-level automatic stabilisers, smoothing a further 10% of shocks[7].

Twenty years after its launch, it is important to assess how the euro area compares in terms of convergence and insurance.

In terms of real convergence, several euro area countries have achieved significant progress, particularly the Baltic States, Slovakia and, to a lesser extent, Malta and Slovenia. The gap between real GDP per capita in these countries and the euro area mean has been reduced by around one-third since 1999[8].

However, other countries that also started far from the euro area average – such as Portugal and Greece – have, on balance, been unable to close the gap significantly.

Real convergence in income per capita is important for the cohesion of a monetary union, so it is vital that the right national and European policies are in place to help countries that have fallen behind since the crisis to re-converge, in particular Greece. At the same time, a slower pace of real convergence does not necessarily prevent a monetary union from being able to stabilise its economy effectively.

What matters more is *business cycle* convergence, since this determines the optimality of monetary policy across states. And business cycles can converge long before income levels do. In the US, for example, GDP per capita in the richest state is still around twice that of the poorest state, which is roughly the same gap as in the euro area today[9]. But US states have had relatively correlated cycles since around the 1930s[10].

When the euro area was established, there were conflicting views on how cycles would respond. According to the 'specialisation hypothesis', monetary union would allow countries to exploit their comparative advantages and increase inter-industry trade. This would expose countries to different industrial shocks, and business cycles would become less correlated[11].

The alternative view was the 'endogeneity hypothesis', which held that the euro would lead to greater intra-industry trade. Industrial structures would therefore become more similar and cycles *more* synchronised[12].

What few foresaw at that time, however, was the rapid emergence of global value chains (GVCs) in both global and euro area trade and how this would affect the transmission of shocks. Between 1990 and 2015, the average ratio of intermediate goods exports to GDP – a measure of value chain integration – increased more than twofold globally, but nearly fourfold in the euro area.

In 2014, participation in GVCs – the share of gross exports consisting of value added which crosses multiple borders – was around 20 percentage points higher in euro area countries than in the US or China[13].

Value chains increase *both* specialisation and synchronisation[14], since demand shocks are transmitted along the supply chain. In fact, trade along value chains has been found to generate more synchronisation than trade in final goods[15].

Consistent with this, multiple studies find that business cycle synchronisation in the euro area has risen since 1999[16]. A substantial share of the variation in GDP growth across euro area countries can now be explained by a common factor that is not shared with other G7 economies[17].

Overall, growth dispersion among euro area countries is now at the same low level as among US states – and roughly half the level before the crisis[18].

The single market has played a key role in trade integration, but the euro has also contributed. New ECB research finds that the euro has facilitated trade creation and the emergence of GVCs within the euro area, especially between 'old' and 'new' member states since 2007[19].

One recent meta-study finds that being part of the monetary union can explain at least half of the overall increase in business cycle correlation among euro area countries since 1999[20].

Countries' participation in value chains nonetheless varies, with some more exposed to agglomeration effects than others[21]. This underlines the need to continue deepening and broadening the single market, so that all member states are well integrated into the European value chain and share in the common business cycle.

But just as in the US, euro area countries are still exposed to idiosyncratic shocks due to their trade structures, as we see in Germany today. And in contrast to the US, common shocks can have asymmetric effects due to different levels of public debt, as we saw during the crisis. Consequently, IMF analysis finds that, while business cycles have become more synchronised during the euro period, their *amplitude* across euro area countries has diverged since the crisis[22].

So, to address this, there needs to be insurance across euro area countries, and such insurance is also likely to be highly effective, perhaps even more so than in the US[23].

Progress in this area is much less advanced, however. Only around 25% of local shocks are smoothed through financial markets in the euro area[24]. We still do not have in place the ESM backstop for the single resolution fund and a European deposit insurance scheme. And there has been little meaningful progress on fiscal policy coordination. Long ago we reached an impasse on key issues which is being perpetuated by two alleged dichotomies.

The first is the notion that private and public insurance are substitutes, and so if the euro area focuses on deepening private risk-sharing, greater public risk-sharing will not be required. But this misunderstands how private insurance develops in the first place. It emerges from deep and resilient financial integration, especially of retail banks, and that only arises in the shelter of public risk-sharing, such as strong backstops and deposit insurance schemes.

The reason is that public insurance guarantees that costs will be shared in the event of bank failures, which is crucial for national authorities to let capital and liquidity flow freely within the monetary union. Without insurance, on the other hand, there will always be an incentive to ring-fence in order to safeguard national balance sheets, which blocks effective risk sharing[25].

US banks, for instance, rely on intra-group funding to respond to local shocks and manage credit growth, allowing them to keep their lending more stable over the cycle[26].

Similarly, without public insurance, banks have a weaker business case to engage in cross-border consolidation. Some of the key benefits of operating multinationally – such as the ability to optimise liabilities by funding loans in one country with deposits in another – cannot be attained if there are different deposit guarantee schemes across countries, and different creditor hierarchies in an insolvency scenario. This is one reason why cross-border banking M&A activity within the euro area is currently at historical lows[27].

In any event, private risk-sharing based on diversification can break down in the face of large common shocks, as happened to some extent in the US during the crisis. One study finds that capital market risk-sharing in the US dropped by almost half in the crisis period[28]. Thus, private insurance cannot ever fully substitute for effective public risk-sharing.

The second alleged dichotomy is the notion that public insurance creates moral hazard, and therefore risks have to be reduced before they can be shared. But this overlooks both the theoretical and empirical evidence we have on the incentive-effects of risk-sharing. There is a wealth of evidence that moral hazard depends on the appropriate design of insurance schemes[29]. And what we see in practice is that the absence of insurance does not lead to lower risks, either for individual countries or for the euro area as a whole.

This is because the assumed mechanism – that the absence of backstops leads to market discipline on governments, which in turn promotes reforms – is not reflected in reality. ECB research going back to 1975 finds no convincing evidence that high interest rates lead to reforms, if one controls for the business cycle and other factors[30].

On the contrary, when countries are under market pressure, they are typically either compelled to enter macroeconomic adjustment programmes, or they enact reforms that are poorly designed and easily reversed. This normally means, among other things, consolidating budgets by raising taxes, which makes the recession worse. And when several countries are in this position, because backstops are not in place to arrest contagion, it spreads and prolongs the crisis for the *whole* monetary union.

We saw this clearly in the euro area in 2010-12. Economies representing one-third of euro area GDP were forced into a pro-cyclical fiscal stance to shore up confidence in their public debt, which was a factor that led to the euro area's second recession. In other words, lack of insurance actually *raised* risks.

In contrast, an effective, quasi-automatic euro area fiscal backstop, with proper eligibility criteria, could have stabilised expectations and led to a more appropriate fiscal stance. This is one reason why I have called on several occasions for a euro area fiscal instrument of adequate size and design.

The same is true in the financial sector. Without public insurance, in a crisis markets typically panic and begin fire sales, which propagate risk. Appropriate backstops, on the other hand, help stabilise market expectations and reduce risks. The role of the FDIC in the aftermath of the Lehman collapse is a good example of this.

During that period, around 500 banks were resolved without triggering financial instability. In contrast, one estimate puts the total number of banks resolved in the euro area in the same period at around 50[31]. In the absence of credible backstops, the clean-up of the euro area's banking sector took considerably longer.

Today, it is estimated that a public backstop for the whole euro area would have the same credibility as that of the US, thereby significantly reducing risks in a crisis. But if national governments are still expected to backstop their own banks, countries such as France or the Netherlands could face potential fiscal costs of 10-12% of their GDP[32].

All this should make it clear that deepening public insurance by completing the banking union and strengthening fiscal union is not about creating a transfer union. It is about creating a euro area in which there is *less* need for public risk-sharing in future, because we have the instruments in place to stabilise crises more quickly, and because we have the right framework to allow private sector risk-sharing to develop more sustainably.

Moving in this direction is evidently politically difficult. But that should not stop us from identifying the problems and making the case for fixing them, so that we can build a monetary union in which convergence is truly balanced by insurance.

Stabilisation over the cycle

Stabilisation in a monetary union also has an aggregate dimension – that is, how *all* policies combine to ensure support for growth over the cycle. This was not much addressed in the OCA literature, which rested on the classical notion that monetary policy should respond to common shocks and fiscal policy to local shocks. This made sense in the conditions prevailing at the time. But it needs to be re-examined in the new environment we face today.

The defining feature of this new environment is the secular decline in the natural rate of interest, which is the rate that in principle balances desired saving and planned investment in the economy. The natural rate is a difficult and intangible concept, but we can nonetheless intuit, from certain long-term trends, that it has been on a downward path.

The most important trend is slowing potential growth across advanced economies, and in particular slowing total factor productivity (TFP) growth, which implies a lower rate of return on capital. As potential growth falls, borrowing costs for the private sector have to fall as well, since firms will only borrow at a price that is below their expected rate of return on investment.

Over time, this creates a downward pull on interest rates. Since the 1990s, long-term real yields have fallen by over 400 basis points in the US, over 500 basis points in Japan and over 600 basis points in Germany[33]. We can get a sense of this dynamic if we compare the economy in the US in the 1990s with that today. In the 1990s, with inflation around 2-3%, and potential growth thought to be around 3-4%, nominal policy rates at 3% were seen as highly accommodative[34]. Now, with lower inflation and long-term growth expected to be 1.5-2%, nominal interest rates at that level would be seen as extremely tight and trigger a recession.

But the size of the decline in real yields since the 1990s also reflects other secular factors that have arisen since then. These have depressed interest rates *even relative to growth* by encouraging people to save more and invest less. The most powerful is adverse demographics. In the euro area, the demographic transition is estimated to have reduced real interest rates by around one percentage point over recent decades. On current trends it can be expected to depress real rates by a further 0.25-0.5 percentage points by 2030[35].

Other studies have pointed to the role of rising income inequality, where increasingly rich households save more of their permanent income[36]; an excess of global saving especially in emerging markets[37]; and a general increase in risk aversion, which is captured in a rising demand for safe assets[38].

The upshot is that, across a range of estimates, the natural rate in the euro area has been trending down to very low levels. Estimates for the US are slightly higher but display the same downward path[39]. This has important repercussions for monetary policy, namely in that any interest rate set by the central bank that is not in line with the trend of the natural rate would be contractionary.

Thus trying to raise rates too quickly would be self-defeating, since it would only lead to growth and inflation falling and rates having to be cut once more.

In fact, if such a stance caused a longer slump and a rise in uncertainty about monetary policy, it could even lead to ‘hysteresis effects’ in investment and risk sentiment[40]. That would in turn depress TFP growth further and cause the natural rate to fall more.

This environment has two key implications. The first is that the optimal policy mix to stabilise the economy changes. With a falling natural rate, the effective lower bound on interest rates becomes more salient. Before the crisis, it was estimated that rates were likely to hit zero in the euro area roughly once every 50 years[41].

Now, monetary policy increasingly has to use unconventional policies to achieve its mandate, and to do so for longer and with more intensity. This is not a barrier to the central bank achieving its objective, but it increases the risk of side effects along the way.

In contrast, fiscal policy playing a more supportive role alongside monetary policy would lead to a faster return to price stability and therefore fewer side effects. This is because fiscal policy becomes more powerful when monetary policy is close to the effective lower bound, as the multipliers are higher[42].

Furthermore, in certain situations, supportive fiscal policy can complement monetary policy in cutting through the obstacles that are weighing on demand – which is the case in the euro area today.

A main driver of the weak outlook at present is heightened uncertainty, which is triggering 'paradox of thrift' behaviour in parts of the private sector. Uncertainty encourages higher saving which compresses demand and incomes, which in turn feeds back into more uncertainty and *lower*, not higher, saving. Fiscal policy can break this vicious circle since, with its greater multipliers, it can push incomes and income expectations higher.

Moreover, while there may be limits to how much households can bring forward future income in response to lower borrowing costs, governments can in principle *raise* their future income through their spending today. This is the case if government spending raises productivity and thereby future potential output, which increases fiscal space today[43]. Higher expected growth in turn makes private sector transmission more effective.

This is not about policy coordination. Our framework in the euro area is built on monetary dominance, where the central bank decides its policy independently based on price stability considerations alone. Rather, if governments want to see a faster exit from unconventional policies, it is in their interests to align with monetary policy.

But this is not what we have seen up to now. From 2009 to 2018, the average cyclically-adjusted government primary balance[44] was -5.7% for Japan and -3.6% for the US, but 0.5% for the euro area.

The second implication of the falling natural rates is that other policies are required for interest rates to rise significantly in the future. While monetary policy has to treat the natural rate as given, both structural and fiscal policies can raise it.

Structural policies can accelerate resource re-allocation, innovation and the diffusion of new technologies, all of which raise TFP[45]. Efficient public spending can increase productivity through, for example, improving education systems or public investment in key infrastructures. The financing of that investment through debt issuance can increase the supply of safe assets and help absorb excess saving.

Fiscal policies can also be used to reduce inequality and encourage greater labour force participation among older workers, thereby lowering saving. In fact, new estimates suggest that the use of these types of fiscal policies in advanced economies in recent decades has prevented the natural rate from falling further[46].

At the same time, well-targeted macroprudential policies can help temper the side effects of low interest rates in the transition period while these policies come into full effect.

The gains at the national level from such measures would be significant where there are large domestic investment needs and reform gaps. In all large euro area countries, net public investment[47] has essentially been zero over the last decade. The share of productive expenditure in total primary expenditure – which in addition to infrastructure includes R&D and education – has also dropped in nearly all euro area economies since the crisis[48].

As an illustration of the effects of higher investment, ECB model-based analysis finds that, in an economy like Germany, raising productive public investment by 1% for 5 years could ultimately yield GDP up to 2% higher and private investment up to 2% higher[49].

Moreover, if the most indebted countries were to couple public investment with structural reforms to raise future growth, higher borrowing would create fewer uncertainties about debt sustainability[50].

The impact would be greater still if euro area countries were to coordinate their policies, and especially when those actions are aligned with the forward guidance provided by monetary policy. ECB simulations find that the spillovers from coordinated investment spending in the euro area are up to six times larger when the central bank does not increase interest rates in response[51]. As the decline of the natural rate is a common challenge, with common causes and consequences, the case for coordination among countries is strong.

The most effective response, however, would be an investment-led stimulus at the euro area level. This would be the best way to achieve an efficient distribution of spending among euro area countries – and is a further reason why I have called for a euro area fiscal instrument. The agreement on the Budgetary Instrument for Convergence and Competitiveness is a step in the right direction, but it does not yet meet the necessary criteria in terms of size or design.

Whichever route is taken, monetary policy will continue to do its job. The latest decisions of the Governing Council have shown its determination in the face of a continuously weakening outlook for growth and inflation.

Consistent with our monetary dominance framework, these decisions are intended to ensure that inflation returns to our objective without undue delay. But if fiscal and structural policies also play their role in parallel – and more so than we see today – the side effects of monetary policy will be less, and the return to higher rates of interest will be faster.

Timely and effective policy actions, however, are of the essence. The fact that interest rates have been able to rise faster in the US than in the euro area since the crisis is, in no small part, because fiscal policy there has played a greater role alongside monetary policy.

By the same token, lack of policy alignment in Japan in the face of decades of deflationary forces eventually led to a situation where both monetary and fiscal policy had to be extremely accommodative to jolt the economy out of entrenched disinflation.

Conclusion

This brings me to my conclusion. Policymakers have a responsibility to learn the lessons of the past, to study the experiences of others, and to avoid foreseeable risks to the public by altering their policies today.

Our monetary union was born incomplete and, within a decade, faced a crisis few could have anticipated. It is understandable that it was not ready. But we know now what it takes to provide stabilisation across countries, and we know what we risk if we act too late to stabilise the union as a whole. This only leads to a longer period of highly accommodative policies.

We want to determine our circumstances, not to have our hand forced by them. The diagnosis of what needs to be done is clear. The roadmap has been laid out. ■

Mario Draghi is the President of the ECB

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This article is based on a speech delivered at the Academy of Athens, 1 October 2019

A call for Europe

Critics of the European idea are gaining ground. Sabine Lautenschläger considers the successes of the European project and says future challenges can only be met by working together

"I am a German and will remain a German, but I have always been a European too and have felt as such."

These are the words spoken by Konrad Adenauer in 1946, when reconciling Europe and securing peace were paramount. National arrogance and isolationism had culminated in two world wars – two world wars which had wreaked death, misery and chaos on Europe.

Adenauer's conviction had a profound influence on many people, including my parents. His core belief that *"we're Europeans first and Germans second"* is still a great inspiration to me today. For those who lived through the Second World War, a strong Europe, a united Europe, represented the future and the path to lasting peace.

But today some people harbour doubts about the European idea. Nationalism and populism are flaring up again and parties that are critical of the European project, or even reject it outright, are gaining ground in many countries. This is an alarming development.

We must not forget the lessons from our history. Borders and walls within Europe have never created security. A united Europe has bestowed peace and prosperity to each member state and its people – the German people included. And the future challenges facing each and every one of us can only be met by working together in Europe.

Scepticism towards the advantages of Europe

And yet Europe is increasingly subject to criticism. Public scepticism towards Europe has grown: in 2007 some 57% of the EU population said they trusted the EU, but this share has now fallen to 44%[1]. At the same time, Eurosceptic parties have almost doubled their share of votes over the past ten years[2].

One explanation is that people feel unsettled, not only in the face of advancing globalisation and structural changes but also because of increasing migration.

Far-reaching changes, fear and a sense of disorientation often cause people to reject what's new and retreat to what is familiar. And this withdrawal becomes menacing if people no longer want to exchange views and opinions and applaud seemingly simple answers as ultimate wisdom.

The major challenges we face, such as globalisation, structural change and migration, are unsettling people and causing many to feel a sense of fear and disorientation

It becomes dangerous if, owing to social media and the filter bubbles affecting what we see online, we merely find confirmation of our own beliefs[3]. And such withdrawal becomes particularly dangerous if people lose empathy and the inherent willingness to take other people's viewpoints and values seriously.

All of this leads to rejection and exclusion in our society. When people feel that their voices are no longer being heard and that they are no longer represented, populists find it easy to undermine the system and propagate simple solutions. The populists' success is based on the perception that they are seriously addressing people's concerns by proposing radical solutions. This is how they spread their new nationalism.

Some Eurosceptic parties are pushing for a retreat from Europe, a withdrawal behind national borders. All too often, regaining national sovereignty is seen as an opportunity to acquire more freedom of action and security in the face of global developments. This suggests that we can preserve our prosperity by sealing ourselves off.

This notion and the retreat to nationalist thinking is wrong. Because it fails to recognise the many benefits that Europe has brought us.

Europe has brought peace

With the European Union we have found a way of resolving conflict that has ushered in the longest period of continuous peace in the history of Europe. The EU has transformed a continent of war into a continent of peace. We should not take this for granted – and the award of the Nobel Peace Prize to the EU reminds us not to do so.

Europe has brought freedom

Human rights, democracy and the rule of law are prerequisites for EU membership. Let's not forget that in 1957, only 12 of the current member states were democracies, compared with 28 now.

Europe has provided an unprecedented degree of freedom of movement. Thanks to the EU, European citizens enjoy border-free travel and are free to study and work within the EU, creating inestimable development opportunities for everyone. And the consequences can be felt in everyday life.

17 million people and 1.4 million commuters live or work in another member state, approximately equivalent to the entire population of the Netherlands. And every year we cross one of the internal borders within the Schengen area an almost inconceivable 1.27 billion times[4].

Europe has brought prosperity

Some 25 years of the Single Market have generated real growth for more than 500 million consumers. Average per capita income in the EU has risen by half over this period. This last point, more prosperity across Europe, is one I must address separately. Because the economic benefits of Europe are often a point of contention in Germany.

Hardly any other economy has profited from the Single Market as much as Germany. Were it not for an open Europe and the creation of the Single Market, the robust economic growth of the post-war era would have levelled off over time.

The free movement of goods, in other words, the abolishment of customs barriers and other obstacles, has created a large European market which promotes trade and growth.

Likewise, the freedom of services has enabled people to offer their services in all EU countries. And the free movement of capital and payments created the conditions for the euro and a common financial market. Free movement of goods, capital and payments and freedom of services have allowed Europe to grow more closely together, have advanced the German economy and have brought prosperity to us all.

German firms last year exported goods to the value of almost €780 billion to other EU member states. Without trade barriers, without exchange rate risk. That accounts for almost two-thirds of all German exports. The Single Market creates and secures high-quality jobs in Germany.

According to the Bertelsmann Foundation, the Single Market contributes €37 billion a year to German real GDP growth. That represents additional income of €450 per person and year[5].

We also owe these advantages to the euro, as the bulk of trade is invoiced in euro. The euro cements the Single Market; our common currency prevents exchange rate fluctuations and competitive devaluations between the member states. The euro has thus provided stability and prosperity. Without the euro, open markets in Europe would not have lasted long.

And all this has not only benefited enterprises, but first and foremost consumers too. The inflation rate has been stable for many years. For the euro it has averaged 1.7% since its introduction, compared with 2.8% for the D-Mark. I have now spoken about the past advantages of a united Europe. Let's now take a look at the future. Here, too, I am convinced that all of us, Germany too, will be able to master the challenges of the future in a united Europe.

The advantages of Europe for future challenges

All countries in Europe face major, predominantly global, challenges, such as increasing worldwide competition, climate change and technological progress.

Global competition

No country, Germany included, can turn its back on globalisation if it wishes to secure future prosperity and distribute it evenly. And we need the EU in order to retain our capacity to act and to shape global developments.

The economic weight of Europe’s member states has drastically declined over the past decades. Looking at the aggregate economic performance of EU countries, the EU’s share in global economic output has fallen from around a third in the 1980s to a sixth today. Germany’s share has more than halved over the same period and now stands at around 3%.

And individual European countries will continue to lose their significance in the world, for one because our birth rate is far lower than that of other countries. More than 500 million people now live in the EU, representing 8% of the world’s population. In 2050, this share will have declined to just 5%[6]. The German population will then make up no more than 0.8% of people in the world.

In such an interconnected world, individual countries will therefore find it increasingly difficult to uphold their prosperity and social security provisions.

Globalisation reduces the capacity of individual countries to levy corporate taxes and finance their social security systems. Free movement of capital allows enterprises to use differences between tax systems to their advantage and to distribute both profits and intangible assets across different countries. This leads to corporate tax bases being eroded. The OECD estimates that the global revenue shortfall owing to tax avoidance amounts to between 4% and 10% of corporate income tax receipts[7].

Moreover, globally active companies can threaten to cut jobs and move production to other countries. Countries are thus tempted to use lower labour and social security standards to their competitive advantage and enter into a race to the bottom, making it harder for them to defend their social standards.

By pulling together, countries in Europe are in a better position to withstand global developments. As a whole, Europe is still large and economically significant enough to tax corporate profits and put an end to social dumping. The EU is a market that firms can hardly do without.

Power lies in numbers. That is especially true for trade. The EU is the most tightly integrated economic region in the world. Two-thirds of EU trade takes place with other member states. And around 50% of cross-border financial holdings in the euro area are from other euro area countries. That is true for Germany too. In practical terms, this means, for example, that Germany exports more goods to France than to China.

So it's not surprising that turning away from Europe could have disastrous consequences for our prosperity. One study shows that, for example, new trade restrictions in Europe could reduce Germany's economic output by 8%[8].

In their external trade, too, countries that go it alone only stand to lose. No country has the heft required to make itself heard in international trade talks and significantly influence trade conditions. And no national economy is large enough to set the common standards for globally integrated value chains. Neither is Germany: our share in global trade is only half the size of that of the EU.

Moreover, Germany's significance for world trade is set to dwindle further in future. The European Commission predicts that, over the next 10 to 15 years, 90% of global growth will be generated outside of Europe. But in Germany especially, employment relies heavily on open markets and international trade: nigh on 30% of German jobs depend directly or indirectly on exports, and this is true for as many as every second job in industry[9].

If we are to profit from this international growth, we need open markets and a strong voice in international trade talks. Only the EU can offer us these.

The EU improves the ability of all member states to control outcomes. By acting together, we can attain objectives that we would have been unable to reach alone. For the EU is the main trading partner for 80 countries worldwide. And with the combined weight of EU member states in global value chains, European firms can set their standards throughout the world[10].

Climate change

Joint action in Europe is also needed to overcome a completely different challenge facing all countries, namely climate change. People in this country are serious about tackling climate change. But countries cannot win the struggle against climate change on their own: pollution does not respect borders.

Think of, say, pollution entering the Rhine or the Danube and potentially affecting another country further downstream. Or the acid rain caused by UK coal-fired power plants in the 1980s which harmed the forests and lakes of Scandinavia.

Climate change is a global phenomenon that poses complex coordination issues for national governments and affects many areas of life, including the economy. Allow me to concentrate on some of the economic consequences of climate change. That in itself will reveal the immensity of the challenges which we can only successfully overcome together.

For one, climate change affects competitiveness in the Single Market. As trade in goods and services expands, it's important to ensure a level playing field. However, individual countries may implement environmental measures that distort competition.

That can happen if, for example, production standards are lowered in a bid to achieve cost advantages. Amid international competition, such practices can lead to environmental dumping – with detrimental consequences not only for the Single Market but also for the environment. So countries have to work together to stop this dangerous dynamic.

Even the direct effects of climate change alone may have an enormous impact on the economy. Rising temperatures and shifting precipitation patterns may depress earnings in different economic sectors such as agriculture, energy, tourism or construction.

And that may also affect the financial system. If companies have serious difficulty in repaying their loans or disbursing dividends, banks and their creditors and investors will in turn suffer damages too.

Moreover, environmental and climate protection measures may have extensive economic consequences. The bans on diesel cars and the fall-out from the emissions scandal, for example, not only triggered a decline in car manufacturers' share prices, but also in the prices for used diesel cars. And handling the trend towards electromobility is testing the German automobile industry's future viability to the limit.

All of this shows the extent to which climate change and environmental measures can affect economic activity, assets and jobs.

Europe offers a unique opportunity to combat climate change and so reduce the potential damage to the economy. Europe can provide well-coordinated instruments and clear, reliable regulation, such as the Europe-wide carbon floor price. The European emissions trading scheme with fixed caps on emissions is the first and largest of its kind worldwide.

As one of the three largest economic blocs in the world, Europe can be at the vanguard of the fight against climate change. Europe has long campaigned internationally for strong and binding targets. For one, the EU built up a broad alliance of industrial and developing countries with ambitious targets, which significantly contributed to the success of the Paris Conference. Moreover, the EU was the first large economic region to present its planned contribution to the agreement as early as in March 2015.

And Europe can ensure that the financial market helps attain climate targets. It has now become clear that market participants are failing to take the social costs of their activities for the environment fully into account, leading to a lack of sustainable finance.

This arises, for example, when market participants base their investment decisions on excessively short time horizons and fail to factor in environmental risks. Because they would otherwise, from a risk perspective, steadily shift the focus of their investment to green and sustainable assets and so contribute to the attainment of the climate targets. Europe can give impetus and set up the right framework[11].

Central banks such as the European Central Bank can also help to fight climate change. First, the ECB can contribute to the development of tools and methods that can be used to identify, quantify and mitigate climate-related risks in the financial system.

Second, the ECB can use its investment portfolio to help fight climate change. For example, sustainability criteria are already taken into account in our portfolios that are not held for monetary policy purposes. We have also bought green bonds under our asset purchase programme. But we have to make sure that we are not creating market distortions, of course – we have to remain market-neutral. This means that the ECB can only buy a limited amount of the green bonds available on the market.

Third, the ECB – together with other leading central banks – can examine the potential effects of climate change on the conduct of monetary policy. We are still in the early stages of our research into whether and how climate change affects the transmission channels of monetary policy and could lead to bigger and more persistent shocks that could have consequences for price stability, among other things.

Fourth, forward-looking banking supervision can urge banks to ensure that they have an overview of the climate-related risks on their balance sheets, and that they do so on a continual basis and with reference to stress scenarios. This is the approach that European banking supervision is taking.

Payments

I have talked about the major challenges facing Europe. But there are also areas which are less prominent and not quite so fundamental, but which are still important in our interconnected world.

Payments are one such example. Safe, reliable and efficient payment systems are a vital part of a well-functioning and integrated economy.

Technological progress and changing payment habits have fundamentally altered the payment system and thrown up new challenges. End users now expect to be able to transfer money around the world in real time and at low cost.

But existing payment systems are fragmented along national lines. The German Girocard scheme and the French Carte Bancaire, for example, are both used by large numbers of end users in their domestic markets, but they exist in parallel and separately from one another.

Many payment service providers retreat behind national boundaries on account of national interests and preferences. And customers can see this. If they want to make cross-border payments in Europe with ease, they frequently rely on global players such as VISA, Mastercard and PayPal. And the big tech companies also offer payment solutions with pan-European reach. This is easier for them, since their global customer base allows them to achieve the desired network effects.

At the moment there are only a handful of large payment service providers offering pan-European payment services. New payment methods are being developed, such as Facebook's planned digital currency, Libra, and its underlying payment system.

According to current plans, users across the globe should be able to make payments not in euro or US dollars, but in Libra. We will need to carefully monitor how this will affect competition, because a lack of competition can impair the efficiency and quality of services in the long term, to the detriment of consumers.

Irrespective of how the payments landscape evolves over the coming years, it is essential that users of the various payment systems can be confident that all payment solutions, old and new alike, are safe and efficient.

To ensure that we have a safe, efficient and modern European payment system in the long term, though, we will need to work together at the European level. National solutions on their own don't have the necessary weight to achieve sufficient scale and network effects.

What a future-oriented European payment system needs most of all are efficient, future-oriented, pan-European market initiatives. The Eurosystem would welcome such initiatives and would likely support them, within the limits of its mandate.

A European payment system which has cross-border reach, supports modern payment methods and is accessible to all could set global standards. And it would also foster integration in Europe.

It would allow people across Europe to make transactions cheaply and safely, and this would enhance the benefits of the Single Market, making it more efficient, more innovative and better able to support growth and prosperity in all EU countries. An integrated market would thus increase the benefits of Europe for all countries.

A plea for more European integration

Creating optimum conditions for the Single Market and the euro is also in Germany's interest. And optimum conditions include not just the type of robust payment system I have just been talking about, but also the lasting stabilisation and deepening of Economic and Monetary Union.

This topic has many different aspects, but I would like to focus today on one key question: how can we advance the banking union project? Euro area firms still obtain most of their funding through banks. A robust banking sector is thus vital for a healthy European economy and a stable single currency. We need a banking sector that is able to offer services to customers across Europe. And we need a market in which banks can compete on a level playing field.

And the banking union – a single framework for the supervision and resolution of banks in the euro area – has already come a long way. All euro area banks are now supervised according to the same high standards. And the single mechanism for resolution ensures that cross-border bank resolutions can be carried out without damaging either the economy or financial stability.

But the banking union is still lacking an important component: a European deposit insurance scheme. For there to be an integrated banking sector and a true banking union, depositors in all countries must have the same level of confidence in their banks. People must be able to have confidence that their money is equally safe wherever it is deposited.

In the long run this can only be done through a European deposit insurance scheme. A shared scheme would make Economic and Monetary Union more robust. It would allow financial resources to be pooled between countries and to be used to tackle severe shocks and systemic financial crises that go beyond the capacity of individual countries.

But it is difficult to reach agreement on this degree of joint liability. If we are to move forward on this, I believe that the journey would need to include three steps.

First, all members of a shared deposit insurance scheme would need to continue to do everything they can to further reduce risks in their banks. Stable banks are, after all, the best form of protection for deposits.

Second, the shared insurance should be introduced gradually, and in such a way that individual countries would provide a minimum level of funding to cover national deposits.

Third, it is critical that banks' contributions to the deposit insurance scheme are risk-based – in other words, that the contribution of each bank is based on the institution's default risk and the amounts involved.

These three features of a shared deposit insurance scheme would strengthen the individual responsibility of member states, banks and shareholders and further incentivise risk-based behaviour. And this would ultimately be to the benefit of the EU and all its member countries.

Finding a common way in Europe

I can't say it often enough: Europe is our shared opportunity. Europe is our opportunity to act together where we face global challenges. After all, no country – Germany included – can by itself meaningfully shape the trading system, the battle against climate change or technological progress. More Europe is therefore the way forward in such an interconnected world.

But don't get me wrong – this is not an appeal for Europe to regulate all aspects of our lives. The EU brings together the shared features of the 28 member states, but also their many differences. Successful cooperation requires us to work on the basis of shared values, objectives and cooperation principles, of course.

We need to observe the principles of subsidiarity and proportionality that have always governed the EU's powers. These principles help us to ensure that cultural diversity and national identities are recognised and respected.

In other words, that we are *"united in diversity."* This is an approach that has proved its worth and we should continue to build on it in the future, ensuring that political decisions are made as close to the public as possible.

And despite all the benefits and the motto *"united in diversity",* there is growing scepticism about Europe. One of the frequent complaints is that the EU always operates on the basis of rigid legal principles, making it seem often technocratic and somehow remote.

This criticism applies to all European institutions and we shouldn't just brush it aside. I firmly believe that the time has come for us to redefine the way in which we work and, in particular, the way in which we communicate. And this applies to the European Central Bank too. The ECB needs to address all citizens, not just an expert audience – without ever becoming political, of course - but only in order to bring facts and explanations to economic issues.

"Do good and talk about it" – in simple and accessible language – should be the motto here. The people of Europe need to be given much more information about what the EU and its institutions are doing on their behalf – and that information should be coming not just from the EU institutions themselves but most of all from national governments and institutions.

Only then will we be able to tackle people's fear and disorientation. Only then will we be able to counter the growing polarisation among the people of Europe.

So we should not be communicating through complex facts, coefficients and rules. This only reinforces the impression that the EU is an arrogant elite that already knows all the answers. We will also need to work fundamentally on our understanding of politics and our culture of debate.

Communication between the public and institutions needs to involve a great deal of commitment and to flow in both directions. The people need to be included so that we can regain their trust and convince them that the EU works for them and takes their concerns seriously[12].

A concept that has worked well in a number of countries is that of deliberative democracy. It essentially involves allowing the public to play a greater role in political decision-making processes.

Ireland provides an instructive example of how this can work. In Ireland 99 randomly selected members of the public are brought together to discuss and deliberate on various issues, such as global warming, the challenges arising from demographic change or the law on abortion. The topic of abortion, for example, was for many years a very controversial topic in Ireland, and one that polarised society.

And so, before a referendum on abortion was held, a citizens' assembly was brought together to discuss the issue. The results of the conversations were published in a report and debated in Parliament. And while public reaction had initially been divided on the matter, the result of the referendum ultimately largely reflected the outcome of the citizens' assembly, which supported the right to abortion.

Many participants reported that the citizens' assembly had brought logic and structure to the discussion and allowed important facts to emerge. It had also shifted what had initially been a very emotional debate to a more rational plane and helped people to understand complex issues. In the end, the referendum did not lead to a massive divide in society, as had initially been thought. It was instead a process that gave rise to a clear result and social consensus.

A similar kind of model for exchanging views and participating in political discussions on European matters could also serve Europe well. Citizens' assemblies could be a helpful way of bringing together citizens in a given country to talk about European issues. The example of Ireland shows that citizens' assemblies are particularly effective when they discuss a concrete topic.

But it could also be helpful to have European citizens' assemblies, which would allow citizens of different countries to exchange ideas. It is particularly important that, within Europe, we develop additional methods and tools which establish shared values that transcend national borders and cultural differences and give rise to a sense of shared objectives.

Assemblies like these could also strengthen the dialogue between the people and the EU institutions. EU politicians and civil servants would be better able to understand the concerns of citizens, and thus better able to represent them. And the EU would be brought closer to the people and enjoy greater trust.

All of this requires hard work, commitment and perseverance, since diversity can slow down the decision-making process. Yes, discussions at the European level take longer than those at the corresponding national level. After all, the many different interests and approaches that often have their roots in national traditions need to be thoroughly discussed and compromises found.

And even if it does take longer, we all stand to gain from closer cooperation within Europe.

We need two things here. First, the determination to hold constructive discussions to establish shared values and objectives. And second, the ability to push through our values and objectives in a globalised world. I believe that Europe can offer both of these things.

Conclusion

Europe's achievements are significant. Never before in the history of our continent have we lived together in such peace for so long, and never before have we enjoyed such freedom. Europe has brought us considerable prosperity, and this has benefited all countries, including Germany. None of this should be taken for granted. And yet, Europe faces criticism.

The major challenges we face, such as globalisation, structural change and migration, are unsettling people and causing many to feel a sense of fear and disorientation. It is then often easier to think in national terms and to ignore the problems to a certain degree. And populists are exploiting this situation to spread a new kind of nationalism – a withdrawal from Europe. I believe that this national way of thinking is dangerous.

And that's because the global challenges affect all countries. At a time when all European countries are seeing their influence wane in the world, we need to hold together if we want to uphold our values and interests in the world.

As Konrad Adenauer once said, *"No European nation is able to protect itself militarily or develop economically on its own. If one wanted today to uphold the traditional concepts of nationalism, this would be a task for Europe."*

And this is why we need a return to Europe, a process of politicisation which encourages people across Europe to find their way back to a common path. We need to work on loosening entrenched debates, understanding differences of opinion and arriving at compromises.

Only by doing so will we be able to ensure that the people of Europe stand by an EU that is internally united and externally strong. Germany needs to play its role in Europe. This is not just in the interests of Europe, it is in the interests of Germany too. ■

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The EU-Mercosur FTA: prospects and risks

The deal is worth fighting for, according to Michael Baltensperger and Uri Dadush, and the agreement could be as significant for the globe's climate as it is for the global economy

After nearly 20 years of on-off negotiations, the European Union and Mercosur – a customs union covering Argentina, Brazil, Paraguay and Uruguay – in June 2019 reached a political agreement on a trade deal. But to derive the full benefits from the EU-Mercosur agreement, major reforms will be needed.

The quantifiable gains from the Free Trade Agreement between the European Union and Mercosur – Argentina, Brazil, Paraguay and Uruguay – are small on account of the small share of EU trade with Mercosur and the relatively modest ambitions of the deal in terms of liberalising agriculture in the EU and manufacturing in Mercosur.

Nevertheless, the agreement, if ratified and accompanied by reforms that strengthen competitiveness, could represent a major departure for Mercosur, pushing it towards an outward-oriented development strategy. The deal could also mark a significant step forward for the EU in its efforts to reform agriculture.

The agreement faces a difficult ratification process, but is worth having and fighting for. Incorporating mechanisms to deal with environmental, especially deforestation, concerns will be particularly important. The agreement constitutes an insurance policy against further deterioration in the rules-based multilateral trading system.

The EU-Mercusor Free Trade Agreement: a deal... finally

After nearly 20 years of on-off negotiations, the European Union and Mercosur – a customs union covering Argentina, Brazil, Paraguay and Uruguay – in June 2019 reached a political agreement on a trade deal[1]. The free trade agreement (FTA) agreement faces a difficult ratification process, especially in Argentina where the market friendly government of Mauricio Macri could be replaced by a protectionist Peronist administration in an election on 27 October 2019.

It is possible that a change of heart in Argentina could lead Mercosur – a troubled customs union (Veiga and Rios, 2019; Felter *et al*, 2019) – to splinter, given strong support for the EU-Mercosur FTA from the Bolsonaro administration in Brazil.

Moreover, the parliaments of EU countries are expected to have their say on ratification, given that the trade agreement is part of a wider Association Agreement between the two regions, which entails aspects over which EU member states are competent. Environmental concerns and agricultural interests will organise to oppose ratification of the agreement in France and other member states, and the outcome is not certain.

The main gains from the agreement relate to its potential to drive reform and long-term productivity improvements in Mercosur manufacturing and EU agriculture

Assuming the agreement is ultimately ratified, the quantifiable gains are likely to be small for Mercosur, because of the deal's modest scope in terms of liberalising trade in products such as beef and other sensitive agricultural products, and its correspondingly limited ambition to reduce tariffs on manufactured goods entering Mercosur.

The quantifiable gains are smaller still for the EU on account of the modest liberalisation in agriculture and Mercosur's small size as an export destination for the EU. The less quantifiable and potentially much larger gains that might accrue from the agreement relate to its potential to drive reforms and long-term productivity improvement in Mercosur's manufacturing sector and the EU's agriculture sector.

As always, specific sectors could see significant gains or losses from the agreement, even though the macroeconomic effects are small. The fact that the agreement will take years to ratify and its implementation schedule is gradual and linear over five to ten years, will make the changes on the ground virtually imperceptible in all but the most sensitive sectors, which should ease concerns about adjustment costs.

The EU-Mercosur deal was made possible by a confluence of reformist governments in Argentina and Brazil in the wake (or midst) of deep economic crises, and the EU's determination to counter new protectionist threats. Despite its small measurable effects, we view the EU-Mercosur free trade agreement as important for the EU and as a landmark shift in Mercosur, for four reasons.

First, for Brazil and Argentina, which account for 95 percent of Mercosur's GDP and which are respectively the world's tenth and twenty-fourth largest economies, the proposed FTA represents a historic departure from an inward-looking development model based on import substitution. By signing the FTA with the EU, the world's largest and most diverse source of industrial goods and agri-food products, the Mercosur nations accept the reality of global markets – the vast size, the opportunities and the competition.

The effect of this shift on productivity and innovation cannot be quantified with any precision, but could be very substantial when conditions are right. The FTA will also impose greater discipline within Mercosur, where non-tariff barriers of various kinds impede internal trade and where the four countries' external tariffs differ on a vast array of products[2].

Second, by the agreement, the EU sends a message that it will not yield to protectionism (Gonzalez, 2019). On the contrary, the EU is responding to protectionism in the United States by improving its preference margin even in the United States' backyard. Equally important, with the agreement the EU consolidates its position – even if modestly – as the bloc best able to function in the event of the World Trade Organization faltering.

Third, even though the chapter on agriculture could have been more ambitious, by linking to the world's most competitive agricultural producers, the EU opens a new chapter in its long and chequered history of efforts to reduce support for this sector and open it to international competition. As happened in other deals, for example the FTA with Morocco and other countries in the Mediterranean, the agriculture chapter establishes a foundation on which liberalisation measures may be extended in the future, for example by increasing tariff-rate quotas, opening new ones or reducing the in-quota tariffs.

Fourth, the agreement goes far beyond reducing tariffs. Even though the full text of the agreement is not at time of writing finalised, and these potential gains are not quantifiable, they are likely to be significant, especially in areas such as financial and transportation services, trade facilitation, geographical indications and other areas where they go beyond present WTO disciplines (WTO+).

Beyond ratification, the challenges faced by the two blocs in realising the gains from the agreement are big but quite different. The EU must improve its farmers' ability to compete and find ways to extend progressively the scope of the agricultural chapters. The EU must also monitor implementation in crucial areas such as removal of non-tariff barriers in Mercosur, and Brazil's compliance with the Paris Agreement – a condition on which the deal is based – including fighting deforestation in the Amazon.

Mercosur, meanwhile, faces the greater challenges. Mercosur members will need to put in place profound economic reforms to strengthen their competitiveness to face the increased presence of world-class firms on their domestic markets for industrial goods and agri-food products. These reforms are essential if Mercosur firms are to respond by raising productivity and becoming more innovative.

For the agreement to enhance economic development, Mercosur members will need to exploit the opportunities to export to the EU and elsewhere across all sectors, not just in agriculture.

Long experience with trade agreements, ranging from the disappointment with the North American Free Trade Agreement's effects on Mexico, and with the Euro-Med agreements on Tunisia and Egypt, to the evident successes of countries in eastern Europe arising from EU accession and of China from WTO accession, point unequivocally to the centrality of domestic reforms.

Any trade agreement provides only opportunity, not certainty. In the case of Mercosur, the FTA with the EU should be seen as an essential step, but one that is only the first of a long journey.

In the rest of this Policy Contribution, we examine selectively some key issues relating to this vast agreement. These issues include the gains from the agreement, reforms in agriculture, the ratification process and the need for complementary reforms.

The agreement in brief[3]

Under the FTA, the EU will remove tariffs on 100 percent of its imports of industrial goods from Mercosur, while Mercosur will remove tariffs on 90 percent of industrial goods imports from the EU, expressed in value of present imports. The EU will remove tariffs on 82 percent of agricultural goods while Mercosur will remove tariffs on 93 percent.

It is important to note that where liberalisation (ie. the removal of tariffs) is less than 100 percent, the numbers cited overstate the degree of liberalisation since trade in the most protected products is repressed to start with. Moreover, long transition periods will apply, up to 10 years for some sensitive goods, and 15 years for Mercosur's imports of motor vehicles. For agricultural products not fully liberalised, market access will be governed through tariff-rate quotas with lower in-quota tariffs.

In agriculture, important concessions by Mercosur countries include the elimination of tariffs on wine, chocolate and several other agri-food products, and the establishment of a tariff-rate quota for cheese. The interests of EU agricultural exporters should be further enhanced by recognition of some 350 geographical indications, such as Parmesan cheese.

Mercosur pledges to not impose export taxes and to eliminate monopolies in products sold to the EU, increasing the likelihood that the EU's terms of trade for products such as beef and ethanol will be favourable. The EU will partially or wholly liberalise the import of Mercosur products including orange juice, instant coffee and fruit, and will increase tariff-rate quotas for beef, poultry, pig meat, sugar, ethanol and other products.

Crucially, the EU will get greater access or total access in manufactured goods, most of which face high tariffs, including cars and parts (35 percent tariff), machinery (14 to 20 percent), and chemicals (18 percent).

Although without the full text of the agreement it is difficult to evaluate the gains from liberalisation of services, from the reduction in trade costs and from the elimination of non- tariff barriers, there appear to be significant measures in each of these areas.

According to the EU's summary note describing the agreement, regulatory reforms in Mercosur are expected to facilitate EU services exports and the establishment in Mercosur of EU firms from sectors such as financial services, transport and communications. The trade facilitation provisions reportedly go beyond the WTO Trade Facilitation agreement.

Other WTO+ provisions are reported to include more transparency in the use of trade defence instruments, explicit public consultation and cooperation mechanisms on sanitary and phytosanitary standards and on technical standards, and more transparent and inclusive government procurement procedures.

Since the Mercosur countries are not party to the WTO's Agreement on Government Procurement, the government procurement chapter of the new agreement will improve firms' access to services and government procurement markets in both blocs. In all cases, effective implementation will be critical for the agreement to deliver on its promise.

The EU-Mercosur deal renews the parties' commitments to the Paris Agreement, which for Brazil includes pledges to meet targets on carbon emissions and reforestation, as well as prevention of deforestation in the Brazilian Amazon. The FTA also provides for a monitoring mechanism that includes civil-society representatives in monitoring implementation of these environmental commitments.

Present trade flows and tariffs

Unless the agreement makes possible a very large expansion of trade, the quantifiable gains are likely to be small because trade between the EU and Mercosur is small. Table 1 shows two-way trade in goods between the blocs from 1998 to 2018. Total EU exports to Mercosur amount to $48.6 billion, equivalent to just 2 percent of extra-EU exports and about 0.26 percent of EU GDP. Mercosur's exports to the EU are $43.7 billion, representing 1.8 percent of Mercosur GDP. These numbers overstate the importance of trade because exports are expressed in gross terms and the domestic value added is about 10 percent less[4].

The relative importance of the European Union as an export destination for Mercosur countries has decreased since 1997. In 1997, 25 percent of Mercosur countries' total exports including exports to other Mercosur countries went to the EU; 20 years later this share is at 16 percent.

In terms of extra-Mercosur exports, exports to the EU were 32 percent of the total in 1997 and 18 percent in 2017. This is despite the EU adding 13 countries during that period.

China has played a role in determining these trends. Exports to China were 4 percent of extra-Mercosur exports in 1997, 12 percent in 2007 and 25 percent in 2017, making China the most important export destination for Mercosur countries.

Meanwhile, the United States, the third most important trading partner for Mercosur, has also been declining in relative terms. In 1997, 22 percent of extra-Mercosur exports went to the US and 19 percent of extra-Mercosur imports came from the US. In 2017, these shares stood at 13 percent and 17 percent respectively.

Table 1. EU-Mercosur trade over time in $ billions

EU exports to Mercosur	**1998**	**2008**	**2018**
Agricultural, forestry, and fishery	0.2	0.2	0.5
Mineral commodities	0.1	1.7	3.5
Manufacturing	25.9	44.6	44.7
Total exports	26.1	46.5	48.6
Mercosur exports to EU	**1998**	**2008**	**2018**
Agricultural, forestry, and fishery	5.3	16.0	8.0
Mineral commodities	1.9	12.9	5.7
Manufacturing	11.9	44.2	30.0
Total exports	19.1	73.1	43.7

Source: Bruegel based on UN Comtrade data. Note: Mercosur is Argentina, Brazil, Paraguay and Uruguay. EU is EU15 in 1998, EU27 in 2008 and EU28 in 2018. Trade values in current US$.

The EU's loss of relative position as a trading partner for Mercosur might have been mitigated were Mercosur's and the EU's trade barriers not so high. Tariffs faced by the EU in Mercosur are about 13 percent for agriculture and 10 percent for non-agriculture (manufacturing and mining), all trade-weighted.

Mercosur's exports to the EU are mainly manufacturing and mining, which face a combined tariff of around just 1 percent, but also include a significant share of agricultural products, which face a combined tariff of around 8 percent. We estimate that EU exporters pay about $4.4 billion in tariffs to Mercosur while Mercosur exporters pay about $1.6 billion[5] in tariffs to the EU.

Quantifiable gains

To evaluate the potential gains from the EU-Mercosur FTA we can use a simple example. This example is intended to underscore the importance of ambition in resource reallocation for the FTA to work, and it also sheds light on the important distributional effects of the FTA.

Assume that when all tariffs are removed, exporters do not reduce prices but capture all the tariff reduction in increased profits. This is not entirely far-fetched, since exporters can enjoy monopoly positions (such as quota rents) or face a very inelastic demand curve for their products.

The assumption that exporters do not reduce prices implies that there is no resource reallocation and there are no net gains from trade as a whole, only redistribution of existing gains because of the reduction in tariffs.

In that case, the gains to EU exporters amount to 0.026 percent of EU GDP, while the gains to Mercosur exporters amount to 0.6 percent of Mercosur GDP. Proportional to GDP, the gains to Mercosur are about 2.3 times greater than the gains to the EU, reflecting the greater importance to Mercosur of trade with the much larger EU economy, and despite Mercosur tariffs being higher than EU tariffs.

However, the absolute gains for the EU are greater because it pays more tariffs to Mercosur than Mercosur does to the EU. So, without reallocation of resources, Mercosur is a net loser from the agreement to the tune of about $2.8 billion, or about 1 percent of GDP.

Additionally, the agreement would also have sharp domestic distributional consequences, with governments losing tariff revenue, consumers not affected (since prices do not change) and gains accruing primarily to EU manufacturers and, most of all, to agricultural producers in Mercosur whose profitability, expressed as the return on capital and land, could increase very significantly[6], even as the Mercosur economies lose on aggregate.

If we assume instead, as is more realistic, that exporters reduce prices to some extent once tariffs are removed and resources are reallocated, the gains to both the EU and Mercosur parties from full liberalisation could be substantial since Mercosur has a highly competitive agricultural sector and the EU has a highly competitive manufacturing sector[7].

Moreover, if the EU's agriculture sector is fully exposed to Mercosur competition, and vice versa in manufacturing, both blocs could see big so-called dynamic gains, ie. ongoing improvements in productivity and innovation triggered by increased competition and assisted by scale economies.

In the presence of wage and other rigidities that cause unemployment, all resources could become more fully utilised as incomes rise and new export opportunities open up. This means, for example, that even though Brazil might lose out on net tariff payments to the EU, it can more than make them up by greatly expanding its agricultural exports to the EU, expanding employment in that sector and accelerating productivity in its manufacturing sector.

To illustrate how these different assumptions could potentially lead to big gains, we refer to Diao *et al* (2003), who used a global computable general equilibrium (CGE) model covering 38 products when the EU had 15 members and Mercosur was assumed to include Chile and Bolivia. The model includes wage rigidities (and so can account for unemployment) and assumes that total factor productivity accelerates with trade.

Assuming full trade liberalisation, Diao *et al* (2003) concluded that GDP increases in both blocs: the EU's GDP increases by 0.34 percent, while Argentina's GDP increases by over 4 percent and Brazil's by nearly 3 percent. It is important to note that only a small part of these gains is derived from resource reallocation and increased employment alone (ie static gains). About 80 percent of the gains are derived from the increase in total factor productivity.

These numbers provide important pointers to what is possible in an ideal situation, but must be treated with caution since there is no accepted way of linking increased competition to acceleration in productivity and, in any event, the link depends crucially on reforms to the business environment.

In any event, the EU-Mercosur agreement certainly does not go as far as full trade liberalisation, as simulated by the Diao *et al* model. No study is available that simulates the present agreement, but Burrell *et al* (2011), using a purely static model that might underestimate the benefits of the agreement, simulated the 2004 EU offer[8], consisting of full liberalisation for goods, full liberalisation for non-sensitive agricultural products and a modest gradual expansion of tariff-rate quotas for sensitive products[9], in exchange for less-than-full liberalisation for Mercosur goods.

Burrell *et al* (2011) also simulated the 2006 Mercosur offers, which proposed greater liberalisation than the EU for agriculture in exchange for even greater Mercosur liberalisation for goods. As it turns out, the present agreement contains elements of both offers, so Burrell *et al* (2011) provides useful pointers.

Based on the EU and Mercosur offers, Burrell *et al* (2011) concluded that by 2020 EU total exports to Mercosur would increase by 9-10 percent, while Mercosur total exports to the EU would increase by 3-4 percent (and about 6-9 percent in agriculture).

However, the GDP gains for the EU15 would be only 0.02 percent in both scenarios, while the gains for Mercosur would be bigger in proportional terms than for the EU, but still very small at 0.12 percent of GDP under the EU offer and 0.16 percent of GDP under the Mercosur offer[10]. The GDP estimated gains in Burrell *et al* (2011) appear to us to be on the low side. Other simulations arrive at somewhat larger gains for the EU (Estrades, 2012).

While under full liberalisation, the EU could gain 0.2 percent of GDP and Brazil, for example, could gain 0.4 percent of GDP, under the limited liberalisation envisaged for sensitive products by both blocs, the gains would be around 0.1 percent for both the EU and Brazil.

The distributional effects of the FTA are estimated by Burrell *et al* (2011) to be modest in the EU (small losses in terms of agricultural incomes and land values) and notably greater in Mercosur where agricultural incomes would increase significantly.

The stark differences between different studies arise mainly from different assumptions and/or model specifications – notably the inclusion of dynamic gains estimates – but they also underscore the importance of full liberalisation for goods by Mercosur and for agriculture by the EU.

A rough comparison of the proposed FTA and the Burrell *et al* (2011) scenarios (Box 1) suggests that the FTA as currently envisaged lies somewhere between the 2004 EU offer and 2006 Mercosur offer – implying that the quantifiable static gains are small for both parties, though larger for Mercosur.

In fact, the FTA includes liberalisation for non-sensitive products, but only limited liberalisation for sensitive agricultural products – where some of the greatest gains could be – and essentially no action on the EU's agricultural subsidies. Correspondingly, Mercosur commits to significant – but only partial – liberalisation for goods.

Box 1. Comparison of the EU-Mercosur FTA with previous offers

Industrial goods

In the FTA, all EU tariffs on industrial products will be eliminated in due course, as per the EU offer of 2004 (EU04) and the Mercosur offer of 2006 (M06).

In the FTA, tariffs on 90 percent of industrial products will be eliminated by Mercosur, somewhere in between EU04 and M06 offers. Note that M06 proposed even greater liberalisation for goods in exchange for greater liberalisation for agriculture in the EU.

Agricultural products not subject to tariff rate quotas

In the FTA, the EU will eliminate all tariffs on these products, in line with both EU04 and M06. However, whereas in those offers only 70 percent of all agricultural exports to the EU were not subject to tariff rate quotas, in the FTA 82 percent of all Mercosur agricultural exports to the EU will not be subject to tariff rate quotas.

Thus, the FTA represents significant liberalisation compared to the most-favoured nation (MFN) regime and Mercosur agricultural exports that can enter the EU duty-free will increase from about 30 percent to 82 percent. These exports currently face MFN tariffs of around 12.5 percent and EU consumers will probably see some price reduction for these products.

In the FTA, Mercosur will reduce tariffs on 93 percent of agricultural imports from the EU; this is more than the EU04 offer but less than what was offered under M06 in exchange for greater liberalisation for agriculture by the EU.

Agricultural products subject to tariff rate quotas

The FTA opens several new tariff rate quotas at zero in-quota tariffs, in line with EU04. However, some of these are small. Ethanol, which was not envisaged in EU04, is a big exception, at 650,000 tonnes. The most important pre-existing tariff rate quota is for beef, where the FTA envisages an additional 99,000 tonnes, in line with EU04, and only about one third of the expansion proposed by M06. The FTA proposes a big expansion for poultry, more than under EU04 but far less than M06 proposed. These provisions are unlikely to have a big effect on EU consumers or on EU producers.

Agriculture liberalisation by the EU is central to determining outcomes, not only because of its inherent value, but also because modest EU ambition on agriculture implies that Mercosur's motivation and offer in all other aspects of the agreement is reduced. The next section delves into the EU's concessions on sensitive agricultural products in more detail.

The EU's concessions on sensitive products, Mercosur tariff savings and prices in the EU

Even though the EU is a net agricultural exporter, including of products referred to as sensitive by the EU, such as beef, poultry and sugar, EU agriculture remains highly subsidised and protected, with EU farmers receiving 37 percent of their income on average from public sources[11].

EU agricultural subsidies distort production decisions over specific crops less than they used to (having been largely delinked from production), but nevertheless represent an enormous source of advantage for EU farmers relative to non-EU producers and Mercosur producers in particular.

The EU plans some reduction in subsidies under its regular budget cycle, but the subsidies will not be affected by the EU-Mercosur FTA and might even increase marginally[12] on account of a small adjustment compensation scheme.

In addition to direct public support in the form of various subsidies, EU agriculture is artificially propped up by severely restriction of competition from overseas. According to the World Tariff Profiles 2019[13], 40 percent of EU applied tariff lines in agriculture exceed 10 percent. Moreover, 13.5 percent of agriculture tariff lines at the six-digit level[14] are covered by tariff-rate quotas and 23 percent of agriculture tariff lines are subject to special safeguards that can be applied automatically in the event of prices dropping below a benchmark.

As already mentioned, the EU-Mercosur FTA will involve elimination of tariffs on about half of EU imports from Mercosur that are not already entering duty-free under the EU's MFN applied tariffs – a significant step. However, products that are subject to tariff rate quotas present a very mixed picture.

Our review of the EU's tariff rate quotas under the proposed FTA suggests that the proposed liberalisation for most products is very limited compared to EU consumption and will imply little change in EU production. Indeed, the agreement has been presented as such[15] by the European Commission.

The liberalisation is also limited compared to Mercosur production and exports (ethanol is a clear exception). Moreover, while Mercosur will derive significant tariff savings from lower in-quota tariffs and their expansion, these gains are likely to be largely appropriated by Mercosur producers and not passed on to EU consumers because the quota expansions are very small relative to EU consumption. Of course, the tariff reductions imply lower EU tariff revenues.

Table 2 lists the EU's most important sensitive products as they affect Mercosur. In 2018 Mercosur exported $8 billion worth of agriculture, forestry and fishery products to the EU. Mercosur exports of products excluded from full liberalisation were on average $3 billion per year between 2016 and 2018, though the volume would potentially be much larger if there was no protection.

The EU is a major export destination for Mercosur countries for several of the sensitive products, despite very high tariffs. For example, 42 percent of income from Mercosur's fresh beef exports, which face a 59 percent MFN tariff out of quota, is realized in the EU, and a third of Mercosur's honey exports and around 10 percent of poultry meat exports go to the EU (Table 2).

Often, Mercosur exporters realise a higher price per tonne in the EU than in other export destinations because products exported to the EU, for example beef cuts, are in the high-quality segment.

Table 2. Mercosur exports to the EU of products excluded from full liberalisation by the EU

			Share of total Mercosur exports			EU MFN
Product	in tonnes	in $ millions	Price $/t	by weight	by value	tariff
Beef fresh	118,065	967.2	8,192	25%	42%	59%
Beef frozen	75,619	380.3	5,029	4%	6%	74%
Poultry meat	391,927	948.9	2,421	7%	13%	53%
Honey	33,926	90.1	2,657	32%	30%	17%
Sugar	468,914	227.4	485	2%	2%	83%
Ethanol	46,467	20.7	446	3%	2%	21%
Rice	117,247	53.9	460	4%	5%	8%
Sweetcorn	2	< 0.1	4,513	2%	8%	14%
Pork meat	35	0.1	2,143	< 1%	< 1%	27%
Cheese	37	0.1	3,603	< 1%	< 1%	40%
Milk powder	< 1	< 0.1	14,263	< 1%	< 1%	64%

Source: Bruegel based on UN Comtrade.
Note: Weight of meat products converted to carcass weight equivalent. Export data is average of 2016-2018.

Mercosur countries already have access to various tariff rate quotas when exporting agricultural products to the EU. Table 3 reports the size of EU quotas at the time of writing which are either for specific Mercosur countries (column D) or for third countries, which include at least one Mercosur country (column E).

The EU-Mercosur agreement foresees several new quotas which will be opened by the EU for Mercosur exporters (column F). To evaluate the significance of these quotas, columns G and H express the quotas in percentage of total Mercosur exports to the EU.

Take Mercosur's exports of beef to the EU, which all studies show has the greatest potential for expansion and for reduction of prices paid by EU consumers. Expressed in tonnes, 25 percent of fresh beef and 4 percent of frozen beef exports from Mercosur go to the EU.

In the case of fresh beef, Mercosur countries have an exclusive yearly quota of 46,000 tonnes and access to an *erga-omnes* quota (ie. a quota open to all WTO members, usually on a first come- first serve basis) of 45,000 tonnes.

Furthermore, Mercosur can export frozen beef on the basis of several quotas which allow 110,000 tonnes of frozen beef into the EU. The EU-Mercosur agreement foresees additional quotas of 55,000 tonnes of fresh and 44,000 tonnes of frozen beef exclusively for Mercosur exporters, which come with a 7.5 percent in-quota tariff, phased-in over six years.

Additionally, the agreement foresees lowering the in-quota tariff rate on the existing fresh-beef quota from 20 percent to duty free. Despite a high out-of-quota tariff of 59 percent[16], current Mercosur exports to the EU exceed the existing quota sizes substantially, underscoring the competitiveness of Mercosur beef.

According to the European Commission, the new quotas represent only 1.2 percent of EU beef consumption, which is 8 million tonnes per year, and are not expected to lead to a significant increase in production by Brazil. In addition, fresh beef imports from Brazil are expected to replace some current imports which are subject to the high MFN tariff[17].

Otherwise stated, existing and new quotas together amount only to 86 percent of current fresh beef imports and 58 percent of current frozen beef imports. Since beef exports exceed already the new quotas, it is unlikely that the new beef quotas will lead to more EU beef imports or will have much of an impact on EU beef prices.

It is likely that the new quotas will be filled by Mercosur exporters who already export to the EU[18], and that those exporters will capture the near totality of the tariff reduction, except in cases when they confront a big and organised purchaser on the EU side.

For poultry meat, the EU currently grants Brazil a quota of around 330,000 tonnes with in-quota tariffs between 8 and 25 percent. The EU-Mercosur agreement creates an additional quota of 180,000 tonnes, which will be duty-free. Current and new quotas together are 30 percent more than what Mercosur currently exports to the EU.

Hence, an increase in the quantity of poultry exports is likely. However, the new quotas represent only 1.2 percent of EU consumption, which is growing rapidly, so are unlikely to result in significantly lower consumer prices.

Sugar is highly protected in the EU with an MFN tariff of 83 percent. Despite an existing quota of 412,000 tonnes for Brazilian sugar exports to the EU, sugar exports from Mercosur to the EU are only 2 percent of Mercosur's total sugar exports. This is partly because the current specific tariff rate is high at €98/tonne for a quota of 334,000 tonnes and €11/tonne for a quota of 78,000 tonnes.

Despite the very high out-of-quota tariff, Mercosur exports more sugar to the EU than what could go through the quotas, again underscoring the bloc's competitiveness. The additional quota of 10,000 tonnes for sugar originating in Paraguay, foreseen under the EU-Mercosur agreement, will lift total sugar quotas to just 90 percent of what is currently exported from Mercosur to the EU, a very small change.

Ethanol presents a different story. Imports to the EU are subject to the 21 percent MFN tariff. The EU-Mercosur agreement grants a large quota of 650,000 tonnes per year. Of this, 450,000 tonnes will be reserved for ethanol for chemical purposes, which will be duty free. The remaining 200,000 tonnes will have an in-quota duty of a third of the MFN rate and is open for all uses, which means particularly for fuel use.

These quotas are very large when compared to current trade. They are almost half the size of Mercosur's total exports of ethyl alcohol to the world. The European bioplastic and biochemical industries, major buyers of ethanol, are expected to grow significantly in the short to medium term.

Hence a major increase in ethanol exports from Mercosur to the EU can be expected, implying lower prices in the EU, and implying increased production in Brazil, as well as some reorientation of present ethanol exports from other destinations. Brazilian ethanol producers can also be expected to displace EU imports from third parties, particularly the United States.

To gauge the benefits that will accrue to Mercosur exporters from the tariff rate quotas in the EU-Mercosur agreement, we estimated tariff savings that could result from the new agricultural tariff rate quotas in the EU-Mercosur agreement. Table 4 lists estimated tariff savings in the last column[19].

Table 3. EU tariff rate quotas on agricultural products: current and new under EU- Mercosur agreement

A	B	C	D	E	F	G	H	J
	Mercosur exports		Exisitng EU quotas 2018 for		New additional quotas under the FTA	F/B	(D+F)/B	Phase-in period for new quotas
Product	to EU	to world	Mercosur	*Erga omnes**				
Beef fresh	118,065	480,923	46,076	45,000	55,000	47%	86%	0/6 years
Beef frozen	75,619	2,142,545	0	109,578	44,000	58%	58%	6 years
Poultry meat	391,927	5,345,730	331,084	36,684	180,000	46%	130%	6 years
Honey	33,926	107,533	0	0	45,000	133%	133%	6 years
Sugar	468,914	26,722,917	412,054	295,734	10,000	2%	90%	Immediate
Ethanol	46,467	1,333,885	0	0	650,000	>1000%	>1000%	6 years
Rice	117,247	2,914,373	0	77,185	60,000	51%	51%	6 years
Sweetcorn	2	97	0	0	1,000	>1000%	>1000%	Immediate
Pork meat	35	691,166	0	74,628	25,000	>1000%	>1000%	6 years
Cheese	37	84,502	0	59,897	30,000	>1000%	>1000%	10 years
Milk powder	0	273,231	0	68,537	15,000	>1000%	>1000%	10 years

Source: Bruegel based on UN Comtrade, WTO and European Commission documents.
*Note: All measures are in tons, for meat in carcass weight equivalents. *Erga omnes = quotas open to all WTO members. Export data is average of 2016-2018.*

The largest absolute tariff savings accrue for the new poultry meat quota ($231 million), the new fresh beef quota ($230 million), the new quota for frozen beef ($163 million) and for milk powder, including infant formula ($136 million).

These *ad-hoc* estimates are based on bold assumptions that quotas are fully used and average prices remain as currently. Particularly where total quotas exceed the volume of current trade, it is rather unrealistic to assume that prices will remain stable or that quotas will be fully exhausted. Column 4 of Table 4 reports the size of all quotas (old and newly added under the EU-Mercosur agreement) as a share of current Mercosur exports to the EU.

In cases where this share is below 100 percent, the assumptions underlying our estimate are more likely to hold. If the share is far above 100 percent, it is less likely that the new quotas will be fully exhausted. If furthermore the absolute size of the quota is large, it is more likely that prices on the European market will go down.

New quotas for beef, sugar and rice are unlikely to have a substantial effect on European prices, and estimating the respective tariff savings at $495 million is reasonable. Quotas for poultry meat and honey exceed current trading volumes and might therefore have an impact on prices. If prices fall, tariff savings will be smaller than our estimate. Therefore, $250 million can be seen as an upper-bound estimate for the tariff savings accruing to Mercosur exporters of poultry meat and honey. The tariff savings on the remaining products are difficult to gauge, since the quotas exceed current imports by a very large amount and in some cases there was almost no trade in these specific product categories between 2016 and 2018.

In conclusion, agricultural producers in Mercosur countries can expect tariff savings between $495 million and $993 million from the new tariff rate quotas. Further savings will of course accrue from the complete removal of tariffs on the remaining 82 percent of agricultural imports.

Table 4. Mercosur tariff savings under new tariff rate quotas

Product quota	Average trade price $/t	Quota size	All quotas as share of current Mercosur exports to EU	In-quota tariff rates		Estimated tariff savings (in $ millions*)
				Old/MFN tariff	New tariff	
Beef fresh WTO	$8,192	46,076	86%	20%	0.0%	75.5
Beef fresh new		55,000		59%	7.5%	229.8
Beef frozen new	$5,029	44,000	58%	74%	0.0%	163.1
Poultry meat	$2,421	180,000	130%	53%	0.0%	231.1
Honey	$2,657	45,000	133%	17%	0.0%	20.7
Sugar Uruguay new	$ 485	10,000	90%	83%	0.0%	4.0
Sugar Brazil WTO		180,000		$112/ton	0.0%	20.2
Ethanol chemical	$ 446	450,000	>1000%	21%	0.0%	42.0
Ethanol for all uses		200,000			7.0%	12.4
Rice	$460	60,000	51%	8%	0.0%	2.3
Sweetcorn	$4,513	1,000	>1000%	14%	0.0%	0.6
Pork meat	$2,143	25,000	>1000%	27%	$95/tonne	12.3
Cheese	$3,603	30,000	>1000%	40%	0.0%	43.0
Milk powder	$14,263	15,000	>1000%	64%	0.0%	136.1

Source: Bruegel based on data from UN Comtrade and Commission Regulations.
*Note: Tariffs in euros converted to $ using an average exchange rate of 1.14. * See footnote 19 for assumptions.*

Will the EU ratify?

The EU-Mercosur trade agreement is part of an association agreement that also includes provisions related to broader political cooperation. Once the legal text is finalised, the Commission will submit it to the Council of the EU and indicate whether it considers it to be a mixed agreement, which requires national ratification, or an EU-only agreement, which requires ratification by the Council and the European Parliament only.

Indications so far are that the agreement will most likely need to be ratified by member states according to their national procedures, which in most cases involves approval by national parliaments[20]. Outgoing trade commissioner Cecilia Malmström has said the ratification process in national and some regional parliaments could take two years to complete.

As with the EU-Canada Comprehensive Economic and Trade Agreement, the Council of the EU and the European Parliament could pass those parts of the agreement that concern EU exclusive competences, such as trade, and apply them provisionally until each member state has ratified the agreement. However, if member states fail to ratify, the provisionally applied parts of the agreement must be retracted.

In Europe, opposition to the EU-Mercosur agreement is based on three main concerns: expected economic damage to EU farming, the attitude of the Bolsonaro government in Brazil to the protection of the environment and indigenous communities, and the possible impact of the tariff reductions on deforestation, especially in Brazil. Opponents will be galvanised by the epidemic of fires in the Amazon during 2019.

European farmers, especially in France, Ireland and Belgium, have criticised the agreement heavily, arguing that the reduction of tariffs and the extension of quotas for agricultural products, in particular beef and chicken, threaten their businesses. Besides the much lower production costs in Mercosur countries, EU farmers argue that they are particularly disadvantaged because Mercosur producers face lower environmental and labour protection standards and because products from Mercosur face lower quality standards and laxer controls than European agricultural products[21].

The European Commission insists that EU food-safety standards will apply to all imported products. The Commission also argues that for beef, poultry and sugar, the new quotas (or reduced tariff rates) will not necessarily lead to increases in imports but that the new quotas will substitute export quantities that currently pay full tariffs (see the preceding section).

Furthermore, for ethanol, honey and rice, the Commission argues that the new quotas are no threat to European agricultural producers because they will replace existing imports from third countries[22]. Our assessment broadly aligns with the Commission's, though we would expect some increase in imports in some commodities subject to quotas, such as poultry, and we would certainly expect increases in imports of products not subject to quotas and which are not already entering duty free.

On environmental and human rights protections, civil society wants the EU to take a tough position to prevent any deterioration in Brazil[23]. Indeed, Amnesty International has criticised the Bolsonaro government for its anti-human rights rhetoric, efforts to hinder the work of civil society organisations and, in general, for *"measures and actions that threaten and violate the human rights of all people in Brazil"*[24]. Furthermore, deforestation rates have increased since President Bolsonaro came to power in January 2019[25].

A third reason why some members of the public and members of the European Parliament oppose the EU-Mercosur agreement is concern that the agreement will incentivise further deforestation in Mercosur countries.

Cattle ranching and soybean (feedstock for ethanol and meat) and sugarcane (feedstock for ethanol) cultivation are considered major drivers of deforestation in Argentina and Brazil, through direct and indirect land-use change[26].

As we have noted, the new beef quotas under the EU-Mercosur agreement are not large enough to lead to significant increases in Mercosur beef production. However, the new ethanol quotas are significant and production and trade of ethanol is expected to increase substantially.

Kirkpatrick and George (2009) evaluated the environmental impact of a possible EU-Mercosur agreement on Brazilian natural forest, concluding that increases in demand for agricultural products and in agricultural production will likely lead to intensification of land use and increased productivity but also to expansion of total land area and increased pressure for conversion of natural forest.

The Commission argues that the wider Association Agreement, which includes the FTA but also agreements on political cooperation, places the EU in a better position to encourage social and human rights protection in Mercosur countries.

Specifically, the FTA includes a Trade and Sustainable Development (TSD) Chapter which contains commitments to respect the ILO's Fundamental Labour Conventions, to promote corporate social responsibility and responsible business conduct as outlined by the United Nations Guiding Principles for Business and Human Rights, to respect multilateral environmental agreements, to fight deforestation and encourage sustainable management of forests, and to effectively implement the Paris Agreement, which also includes commitments to reforestation and forest preservation.

Since the official legal text is at time of writing not available, it remains unknown how these commitments in the TSD Chapter will be enforced. So far, commitments in the TSD Chapters of EU FTAs have been subject to dedicated dispute settlement mechanisms, including civil society consultation mechanisms and establishment of panels of independent experts to produce public reports with recommendations. The European Commission has opened formal consultations on the failure to uphold TSD Chapter commitments in some cases.

For example, the Republic of Korea has, despite its commitment in the 2011 FTA with the EU, failed to ratify several of the ILO's Fundamental Labour Conventions[27]. However, no expert panel has so far been established to investigate a partner country that has failed to uphold a TSD Chapter commitment.

We agree with the Commission's view that the wider Association Agreement is the best approach to engage with Mercosur countries on human rights and the environment. It is however not possible to dismiss the threat that increased agricultural production constitutes for the Amazon.

Given the high visibility of the deforestation issue, the EU will probably have to insist on tighter environmental conditions and more active implementation and monitoring to win ratification. The EU should also visibly intensify its monitoring and strengthen enforcement of commitments made in the TSD chapter.

The European Commission (2018) looked at how TSD chapters could be strengthened, finding no consensus on the use of trade sanctions, but broad support for more assertive implementation and enforcement of TSD chapters, including through full involvement of civil society organisations, an increase in resources dedicated to implementation and strengthening of TSD chapters in relation to climate change (European Commission, 2018).

Additional conditions could include cooperation mechanisms at the subnational level agreed with the Brazilian authorities and norms agreed with Brazilian and international companies operating in the Amazon[28].

Will complementary reforms follow?

To derive the full benefits from the EU-Mercosur agreement, major reforms will be needed in the EU and Mercosur. Mercosur's agricultural producers, which are among the world's most competitive, and EU farmers, who are among the world's most cossetted, will make for uneasy bedfellows in a free trade area. Gradual change towards less support via the EU's agricultural protection regime will be needed so that EU farmers, who have shown remarkable adaptability and – helped by subsidies – run a trade surplus, continue to adapt.

EU farmers must continue to move into higher value-added products, and build on their comparative advantage in specialities, or they must exit the sector. As the EU's total labour force declines, thanks to population aging and restrictions on immigration, younger workers will tend to find increased opportunities in sectors other than agriculture. What needs to be done to accelerate this process is well known, but political will has been in short supply.

The reforms facing decision-makers in Argentina and Brazil are more complex, but their importance for the success of the agreement cannot be overstated, nor can the importance of the agreement for spurring the needed reforms. The reform task is formidable, as the struggles of the Macri government and massive corruption scandals in Brazil have shown[29].

The four Mercosur countries typically score in line with, or better than, their per-capita income in the World Economic Forum's (WEF) competitiveness rankings and the World Bank's *Doing Business* report. However, their manufacturing sectors will, if the FTA is ratified, confront direct competition from firms in European nations that are ranked some 60 to 100 slots higher. For example, while Brazil ranks 72 in the WEF rankings, and Argentina ranks 81, Germany, the Netherlands, the UK, Sweden and Denmark, all rank in the top ten.

Mercosur nations must get better at enabling their firms. There is no doubt that Argentina and Brazil have enormous development potential, particularly because of their natural resources. One measure of that potential is that, despite the many weaknesses in their business environments, Argentina has attracted respectable amounts of FDI in recent years (around 2.5 percent of GDP) and Brazil even larger amounts (around 3.5 percent of GDP).

The political consensus needed to make progress on reforms in Mercosur is difficult to achieve, partly because Mercosur nations have some of the highest levels of income inequality and a large part of the population is in poverty or at risk of relapsing into poverty (Estrades, 2012).

For example, whereas the Gini coefficient of inequality is close to 0.3 in France and Germany, it is over 0.4 in Argentina and a shade above 0.5 in Brazil (with higher numbers indicating greater inequality). The Mercosur nations badly need first generation reforms, notably improvements to macroeconomic management, reductions in public debt and rationalised trade regimes[30]. They also need investment in infrastructure (Italy ranks 21 in terms of its infrastructure according to the WEF, whereas Brazil is ranked 81).

To improve competitiveness, structural reforms in Mercosur must aim to improve the quality of public services, provide high-quality public education, remove barriers to competition and improve all-round governance and regulation, all areas in which Mercosur nations lag significantly behind EU countries. Also critical for competitiveness is the level of the exchange rate.

According to IMF (2019), whereas the real exchange rates of Argentina and Brazil are substantially in line with fundamentals following their recent devaluations, Germany's is substantially undervalued. Unless the broader domestic reform agenda in Mercosur makes great advances, the net effect of their opening to trade with the EU will be minuscule. The FTA can bring new impetus to these reforms.

Nevertheless, and despite its rather small quantifiable gains, the EU-Mercosur FTA is an agreement worth having and fighting for. If accompanied by vigorous domestic reforms, it could represent a landmark shift in Mercosur's development path towards higher growth, and, over time, present opportunities for more far-reaching agricultural liberalisation in the EU.

The agreement sends an important signal to protectionists in the United States that their policies are refuted by two of their largest trading partners, and will lead only to an erosion of the US's competitive position.

The FTA includes several WTO+ provisions that are inherently useful and can point the way to better trade deals across the world, for example in setting standards and in trade facilitation.

Finally, the reaffirmation of the Paris Agreement by economic blocs at very different levels of development, and both so critical to the path of global carbon emissions, is also of great value. ■

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Endnotes

1. See https://trade.ec.europa.eu/doclib/press/index.cfm?id=2039

2. Otaviano Canuto (2019) 'Mercosur-EU trade agreement: Better Late than Never...', Opinion, 3 July, Policy Center for the New South, available at https://www.policycenter.ma/opinion/mercosur-eu-trade-agreement-better-late-never#.XV2COvZFzD4

3. A fairly detailed description of the agreement in principle can be found here https://trade.ec.europa.eu/doclib/docs/2019/june/tradoc_157964.pdf

4. The share of domestic value added in total gross exports is estimated at 88 percent for the EU, 90 percent for Brazil and 93 percent for Argentina. See the OECD 'Statistics on Trade in Value Added' dataset, available at https://doi.org/10.1787/36ad4f20-en

5. Argentina's manufactured exports to the EU, which are about an eighth the size of Brazil's, are subject to higher tariffs of around 5 percent in the EU, while Argentina's agriculture exports to the EU, which are about half of Brazil's, are subject to lower tariffs of around 5 percent.

6. By about 6 percent of the land and capital stock per annum. Calculated as the percentage increase in GDP x the share of agriculture in GDP x the share of capital and land in agriculture value added, or 0.6 x 23.5 x 0.4.

7. The fact that both blocs are highly competitive in sectors of comparative advantage means that full liberalisation would bring little to virtually no cost from trade diversion.

8. Available via http://www.sice.oas.org/TPD/MER_EU/MER_EU_e.asp

9. The EU 2004 offer on sensitive products included "goods subject to TRQs: expansion of existing TRQs (except for sugar and sheep meat) on a product-by-product basis. New TRQs created for rice, wheat, other cereals, pork, skim and whole milk powder, butter, cheese and ethanol. In-quota tariff equal to zero. We assume that the expansion is fully phased in by 2020" (Burrell et al, 2011).

10. All the studies we reviewed concluded that little trade diversion is expected from the EU-Mercosur FTA, since agriculture in Mercosur and manufacturing in the EU are among the most competitive in the world.

[11] "The EU average share of direct payments in agricultural factor income in 2013-2017 stood at 26%. However, this masked considerable differences between Member States, ranging from 20% or less in Croatia, Cyprus, Malta, Italy and the Netherlands to more than 40% in the Czech Republic, Denmark, Luxembourg, Slovakia and Sweden. Taking all subsidies into account, total public support in agricultural income reached 37% of agricultural income on average in the EU." See https://ec.europa.eu/agriculture/sites/agriculture/files/cap-post-2013/graphs/graph5_en.pdf

[12] There are plans to provide €1 billion to EU farmers to deal with adjustments related to the EU-Mercosur FTA. However, proposals for the CAP budget post-2020 at time of writing foresee a reduction of agricultural subsidies by 12-15 percent (Matthews, 2018).

[13] Available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm

[14] See https://unstats.un.org/unsd/tradekb/Knowledgebase/50018/Harmonized-Commodity-Description-and-Coding-Systems-HS

[15] As stated by EU Agriculture Commissioner Phil Hogan on presentation of the EU-Mercosur FTA (28 June 2019): "We will only open up to agricultural products from Mercosur with carefully managed quotas that will ensure that there is no risk that any product will flood the EU market and thereby threaten the livelihood of EU farmers."

[16] This is the ad-valorem equivalent of the MFN tariff which is specified as 12.80 percent + €1,768/tonne.

[17] According to the European Commission the new quotas represent: "1.2% of the total European beef consumption (8 million tons every year). It will take 5 years until this amount is reached. […] It is expected that, rather than creating an equivalent increase in imports, one of the effects of the new quota for 'fresh' beef will be to replace some of the imports that are already taking place. In addition, the agreed amounts will not lead to a significant increase in production on the Mercosur side. Brazil alone already produces 11 million tons of beef every year and the agreed quota of 99,000 tons will still be split among the four countries." See https://trade.ec.europa.eu/doclib/docs/2019/july/tradoc_158059.pdf

[18] 35,000 tons of the erga-omnes quota for fresh beef (total 45,000 tons) will become exclusively available to US exporters over the next seven years. See https://www.consilium.europa.eu/en/press/press-releases/2019/07/15/imports-of-hormone-free-beef-eu-us-agreement-confirmed/

19. We assumed all tariff rate quotas are fully used and average prices remain as currently. We furthermore assumed that the composition of trade will not change.

20. The Irish government has said that it perceives the EU-Mercosur to be a mixed agreement. See https://www.oireachtas.ie/en/debates/question/2019-07-04/177/. The European Commission has noted that similar past agreements have "required a validation by all Member States according to their national constitutional procedures, in addition to the European Parliament and the ministers' vote in the Council." See https://ec.europa.eu/trade/policy/in-focus/eu-mercosur-association-agreement/agreement-explained/

21. See for example, http://www.jesuisagriculteur.be/ and John Lichfield (2019) 'Why French farmers are plotting revolution', UnHerd, 29 July, available at https://unherd.com/2019/07/why-rural-france-hates-globalisation/

22. See http://trade.ec.europa.eu/doclib/docs/2019/july/tradoc_158059.pdf

23. See for example, http://s2bnetwork.org/letter-brasil-bolsonaro-eu-mercosur/

24. See https://www.amnesty.org/en/latest/news/2019/05/brazil-bolsonaro-anti-human-rights-rhetoric/

25. See for example, Letícia Casado and Ernesto Londoño (2019) 'Under Brazil's Far-Right Leader, Amazon Protections Slashed and Forests Fall', New York Times, 28 July, available at https://www.nytimes.com/2019/07/28/world/americas/brazil-deforestation-amazon-bolsonaro.html

26. Jusys (2017) found that sugarcane cultivation indirectly explained 12.2 percent of deforestation in the Amazon between 2002 and 2012.

27. See https://trade.ec.europa.eu/doclib/docs/2018/december/tradoc_157586.pdf

28. See Bard Harstad (2019) 'Trade deals could combat Brazil's Amazon deforestation', Financial Times, 22 August, available at https://www.ft.com/content/5f123000-bf5e-11e9-9381-78bab8a70848

29. Otaviano Canuto (2017) 'Dissolving corruption in Brazil', Center for Macroeconomics & Development, 5 October, available at https://www.cmacrodev.com/dissolving-corruption-in-brazil/

30. For example, Germany is ranked 1 in macroeconomic stability by the WEF, but Brazil is ranked 122 and Argentina 136.

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The EU's competition and antitrust tightrope

Economic sovereignty remains one of Europe's biggest challenges. Rebecca Christie and Mathew Heim review the Bruegel meeting that addressed the EU's global challenges locally

The European Union, the world's largest consumer market, needs a clearer vision for how it wants to manage competition and state subsidies affecting European markets and consumers. As business becomes ever more inter-connected, however, increasingly complex challenges confront EU policymakers, enforcers and market players.

Bruegel's 2019 annual meetings offered a prime opportunity for European and national policymakers, academics and corporations to discuss the outlook and pace of change in this arena. The discussion was held under the Chatham House Rule, in order to allow a full and frank conversation. From merger strategy to government subsidies, the conversation outlined the hard choices ahead.

Economic sovereignty remains one of Europe's biggest challenges: how can the EU and member states keep watch over the EU economy and ensure control is not ceded to outside influences that might damage strategic EU interests, and also do so without being protectionist?

While geopolitical issues are not new the challenges are accelerated: state-controlled companies' increased internationalisation and strategic behaviour; the speed of digital technology evolution; and the rise of winner-takes-all markets and of scale. As a result, the role of government has increased in relevance.

Germany has been one of the member states at the forefront of this conundrum, issuing a joint position with France and Poland, proposing reforms to EU merger rules to tackle the impact of third country state-funded or controlled enterprises.

This issue will become increasingly important as such entities increase their global footprint or act to enable long-term industrial policy strategies of their home state. How do European and national competition and sector regulators work together to address these geopolitical challenges?

EU competition law can't control other economies, but it can influence global thinking through guidelines, standards and even regulatory timing. In the past, the tight European review process has offered the European Commission a leadership role on global mergers also being scrutinised in other jurisdictions, notably as the main authority to consider remedies.

> *... the EU needs to take a rigorous approach in developing new policies to address the question of anti-competitive harm*

This has increasingly come up against authorities who are willing to be the last to clear, and can therefore seek additional remedies not contemplated initially.

European authorities will need to think holistically to make sure their policies work together coherently instead of at cross purposes. It has also been argued that the EU needs a policy approach that incorporates the impact of worldwide consolidation in certain key sectors. Should EU companies face fewer constraints on joining forces when they are up against tough global competition?

At what point, if any, does it make sense to put global European business interests ahead of the impact EU domestic markets? This issue was at the core of the debate following the Siemens/Alstom prohibition. There are arguments that Europe should develop an industrial backbone, focusing on developing value chains in critical sectors.

That said, there are dangers in relaxing conditions for merger approval, particularly where there are demonstrable negative economic effects. Furthermore, the EU should tread carefully before enabling new corporate entities that might be perceived as too 'important' to fail and seek preferential treatment down the road or create deadweight loss. This would have spillover effects on the single market that could range far beyond the particular economic threat at the center of the initial decision.

So while competition policy cannot ignore industrial policies or geopolitical impact, it should be done carefully, without revolution and in particular safeguarding the positive elements of the EU system. It should not through direct political intervention.

Mechanisms that permit political involvement in cases invites lobbying, not just by companies, but policymakers themselves, raising concerns about capture and special interest protection. It is particularly important that the EU competition system continues to be a world leading system to remain influential with those jurisdictions that play by a different rulebook.

Digital challenges, in forms of digitalisation of sectors and dominant digital platforms heighten the issue. Many of the world's biggest consumer-facing technology companies are based outside the EU, yet European users have come to depend on them. The 'winner take all' aspect of many digital markets raises the stakes for policymakers if limits are placed on an international technology company's ability to act in their market, this may also restrict the services it is able to offer to European users.

Should competition enforcers be less risk averse and engage in experimental enforcement? One approach might be to revisit the way policy attempts to intervene in markets which are too concentrated for self-correction and by doing so, rebalance the 'error-cost framework'.

The European Commission's expert report has floated the idea of shifting the burden of proof onto large companies, instead of competition enforcers requiring dominant digital platforms to show that they are acting in pro-competitive ways. This, however, is not a simple task as an approach that essentially implies companies are 'guilty until proved innocent' poses fundamental questions about the rule of law and how the EU regulates in a free society.

Europe's emphasis on business-to-business commerce and emerging technologies merit particular attention on this front, as actions taken to against perceived anti-competitive practices of firms from outside the EU could set a precedent that negatively affects successful European players or markets in ways that were not originally intended.

An additional complication is how to address geopolitical tensions related to digital markets, given how sensitive these sectors can be and closely related to economic sovereignty.

In general, the EU needs to take a rigorous approach in developing new policies to address the question of anti-competitive harm. Only where there is a well-defined, empirically-backed concept can the Commission avoid miscalibrated 'solutions' that may do more harm than good.

This is an issue not only for Europe's response to the US-based technology giants, but also to its dealings with large companies from jurisdictions where companies benefit from significant levels of government support, or even direction.

There thus needs to be coherence between policies and tools, especially if competition policy is not the only tools to address an issue, in areas such as procurement and trade defence relating to state owed enterprises, or interoperability requirements in digital markets. New forms of regulation could be considered as a complement to competition enforcement. ■

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Limits of the ‘Brussels effect’

The EU model of financial market regulation is increasingly copied by third countries. Alexander Lehmann considers bank regulation in the European Union neighbourhood

The EU model of financial market regulation is increasingly copied by third countries. In this context, the EU's efforts to promote its model beyond its borders should take into account the underdevelopment of financial markets in many partner countries, and the often insufficient capacity of regulators and supervisors.

The EU's policy in its neighbourhood in eastern Europe has for some time been to encourage countries to bring their regulatory standards into line with those of the single market, in exchange for increased access to EU markets.

In financial services, this policy is motivated by the need to prevent financial instability being imported from third countries into the single market. For this reason, advanced countries can seek formal recognition that their regimes are 'equivalent' to the EU's.

But in emerging markets and developing countries, wholesale adoption of EU legislation runs up against the weaknesses of local supervisors, and might also result in the introduction of legislation that is irrelevant in underdeveloped financial markets.

The trade agreements that the EU concluded with Georgia, Moldova and Ukraine in 2014 are examples of this EU approach. The three agreements envisage regulation in the partner countries converging with that of the EU and set schedules for this to happen.

Included in the schedules are the core elements of prudential rules for banks and all EU legislation on the payments system and capital markets in effect at the time the trade deals with concluded, with new EU legislation incorporated on a rolling basis. In the agreement with Ukraine, there is clear language tying access to the EU market to Ukraine's adoption of legislation that is sufficiently close to the EU's.

The countries of the western Balkans, meanwhile, are interested in regulatory convergence with the EU given the deep engagement of euro area banking groups in local banking markets. For these countries, foreign-owned subsidiaries command a significant share of local banking assets, though these subsidiaries are typically small within the overall assets of the parent groups. The concerns of the host country supervisor may not figure prominently within a college of supervisors assessing the soundness of the entire group.

Exporting EU regulation to third countries irrespective of the broader development of institutions and laws will not automatically yield equivalent benefits in terms of financial stability as in the EU itself

In 2015, six western Balkan countries signed a memorandum of understanding with the European Banking Authority (EBA). This settled the thorny issue of confidentiality in information exchange and has already facilitated cooperation in supervisory and resolution colleges. There are broad requirements for these countries to bring their regulatory and supervisory standards in line with the EU's, but specifics and timeframe depend on host-country market development.

In a sign of this close integration Serbia and Albania signed cooperation agreements with the Single Resolution Board, the only countries to do so apart from five major G20 economies.

In the four EU accession candidates (Serbia, Albania, Montenegro and North Macedonia) the European Commission has assessed the local financial sectors as 'moderately prepared' to take on the obligations of EU membership. In Serbia and Montenegro, accession talks have started on the relevant chapters.

Serbia and Albania adopted laws on bank recovery and resolution in 2015 and 2017 respectively. Both laws closely follow the model defined by the EU bank recovery and resolution directive (BRRD, 2014/59/EU), though requirements for the bail-in of bank creditors are very different, and the rules of implementation of course diverge from the EU's.

Constraints in local markets and institutions

Exporting EU regulation to third countries irrespective of the broader development of institutions and laws will not automatically yield equivalent benefits in terms of financial stability as in the EU itself. Inadequate accounting standards and creditor rights might undermine this. In capital markets regulation a high standard law may, in fact, be counterproductive without good enforcement.

Some instruments that are central to recent EU legislation might be missing entirely in local markets, such as the requirements for subordinated bank debt that could be subject to a bail-in based on well-defined creditor hierarchies, if a bank has to be resolved.

Other EU targets may be out of line with local market development (such as the level of deposit insurance coverage). Capital markets in EU neighbourhood countries are even less developed than banking sectors, and adopting some recent EU legislation (such as the Directive 2014/65/EU on markets in financial instruments, MiFID II) would be well out of proportion.

More practically, local supervisors might lack the resources to enforce complex regulation. Some evidence of this emerged in the November 2019 update of the World Bank database on practices in bank regulation and supervision.

Across the 160 countries surveyed, there have been significant increases in the number and complexity of regulations since the global financial crisis. This has not been matched by an increase in supervisory powers and capacity. Rules on disclosures and stress testing of bank assets place particularly severe strains on supervisors.

Brussels might, therefore, be risking the unilateral imposition of EU rules on third countries and thereby discriminating against market participants originating in jurisdictions with incompatible standards.

However, this seems less of a concern in banking regulation than in product standards. EU banking regulation, on the whole, reflects international standards, most importantly the Basel III framework and the resolution regime promoted by the Financial Stability Board. These are in essence sensible targets, though the timeframe for adoption should be proportionate to the development of markets and institutions.

	4 candidates				3DCFTA			Average of 6 euro area NCAs
	Albania	Macedonia	Montenegro	Serbia	Georgia	Moldova	Ukraine	
Number of supervisor's financial system responsibilities other than banks	5	3	6	6	7	4	4	5
Number of professional supervisors	30	31	45	58	56	64	301	593
o/w% with more than 10 years' experience	53	52	20	44		20	46	43

Source: Bank Regulation and Supervision Survey, World Bank, Nov. 2019.

But the effort to promote in emerging markets financial regulation that resembles that adopted in the EU since the financial crisis should be focused on those countries where euro area banks already have extensive stakes, primarily emerging Europe and Latin America.

There is also a justified interest in aligning supervisory practices, which will facilitate the coordination of cross-border supervision and crisis management.

In the four western Balkan candidates for EU membership, cooperation and information exchange in the cross-border colleges could be further strengthened. Local supervisors could be strengthened through targeted technical assistance. Given the extensive stakes of euro area banks, the interests of home and host-country authorities are likely aligned. A strong local framework will also define standards for new investors – such as those from Russia and China – in the local banking markets.

It is not clear that convergence with technically complex EU financial regulation should be a condition for preferential market access under trade agreements. Local market development should be taken into account.

For Georgia, Moldova and Ukraine, the obligation to 'approximate' their laws to the EU standard should be interpreted flexibly, focusing on principles rather than transposition. Deadlines for the adoption of EU legislation should be scheduled in line with countries' own regulatory strategies, and new EU law should be adopted only when relevant and sensible for local market development and financial stability. ■

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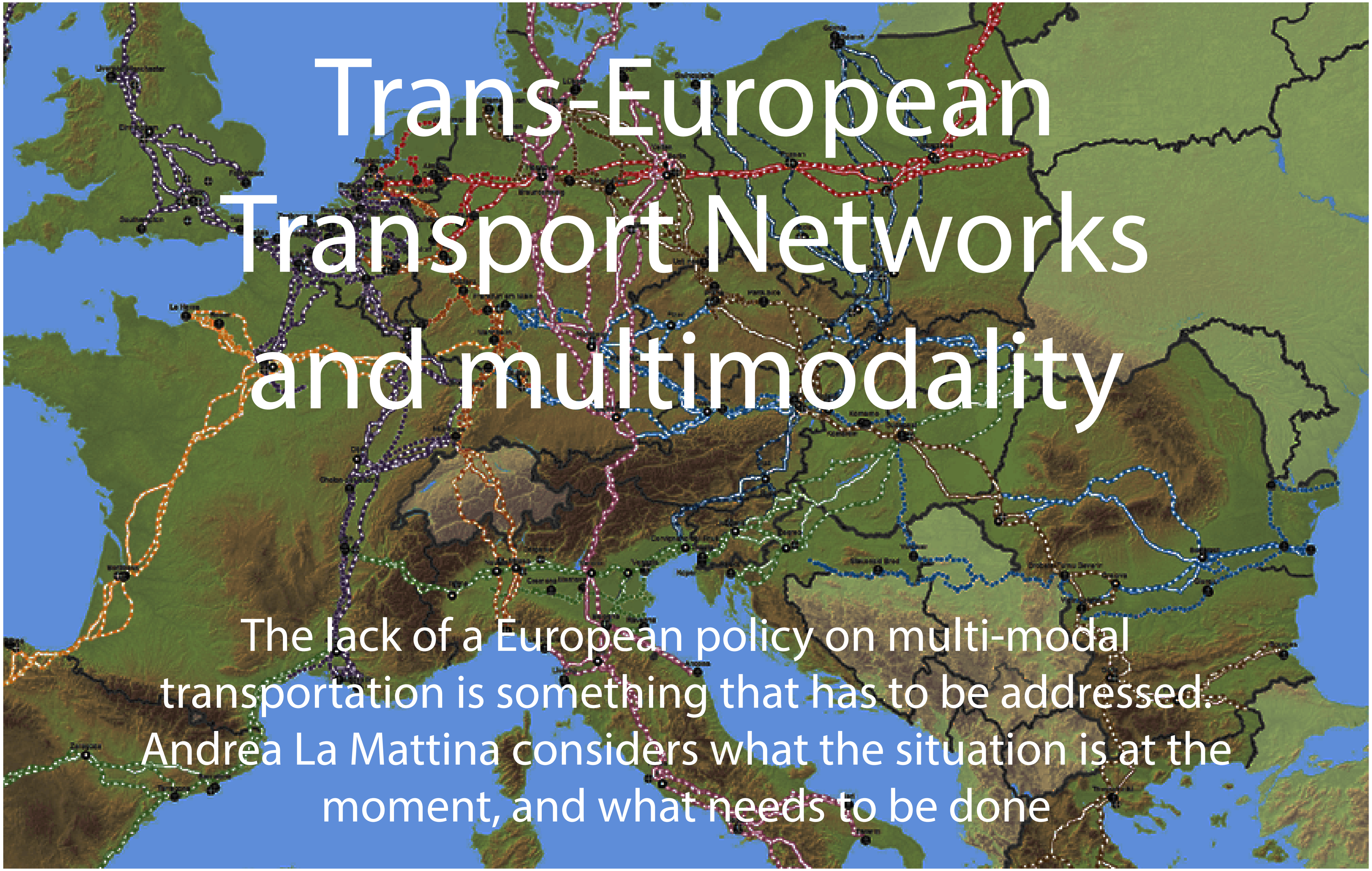

Trans-European Transport Networks and multimodality

The lack of a European policy on multi-modal transportation is something that has to be addressed. Andrea La Mattina considers what the situation is at the moment, and what needs to be done

In the current economic context, international maritime transport appears with more frequency as a mere phase of a multimodal transport. The concept of 'multimodality' refers to a kind of transport which is performed by the combination of two or more means of transport (ie. by sea and road or by air and rail, etc…) on the basis of a single contract covering the transfer of the goods from the place of shipment until the final delivery destination under the responsibility of a single carrier (the so-called multimodal transport operator-MTO).

In this perspective the sea ports are no more the final points for maritime transports, but they assume the proper role of logistics hubs necessary to facilitate the integration by and between the various means of transport.

Bearing in mind what above, the EU (and before the EEC) has implemented various projects in order to contribute to the development of the multimodal transport inside the member states.

In 1992 the PACT – Pilot Action for Combined Transport - was implemented, when in 2001 one of the key points of the White Paper regarding the European transport policy was 'linking up the modes of transport'; and finally between 2003 and 2013 were launched the Marco Polo Programs.

Furthermore, the EU Regulation n. 1315/2013 makes reference to the 'core network' (which includes only the key infrastructures of the EU) as *"the backbone of the development of a sustainable multimodal transport network"* which *"should stimulate the development of the entire comprehensive network;"* therefore, removing the main technical and administrative barriers to multimodal transport is considered as a priority by the European legislator.

Notwithstanding its clear centrality in the development of the international and EU transports, multimodal transport is not specifically regulated by any international convention, the United Nations Convention on

International Multimodal Transport of Goods (undersigned in Geneva on 24 May 1980) never having entered into effect.

In this situation, the courts have attempted to determine the legal regime which is applicable to multimodal transport (especially to multimodal maritime transport), in some cases extending the international maritime transport rules currently in force to all (or to part) of the phases of such kind of transport.

... it would have been better to have a complete regulation of multimodal transport and I hope that one day it would be possible to have a truly 'uniform' system of international transport

In particular, where the maritime segment of the carriage was the 'prevailing route', the Hague-Visby Rules have often been applied to the entire multimodal transport (and, therefore, even to the non-maritime phases of such multimodal transport); on the contrary, in other cases the decisions are based on the so-called 'network liability system', thereby splitting the liability regime of the multimodal carrier and affirming that such a regime varies on the basis of the place where the damage to the goods occurs. In these cases, the Hague-Visby Rules have only been applied if the damage is caused during the maritime phase of a certain multimodal transport.

Both of these trends represent positivism and criticism. On the one hand, the application of the Hague-Visby Rules to multimodal transport irrespective of the localization of the damage to the goods eliminates all doubts concerning the discipline of 'non-localized' damages (meaning those damages that arise from an unknown route), but it does not seem at all convincing, because (a) it represents a 'strain' for the application of the Hague-Visby Rules, which does not take into consideration routes which are different to the maritime one and (b) it leaves sufficient room for many doubtful aspects with reference to the notion of 'prevailing route'.

On the other hand, recourse to the 'network liability system' does not create compatibility problems with the application of the international 'unimodal' conventions and, in particular, with the Hague-Visby Rules, but it does create uncertainty concerning the applicable regime of responsibility which is unpredictable before the damage occurs and which may not be determined at all in the case of 'non-localized' damage. Such uncertainty may not only increase litigation, but may also result in increased insurance costs connected with multimodal transport.

In light of such uncertainties, the Supreme Court of the United States in the Kirby case inaugurated what has been defined as a 'conceptual approach' affirming that a multimodal transport contract that includes a 'substantial' maritime route and a 'shorter', but not necessarily 'incidental', land route has a maritime nature (unless it results in the different will of the parties to such a contract).

Therefore - independently from the identification of the place where eventual damage to the goods occurs – such a multimodal transport contract has to be regulated by the US Carriage of Good by Sea Act (ie. the Federal legislation on maritime transport where the 1924 Brussels Convention on bill of lading has been implemented).

In the case in question the Supreme Court (i) completely overrides the 'network liability system' (that - as was said by the Court - may cause 'confusion and inefficiency'), as it is not relevant in determining where the damage to the goods occurred, and (ii) grants more certainty and predictability to the conclusions of the case-law trend indicated above, making it unnecessary to measure with 'a ruler' which is the 'prevailing' route of a certain multimodal maritime transport in order to determine its applicable legal regime and giving substantial emphasis to the relevant 'surrounding circumstances' of the case.

In the same perspective, in the Kawasaki case, the Supreme Court has affirmed that a through bill of lading issued abroad by an ocean carrier can apply also to the domestic, inland portion of a multimodal transport (providing both for sea and rail carriages), with the consequence that not only the ocean carriage but also the inland carriage will be governed by the US Carriage of Goods by Sea Act.

On the basis of what above we cannot ignore the situation of uncertainty that characterizes the rules which are applicable to multimodal transport due to the absence of an unequivocal case law. Only a specific regulatory intervention that is desired by most parties, and that has resulted in interest in the UNCITRAL, would solve the problem.

In this perspective, the drafters of the Rotterdam Rules (ie. the convention on transport of goods by sea undersigned in 2009, but not yet entered into force) have intended to specify the extension, in certain cases, of the application of such regulation to forms of multimodal transport (door-to-door) that include a maritime route.

In an extreme synthesis, the new convention elaborated on behalf of the UNCITRAL does not have the aim of regulating multimodal transportation tout court, but - under certain conditions and in the presence of certain circumstances - only to extend its scope of application in relation to the land and/or air and/or internal waterways route (if any) and/or subsequent to maritime transport.

Therefore, the Rotterdam Rules are a little less of a 'true' multimodal convention (such as the 1980 Geneva Convention) but a little more of a convention on maritime transport: correctly, in fact, a 'multimodal maritime approach' has been referred to.

As has therefore been observed, the 1924 Brussels Convention, in its original formulation, was a 'tackle-to-tackle' convention, the Hague-Visby Rules and the Hamburg Rules were 'port-to-port' conventions, and, finally, the Rotterdam Rules will become a 'door-to-door' convention, even if they merely concern 'wet' multimodal transports (ie. multimodal maritime transports).

In reality, as already observed above, the text in question is not really a 'door to door' convention because the scope of application of the Rotterdam Rules is limited both under the 'subjective' profile as well as the 'objective' one.

Rotterdam Rules do not regulate any kind of multimodal transport, but – subject to certain conditions - they extend their scope of application to non-maritime routes involving 'wet' multimodal transport. In other words, the Rotterdam Rules do not provide a 'uniform' regime of responsibility concerning the multimodal carrier, but – by applying a sort of 'network liability system' - they try to fill the gaps left open by the 'unimodal' conventions currently in force and, in particular, by the Hague-Visby Rules.

In this sense, the Rotterdam Rules, firstly, extend the definition of a 'contract of carriage' relevant to its proper scope of application and affirm in Art. 1.1 that such a contract shall provide for carriage by sea and may provide for carriage by other methods of transport in addition to the sea carriage; also the combined provisions of Art. 5 (entitled 'General scope of application') and Art. 12 (entitled 'Period of responsibility of the carrier') provide that the period of responsibility of the carrier includes the moment from the receipt of the goods until the moment of the delivery of the same goods to the consignee, and that the responsibility of the carrier is not necessarily limited to the phase when the goods are placed on the ship.

Furthermore, from Art. 5 of the Rotterdam Rules it is clear that the places of the receipt/delivery of the goods may eventually not coincide with the ports of loading/unloading.

But – as it has been said above - the scope of application of the Rotterdam Rules is limited both under the 'subjective' profile as well as the 'objective' one.

Under the 'subjective' profile the scope is limited because the Rotterdam Rules, once in force, will only be applied (a) to the 'contractual' maritime carrier - and this (subject to the 'objective' limits mentioned further on) with reference to the services he provides, directly or indirectly, on the maritime route as well as on the land or air or internal waterways route - and (b) to the so-called 'maritime performing parties', meaning those individuals who are charged by the same contractual carrier to execute – 'during the period between the arrival of the goods at the port of loading of a ship and their departure from the port of discharge of a ship' (Art. 17) – 'any of the carrier obligations under a contract of carriage with respect to the receipt, loading, handling, stowage, carriage, care, unloading or delivery of the goods' (Art. 1.6.a). In other words, the Rotterdam Rules - as implicitly stated in Art. 4.1.a - may not be applied towards 'non-maritime carriers', unless they operate 'exclusively within a port area' (Art. 1.7).

The Rotterdam Rules are also limited under the 'objective' profile as they do not provide a uniform regime for all the phases of a multimodal transport, - but, by adopting the so-called 'network liability system'- only in the case of losses or damage to the goods that are verified exclusively on one route.

As a matter of fact, Art. 26 determines the application of the 'international instrument' to such phases (not also the state legislation) specifically shaped for the relevant non-maritime route if the interested party would have stipulated a separate transportation contract and if such an instrument imperatively stipulated ('either at all or to the detriment of the shipper') the provisions that concern the responsibility of the carrier, the limitation of liability and a time bar.

Hence, from an 'objective' point of view, the Rotterdam Rules may only be applied with regard to non-maritime routes if: (a) damage to the goods occurs exclusively on a non-maritime route or the damage is not localized (meaning that the route of the transport where the damage occurs is unknown) and (b) there is no mandatory uniform regime of the non-maritime route concerning the responsibility of the carrier, the limitation of liability and a time bar, or, even though there may be such a regime, it does not clash with the corresponding provisions of the new Convention.

The rationale of these limits of application resides in the will to avoid conflict between the Rotterdam Rules (in the part where it extends its proper scope of application to the non-maritime route) and the 'unimodal' conventions which regulate land, train, air and internal waterway transportation.

Of course, it would have been better to have a complete regulation of multimodal transport and I hope that one day it would be possible to have a truly 'uniform' system of international transport, common to all phases of carriage and regulated by a sole convention in lieu of several 'unimodal' instruments. But at present that way is far to have concrete chances to be implemented as it has been demonstrated by the complete failure of the 1980 Geneva Convention on International Multimodal Transport of Goods.

Bearing in mind what above, although they are not revolutionary, the Rotterdam Rules should be looked as the first international instrument which provides a regime concerning the liability of the sea carrier which specifically takes into consideration the development of the sea transport into a 'multimodal perspective'.

Of course, their entry into force (if any) should contribute to create a more predictable legal background in this relevant field of the international trade. ■

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Anti-money laundering and combating the financing of terrorism

AML and CFT are high on the agenda of policymakers at both European and global levels. Yves Mersch considers recent initiatives and the role of the ECB

Introduction

A number of high-profile cases of the alleged systematic use of banks for money laundering have been reported over the last two years, along with reports of investigations and other follow-up measures being taken by national authorities. This has put anti-money laundering (AML) and combating the financing of terrorism (CFT). The European Commission, EU legislators and other authorities all rightly agree that misuse of the financial system cannot be tolerated. They have started to strengthen the EU's AML/CFT framework, and further changes are in the pipeline.

So let us take a closer look at three things. First, what are the objectives of combating money laundering and terrorist financing? Second, what is it that the ECB can – and cannot – do in this area? And third, how might the European AML/CFT framework develop in the future?

Objectives of combating money laundering and terrorist financing

The EU's current AML/CFT framework largely follows the international standards established by the Financial Action Task Force. The framework has two main objectives. The first is to protect society from crime. And the second is to protect the stability and integrity of the European financial system.

EU legislators recognise that money laundering, terrorist financing and organised crime are significant problems that are damaging the integrity, stability and reputation of the financial sector and threatening the Internal Market and the internal security of the Union.

They also acknowledge that acts of terrorism are one of the most serious violations of the universal values of human dignity, freedom, equality and solidarity, and of the enjoyment of human rights and fundamental freedoms on which the Union is founded.

Efforts to combat money laundering and terrorist financing concern two areas of EU law: the establishment and functioning of the Internal Market and judicial cooperation in criminal matters. These two areas differ in the level of harmonisation which can be pursued under the current Treaties.

Even though the AML/CFT framework has been harmonised to a significant extent at the EU level, it remains strongly connected to the national legal frameworks, particularly to the criminal law of individual member states and the crimes defined therein, which differ considerably.

The battle can only be won through cooperation. All authorities involved need to cooperate – both within and across national borders

More precisely, both the AML Directive and the Directive on combating money laundering by criminal law contain minimum lists of the predicate offences to money laundering; that is, the types of underlying criminal activity which generate the property that need to be laundered. These lists highlight the link to the national laws of member states.

First, they rely on national criminal law by referring to offences that can be punished with deprivation of liberty for a maximum of more than one year. And second, they do not define the actual content of the individual predicate offences; this again is regulated by national law.

Effectively combating money laundering and terrorist financing requires a coordinated approach from legislators, AML/CFT supervisors, law enforcement authorities, judicial authorities, financial intelligence agencies, banks and other financial institutions, and many others.

Information sharing between all these bodies has often been insufficient, particularly across borders. That being said, we must always be mindful of the rule of law and protect people's fundamental rights. Public allegations of a bank being involved in money laundering or terrorist financing could lead to serious financial difficulties, or even cause the bank to fail, even if the allegations are later found to be exaggerated or completely unjustified.

What the ECB can (and cannot) do to fight money laundering

Now what is the role of the ECB? It is important to clarify that our mandate is purely prudential. In 2013, supervisory tasks were conferred on the ECB on the basis of Article 127(6) of the Treaty on the Functioning of the European Union (TFEU).

This Article limits the tasks that can be conferred on the ECB to those that concern policies that relate to the prudential supervision of credit institutions and other financial institutions – with the exception of insurance undertakings.

This provision, in turn, was duly reflected in the SSM Regulation which further limited the scope to banks only. There, the legislator explicitly confirmed, in recital 28, that the task of AML/CFT supervision remained with the national authorities.

That said, there is still a role for prudential supervisors to contribute to combating money laundering and terrorist financing. This is reflected in recital 29 of the SSM Regulation, which states that *"the ECB should cooperate, as appropriate, fully with the national authorities which are competent to ensure a high level of consumer protection and the fight against money laundering."*

Indeed, prudential supervisors might come across information that could help to uncover money laundering or terrorist financing. For instance, they may obtain insights into the quality of a banks' general internal governance, with potential implications for the functioning of the bank's AML/CFT measures. Our supervisors might detect information of this sort during an on-site inspection, and they can share it with the competent authorities.

At the same time, the prudential supervisor can use the insights gained by AML/CFT supervisors and reflect the AML/CFT-related concerns in its prudential tasks. It does so, for instance, when it grants authorisations to credit institutions; when it assess whether bank managers are fit and proper for their job; when it assesses acquisitions of qualifying holdings; and when it engages in ongoing supervision and the Supervisory Review and Evaluation Process (the so-called SREP).

The job of AML/CFT supervisors, on the other hand, is to monitor and enforce the compliance of credit institutions and other obliged entities with the AML/CFT requirements that are set out in the applicable laws. We must therefore acknowledge that the two sets of supervisors play very different roles, and synergies are limited.

In order to improve cooperation between both sets of supervisors, the latest amendment to the AML Directive required the ECB to sign an agreement setting out the practical modalities for exchanging information with the AML/CFT supervisors of credit and financial institutions within the European Economic Area.

This agreement was signed in January this year. And ever since, the ECB has been exchanging information under this framework. Our initial experience has shown that it is particularly important to put in place robust formal procedures and exchange information in secure ways only when there is strong justification for doing so and based on well-defined relevance criteria.

All this is necessary to ensure the rights of the supervised banks are protected. There is a narrow line between enabling the appropriate flow of information and ensuring the confidentiality of this information.

Aside from the ad hoc exchange of information, the ECB's approach requires receiving assessments from AML/CFT supervisory authorities at least once a year to support its annual SREP, which is its main off-site supervision tool. In exchange, the ECB shares relevant excerpts of SREP decision letters with AML/CFT supervisors on an annual basis.

Going into more detail, the ECB has also developed an approach to identify and reflect AML/CFT concerns in prudential supervision.

First, as a primary information source, we factor the assessments from AML/CFT supervisory authorities into our prudential SREP assessment. We are also looking into possible prudential warning signals that would complement the assessments received from the AML/CFT supervisors by using our available supervisory data to highlight patterns that might indicate wrongdoing.

And second, we take the necessary action when required. This could range from sharing our concerns with the AML/CFT authorities to imposing supervisory measures to address prudential concerns. We could, for instance, require a bank to strengthen its general governance arrangements or reassess its board members and key function holders. We could even withdraw a bank's licence as a last resort.

Through performing these supervisory tasks, we can, to a certain degree, indirectly contribute to the goals of the Single Market.

And there's more. Following on from the most recent enhancements to EU law, such as CRD V and the AML Action Plan, we are working together with the European Commission and the European Banking Authority, which is tasked with developing technical standards and guidelines to enhance and complement the amended regulatory framework.

At the same time, we have actively contributed to the revision of the guidelines on the sound management of AML/CFT-related risks within the AML Expert Group of the Basel Committee on Banking Supervision.

How to strengthen the EU's institutional setup

While much has already been done, weaknesses in the European AML/CFT framework still represent a risk to the integrity and resilience of the European banking sector. The current supervisory fragmentation and differences in supervisory practices in the area of AML/CFT can severely undermine the integrity and stability of EU banks and thereby the ECB's supervisory effectiveness, particularly in a cross-border context.

The steps taken so far might not be enough to effectively prevent money laundering and terrorist financing in the banking sector. Thus, further steps might be considered by the political authorities to make the AML/CFT framework more effective, particularly for cross-border activities.

We therefore welcome the ongoing discussion on what steps to take, and we stand ready to provide support in our areas of competence. However, the ECB cannot take over the role of an AML/CFT supervisor; this is ruled out by the Treaty. Furthermore, there are also only limited synergies between prudential supervision and AML/CFT supervision.

From our perspective, a strategy to strengthen the EU AML/CFT framework could comprise at least two elements.

First, a further harmonisation of the AML/CFT rulebook could address possible divergences and shortcomings in the way the rulebook was transposed in different member states. It could also strengthen enforcement of AML/CFT compliance through AML/CFT supervisors by providing clear regulatory guidance and harmonised, stronger supervisory powers.

This could be achieved by transforming the AML Directive into an EU regulation, which would have the potential of defining a harmonised anti-money laundering framework that is directly applicable throughout the European Union. To be effective, the scope of a future regulation should be as broad and encompassing as the legal base would allow, also with a view to moving towards a more rule-based approach, while fully respecting the legal constraints and the remaining variety of national institutional setups[1], particularly in the area of criminal law and justice systems[2].

Second, supervisory fragmentation should also be addressed, especially in relation to coordination and cooperation procedures. This could be achieved by charging an EU body or a new authority with AML/CFT tasks.

This EU body or authority should be independent to allow it to act decisively in addressing ML/TF risks. It could detail a single AML/CFT rulebook via technical standards and/or guidelines, coordinate its implementation and ensure strict and harmonised AML/CFT supervisory practices in the EU and across member states, leveraging on the experience and expertise of national supervisors.

The EU AML/CFT body should make sure that accurate and timely assessments on possible irregularities and ML/TF risks are proactively provided to prudential supervisors, including the ECB in its supervisory role[3], so these risks can be factored into their prudential assessments.

Finally, if supported by co-legislators and primary law, the EU AML/CFT authority could be equipped with direct AML/CFT supervisory powers.

Conclusion

Anti-money laundering and combating the financing of terrorism are challenging endeavours. First, they involve several areas of law at both the EU level and national levels. Changes that lead to an efficient distribution of competences might imply the transfer of sovereignty from national to EU level within the existing Treaty framework.

Second, several types of authority play a role, including AML/CFT authorities and prudential supervisors. There is a broad heterogeneity of institutional setups among member states, involving judicial authorities limited to cooperation and implementation, as well as surveillance authorities attached either to the executive or judicial branch, and their interaction with prudential supervisors.

In other words, we need to reflect on the most effective way to manage the institutional and functional fragmentation in this area given its inherent cross-border nature.

All of this makes combating money laundering and terrorist financing complicated from both a legal and a practical point of view. The battle can only be won through cooperation. All authorities involved need to cooperate – both within and across national borders.

So I welcome the ongoing debates about a review of the regulatory framework and the possibility of establishing an EU AML/CFT body. Within the limits of its mandate, the ECB will continue to contribute to this debate.

Important as this debate is, let's not forget the responsibilities that supervised entities already have: to put in place and maintain internal systems and controls to ensure that they properly manage the risks to which they are exposed. ■

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Endnotes

[1] For example, national setups of financial intelligence units.

[2] Such as in the case of predicate offences for money laundering where, in line with Article 83(1) TFEU, the European Parliament and the Council only may, by means of directives, establish minimum rules concerning the definition of criminal offences and sanctions.

[3] Information should be provided by the EU AML/CFT body to the coordination function in the SSM for SSM related AML/CFT tasks, acting as central point of contact

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A major step toward combating money laundering

Combating money laundering in Europe took a momentous step with finance ministers putting forward a joint proposal. Nicolas Véron and Joshua Kirschenbaum say that this paves the way for strong EU legislation

The struggle to combat money laundering in Europe took a momentous step forward on November 8 when the finance ministers of France, Germany, Italy, Latvia, the Netherlands, and Spain put forward a joint position paper. Their proposal is likely to pave the way for strong European Union legislation, buttressing the credibility of the new European Commission led by Ursula von der Leyen.

Adopting this proposal would create, for the first time, a centralised anti–money laundering (AML) supervisor with EU-wide authority in Europe. It is an apt response to a recent series of embarrassing revelations of AML failures. These highly publicised lapses started with the collapse of Latvia’s ABLV Bank after US Treasury determined in February 2018 that it was *“of primary money laundering concern.”*

Following that wake-up call, other AML shortcomings have emerged involving European banks. These include large ones like ABN Amro, Danske Bank, ING, Raiffeisen, and Swedbank, and smaller banks in Cyprus, Estonia, Malta, and Latvia, among others.

Momentum supporting a centralised AML supervisor has been building

The six countries’ joint paper came after an initial policy response that was quick by EU standards, but sadly underwhelming. In September 2018, the European Commission president Jean-Claude Juncker proposed strengthening the AML coordinating role of the European Banking Authority (EBA), an EU agency that brings together banking supervisors of all EU member states. The corresponding legislation was approved a few months later.

But it left two major flaws uncorrected. First, the EBA is a ‘supervisor of supervisors’ that only steps in (if at all) after national supervision failures become evident, too late to deter misbehaviour, and that offers national supervisors little incentive to cooperate.

Second, the EBA's intergovernmental governance is weak when it comes to remedial action, as the EBA's board of supervisors demonstrated when it rejected in April 2019 a staff recommendation to pursue the Danske Bank case.

That episode strengthened the backbone of several key participants. The Dutch government led by proposing a European AML supervisor in July 2019—the joint paper borrows substantially from this proposal. Later in July, the European Commission candidly reported recent AML failures and hinted at further reform.

Given the impetus from the joint paper, EU member states can and probably will formalise a strong European AML supervisory mechanism before year-end, and the European Commission could make a legislative proposal in the first half of 2020

Meanwhile, senior policymakers including then-ECB President Mario Draghi, top ECB banking supervisor Andrea Enria, and European Commissioner Valdis Dombrovskis have called for a European AML supervisor.

As we argued in a *Policy Contribution* last year, an authoritative AML supervisor at the European level is a necessity if the EU is to be effective and credible in this area.

A European AML supervisor could be either a new EU agency or the EBA, more likely the former

The combined political heft of the EU's largest countries, other than the United Kingdom, now adds to this momentum with the finance ministers' joint paper. Its main thrust is to call for a *"supervisory mechanism,"* akin to the Single Supervisory Mechanism (SSM) that exists for the prudential supervision of banks, and thus *"featuring a European central supervisor cooperating with national supervisory authorities."*

That European AML supervisor could be either a new EU agency, with Article 114 of the Treaty on the Functioning of the European Union (TFEU) its presumed legal basis, or the EBA. In the latter option, however, the joint paper makes it clear that a comprehensive overhaul of the EBA's governance would be needed *"to guarantee the required level of independence"* as the paper delicately puts it—a task arguably as complex as a new institutional creation.

The political issue underlying the choice between the two options, as with any EU agency, is location. The EBA would presumably remain in Paris, while a new agency could be in any member state.

Finance ministers propose new AML supervisor have direct authority

As with the SSM, the EU supervisor would have direct authority over some financial firms and would thus not be a mere supervisor-of-supervisors on the current EBA model. The joint paper states that:

> *"Establishing a central supervisor that can supersede national supervisors and can independently conduct supervision is necessary to ensure consistent and effective European [AML] supervision. […] the European supervisor, having performed a thorough risk assessment in cooperation with the national supervisors, would concentrate its direct supervision, resources and efforts on the riskiest institutions as well as on the member states and areas where national supervision is apparently insufficient or inappropriate."*

As this text makes clear despite the convoluted syntax, the EU supervisor itself would choose which firms are supervised directly. Importantly, it would therefore not have to rely on the crippling process of achieving consensus with national authorities or on uniform criteria easily circumvented by bad actors.

On the latter point, the joint paper improves on the Dutch contribution in July, which called for *"objective criteria"* to characterise risk. Observable metrics should of course enter the assessment, but the decision on which entities to supervise should rest on the European supervisor's judgement.

The context is very different from the SSM's, where smaller banks are generally left to national supervision. A proportionality-based approach that may be apt for prudential supervision cannot apply in AML supervision, because major AML violations often happen in smaller firms that have otherwise no systemic relevance. Prudential supervisors look at the haystack, but AML supervisors have to look for the needles.

Direct supervisory authority also implies that the EU supervisor could impose administrative fines for violations of the AML framework, big enough to dissuade bad behaviour, though the joint paper does not state that explicitly. There is established precedent: the European Securities and Market Authority (ESMA) imposes fines on entities it supervises, based on the same Article 114 TFEU[1].

The joint paper also suggests further harmonisation of the AML regulatory framework in EU law. A directly applicable EU regulation would replace some legislation that currently requires transposition into national law. This step makes sense, but it should not be used to delay the establishment of the European central supervisor. Both tasks would be best addressed together.

These actions will not be a panacea. Later endeavours could include more coordination of the financial-intelligence-unit function at the EU level, and linkages between AML and EU sanctions. These must be preceded by improvements of the police, judiciary, security, and intelligence capabilities at the EU level. The establishment of a European AML supervisor will help pave the way for such future, more complex changes.

As for the UK, for as long as it stays in the single market it must be included in the EU AML supervisory mechanism. If and when it leaves the single market, a lower probability than leaving the EU, tailored arrangements will be needed. Unfortunately, the UK did not co-sign the joint paper, but one hopes it will play a constructive role in the next steps.

EU member states likely to move fast to formalise a strong European AML supervisory mechanism

Given the impetus from the joint paper, EU member states can and probably will formalise a strong European AML supervisory mechanism before year-end, and the European Commission could make a legislative proposal in the first half of 2020.

Since AML supervision is as much a security challenge for the European Union as a regulatory one, it will buttress the von-der-Leyen-led European Commission's credibility as a 'geopolitical Commission'. It may also help create momentum for further shoring up the EU financial supervisory architecture, including the reform of ESMA to transform it into a truly independent supervisor and the completion of the banking union. The joint paper is bad news for money launderers and good news for Europe. ■

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Endnote

1. Note: one of the authors (Véron) is an independent non-executive director at DTCC Derivatives Repository plc, an entity under the direct supervision of ESMA.

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