Climate Finance and the Transition to a Low-Carbon Economy: Challenges and Opportunities for Sustainability in Europe

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Abstract: The Paris Agreement of 2015 was a historic milestone in the global fight against climate change with the commitment of the signatory parties to contain the increase in the Earth's temperature. Long before this Agreement, the EU had already shown its desire to make economic growth compatible with the reduction of greenhouse gases in the medium and long term. To achieve these objectives, a change in the energy model is essential. The European Green Deal sets out a new strategy to reconcile economic growth with emission reductions, prosperity and social justice. In 2021, the EU adopted the European Climate Law, which includes a binding target of climate neutrality by 2050 and an intermediate target of at least 55% reduction of greenhouse gas emissions by 2030 compared to 1990 levels.

Keywords: Climate Finance; EU Taxonomy for Sustainable Activities; European Green Bonds; Decarbonisation.

INTRODUCTION

On 18 May 2022, the European Commission proposed the REPowerEU package which modifies the Recovery and Resilience Facility regulation and other legislative acts. It provides for targeted amendments to finance investments and reforms with the objective of diversifying energy supplies and reducing dependence on fossil fuels. This will be achieved by adding in the national Recovery and Resilience Plans dedicated chapters including new reforms and investments and ensuring synergies and complementarity between measures funded under the RFF and actions supported via other national or Union funds.

Among the key objectives of REPowerEU will be increasing the resilience, security and sustainability of the Union energy system through the needed decrease of dependence on fossil fuels and diversification of energy supplies at Union level, including by increasing the uptake of renewables, energy efficiency and energy storage capacity.

The Recovery and Resilience Facility (RRF) is a temporary instrument that is the centrepiece of Next Generation EU, the EU's plan to emerge stronger and more resilient from the current crisis. Through the Facility, the Commission raises funds by borrowing on the capital markets (issuing bonds on behalf of the EU). These are then available to its Member States, to implement ambitious reforms and investments that:

• make their economies and societies more sustainable, resilient and prepared for the green and digital transitions, in line with the EU's priorities;

• address the challenges identified in country-specific recommendations under the European Semester framework of economic and social policy coordination.

The RRF is also crucial for implementing the REPowerEU plan, the Commission's response to the socio-economic hardships and global energy market disruption caused by Russia's invasion of Ukraine.

The war in Ukraine continues to constrain the international context, not only because of the heightened uncertainty but also due to the consequences of oil and gas becoming «weaponised». Additional investments of €210 billion are needed between now and 2027 to phase out Russian fossil fuel imports, which are currently costing European taxpayers nearly €100 billion per year. Until then, natural gas is considered to have a bridge function, as it is deemed to be less damaging to the environment in comparison to coal and oil.

CLIMATE FINANCE

The climate finance contribution is an important part of the 2015 Paris Agreement. The European Council approved, in October 2023, the submission of an updated nationally determined contribution (NDC) of the EU and its member states to the United Nations Framework Convention on Climate Change. The EU and its member states are parties to the Convention, which has 198 Parties (197 countries plus the European Union) in total. The rotating presidency of the Council, together with the European Commission, represent the EU at these international climate summits.

The EU's updated NDC submission was prepared in light of the adoption of all the essential elements of the 'Fit for 55' legislative package, which will result in the EU cutting its net greenhouse gas (GHG) emissions by at least 55% by 2030 (compared to 1990 levels).

In the updated NDC, the EU recalls the steps leading up to it, from the ratification of the Paris Agreement in October 2016, when the then NDC contained a GHG reduction target of at least 40% by 2030 (compared to 1990 levels). Following the guidance of the European Council given on 11 December 2020, the EU submitted an updated NDC containing an enhanced reduction target of at least 55%. This target was then established as legally binding through the European Climate Law, adopted on 30 June 2021.

In this context, according to the Commission's estimates, the full implementation of the 'Fit for 55' legislative framework could enable the EU and its member states to overachieve the EU's net domestic reduction of GHG emissions target of at least 55% compared to 1990 by 2030.

The European Council also adopted, in October 2023, a regulation creating a European green bond standard. The regulation lays down uniform requirements for issuers of bonds that wish to use the designation 'European green bond' for their environmentally sustainable bonds.

Environmentally sustainable bonds are one of the main instruments for financing investments related to green technologies, energy efficiency and resource efficiency as well as sustainable transport infrastructure and research infrastructure. European green bonds will be aligned with the EU taxonomy for sustainable activities and made available to investors globally.

The regulation is a further step in implementing the EU's strategy on financing sustainable growth and the transition to a climate-neutral, resource-efficient economy.

The regulation establishes a registration system and supervisory framework for external reviewers of European green bonds.

To prevent greenwashing in the green bonds market in general, the regulation also provides for some voluntary disclosure requirements for other environmentally sustainable bonds and sustainability-linked bonds issued in the EU.

All proceeds of European green bonds will need to be invested in economic activities that are aligned with the EU taxonomy for sustainable activities, provided the sectors concerned are already covered by it.

For those sectors not yet covered by the EU taxonomy and for certain very specific activities there will be a flexibility pocket of 15%. This is to ensure the usability of the European green bond standard from the start of its existence.

The use and the need for this flexibility pocket will be re-evaluated as Europe's transition towards climate neutrality progresses and with the increasing number of attractive and green investment opportunities that are expected to become available in the coming years.

The European Council will also underline that the EU and its member states are committed to the goal of developed countries to collectively mobilise USD 100 billion per year in climate finance until 2025. The EU and its member states are the world's largest contributor to international public climate finance, and since 2013 have more than doubled their contribution to climate finance to support developing countries.

Every year, the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) meets to determine ambition and responsibilities and identify and assess climate measures.

The main agenda items of COP 28 are expected to be:

• the Global Stocktake

• the Mitigation Work Programme

• the Global Goal on Adaptation

• climate finance, including financial arrangements for Loss and Damage

The European Council adopted, in October 2023, the new Renewables Energy Directive to raise the share of renewable energy in the EU's overall energy consumption to 42.5% by 2030 with an additional 2.5% indicative top up that would allow to reach 45%. All member states will contribute to achieving more ambitious sector-specific targets in transport, industry, buildings and district heating and cooling.

Member states will have the possibility to choose between:

• a binding target of 14.5% reduction of greenhouse gas intensity in transport from the use of renewables by 2030

• or a binding share of at least 29% of renewables within the final consumption of energy in the transport sector by 2030

The new rules set a binding combined sub-target of 5.5% for advanced biofuels (generally derived from non-food-based feedstocks) and renewable fuels of non-biological origin (mostly renewable hydrogen and hydrogen-based synthetic fuels) in the share of renewable energies supplied to the transport sector. Within this target, there is a minimum requirement of 1% of renewable fuels of non-biological origin (RFNBOs) in the share of renewable energies supplied to the transport sector in 2030.

The directive provides that industry will increase the use of renewable energy annually by 1.6%. Member states agreed that 42% of the hydrogen used in industry should come from renewable fuels of non-biological origin (RFNBOs) by 2030 and 60% by 2035.

Member states will have the possibility to discount the contribution of RFNBOs in industry use by 20% under two conditions:

• if the member states' national contribution to the binding overall EU target meets their expected contribution

• the share of hydrogen from fossil fuels consumed in the member state is not more 23% in 2030 and 20% in 2035

The new rules set an indicative target of at least a 49% renewable energy share in buildings in 2030. Renewable targets for heating and cooling will gradually increase, with a binding increase of 0.8% per year at national level until 2026 and 1.1% from 2026 to 2030. The minimum annual average rate applicable to all member states is complemented with additional indicative increases calculated specifically for each member state.

The directive strengthens the sustainability criteria for the use of biomass for energy, in order to reduce the risk of unsustainable bioenergy production. Member states will ensure that the cascading principle is applied, with a focus on support schemes and with due regard to national specificities.

Permitting procedures for renewable energy projects will be accelerated. The purpose is to fast-track the deployment of renewable energies in the context of the EU's REPowerEU plan to become independent from Russian fossil fuels, after Russia's invasion of Ukraine. Member states will design renewables acceleration areas where renewable energy projects will undergo simplified and fast permit-granting process. Renewable energy deployment will also be presumed to be of 'overriding public interest', which will limit the grounds of legal objections to new installations.

The Carbon Border Adjustment Mechanism (CBAM) is a key part of EU's climate action. This mechanism promotes the import of goods by non-EU businesses into the EU which fulfil the high climate standards applicable in the 27 EU member states.

The objective of CBAM is to prevent - in full compliance with international trade rules - that the greenhouse gas emissions reduction efforts of the EU are offset by increasing emissions outside its borders through relocation of production to non-EU countries (where policies applied to fight climate change are less ambitious than those of the EU) or increased imports of carbon-intensive products.

CBAM targets imports of products in carbon-intensive industries and will begin to operate from October 2023. Initially, a simplified CBAM would apply essentially with reporting obligations only. The aim is to collect data. From then onwards, the full CBAM will kick in. It would be phased in gradually, in parallel to a phasing out of the free allowances, once it begins under the revised EU emissions trading system (ETS) for the sectors concerned. This will ensure compatibility of CBAM with international rules on trade.

CBAM is designed to function in parallel with the EU's Emissions Trading System (EU ETS), to mirror and complement its functioning on imported goods. It will gradually replace the existing EU mechanisms to address the risk of carbon leakage, in particular the free allocation of EU ETS allowances.

The use and the need for this flexibility pocket will be re-evaluated as Europe's transition towards climate neutrality progresses and with the increasing number of attractive and green investment opportunities that are expected to become available in the coming years.

AN INSUFFICIENT REFORM OF THE EU'S FISCAL RULES

In November 2022 the European Commission presented a proposal to reform the fiscal rules with a view to their re-implementation in 2024. The proposal does not change the debt and deficit targets of 60% and 3% (they are laid down in the EU treaties and changing them is rather infeasible); instead, it establishes them as medium-term targets and focuses on reforming the system to steer us towards them. In particular, the Commission proposes placing at the heart of the system a series of «structural fiscal plans», which would be drawn up at the national level and would revolve around three major axes: (i) investment priorities, (ii) structural reforms, and (iii) a fiscal path. Taken together, these three pillars would serve as the basis for assessing each state's debt and ensuring its sustainability.

In more detail, each national government would draw up its «structural fiscal plan» based on a four-year time horizon. The Commission would evaluate the plan and discuss it with the country in question, before approval is finally sought from the European Council. The fiscal path that would guide the evolution of the public accounts would be defined on the basis of a net primary expenditure rule, adjusting to the specific situation of each state and its debt sustainability analysis.

Once in place, the plans would be monitored and evaluated, both by the Commission and by the independent fiscal authority of each country. Moreover, given this personalised approach, it would be necessary to establish a common framework with a clear set of rules and transparent criteria to guide the evaluation of each country's public accounts.

Finally, the European Commission proposes to maintain the system of «excessive deficit procedures» (EDPs) for breaches of the 3% deficit target, as well as to extend the range of sanctions in the event of non-compliance (reducing the pecuniary damage in order to make their implementation more credible, but accentuating the reputational damage). In the event of extraordinary economic events, the plan also envisages the activation of escape clauses to freeze the rules (at both the European and the country level).

According to the relevant literature, a fiscal rule is well designed when it is binding, thereby acting as an effective constraint on policy making. In most cases, the bindingness of a rule relates to the stringency of the legal basis. Additional desirable features of fiscal rules include the existence of monitoring bodies - such as independent fiscal institutions - and correction mechanisms in case of deviations from the rule targets. Finally, an important property is the resilience to shocks through some form of flexibility, usually embedded in the rule design, such as escape clauses.

Firstly, the Commission is moving away from the uniformity of the current rules in favour of a more personalised approach to the sustainability of each country's debt. This is a vision that is much better suited to the current environment and in particular to the disparity that exists between the public accounts across the EU.

Moreover, the Commission presents a broader view of debt sustainability, explicitly stating that it also depends on investment and reforms (i.e. on an economy's ability to grow and its resilience). In this regard, the new rules would help create space for fiscal policy.

In other words, the sustainability of the public accounts is a constraint which fiscal policy must adhere to, but it is not its primary objective. Fiscal policy must help to stabilise the business cycle, and it can also help to foster stronger, more resilient and more inclusive long-term economic growth.

Thirdly, the proposal simplifies the current fiscal framework (e.g. the use of indicators based on unobservable variables, such as structural deficits, would no longer be mandatory). However,

it does so in a limited way and, given that many details are yet to be defined, it remains to be seen whether the final version will really involve less complexity and uncertainty.

On the downside, the time horizons appear somewhat generous: the plans would allow up to four years for the fiscal path to bring the deficit below 3% and for debt to be placed on a sustainably downward trajectory.

Moreover, this timeframe could be extended by another three years depending on the country's reform and investment programme. Thus, the plan would likely extend beyond the mandate of the current government, which means that adhering to it would require a high degree of national commitment, as well as commitment, coordination, and legitimacy among all the actors involved (governments, independent fiscal authorities, the European Commission and the Council).

In any case, it is worth acknowledging the Commission's ambition: at a time when there is no consensus among the major European capitals on how to reform the fiscal rules, it has proposed a reform which goes far beyond marginal adjustments. In this way, Member States must employ the same level of ambition in their negotiations, and when the fiscal rules are reinstated in 2024, they should incorporate a redesign that reflects the lessons of the past 30 years and which fits Europe's current reality.

CONCLUSIONS

30 years ago, the countries that founded the EU committed themselves to restricting and coordinating their fiscal policies with a common set of rules, best known for the debt and deficit limits of 60% and 3% of GDP. The aim was to avoid negative externalities between the public accounts of individual states and the consequent risks of financial instability.

These reasons are still valid today, but the rules have become outdated following a global financial crisis, a sovereign debt crisis in Europe, and a pandemic. In fact, despite having been adjusted over the years, the rules finally had to be formally suspended in March 2020.

While the primary objective of fiscal rules is to enhance budgetary discipline, they can also foster policy coordination between different levels of government and reduce uncertainty about future fiscal policy developments.

Depending on their design, they can also enhance macroeconomic stabilisation over the business cycle. However, fiscal rules can only yield these benefits if they are well designed and endowed with appropriate institutions for monitoring and if enforcement mechanisms are in place, or if they are supported by strong political commitment.

The 20 economies that make up the euro area have a single currency, the euro, with a common monetary policy and, implicitly, a fixed exchange rate. However, in the last two years the euro area has suffered significant discrepancies in the inflation rates of its member countries.

The importance of energy and the inflation «unit effect» are consistent with the idea that behind the dispersion between countries lies the same origin: a common and major shock – namely, the war in Ukraine and its impact on energy and food prices – being transmitted to each country to differing degrees, depending on their exposure to the crisis unleashed by the war and to the various different economic policy responses. Thus, countries with a lower dependence on Russian gas and/or a higher production of renewable energy have, generally speaking, seen their prices less stressed. In the same vein, there has been significant disparity in the policies implemented to tackle the crisis, in terms of both their cost and their design, ranging from incentives for energy saving, to interventions (or lack thereof) in the price system to direct support for households and businesses.

In the same way, EU coordination is also important for ensuring the efficient flow of energy between countries. This applies in both the short and long term. In the long run, the decarbonisation of the economy and increased renewable production will lead to more variable power generation, increasing the benefits of a Europe-wide interconnected grid.

With no sign of a truce in the invasion of Ukraine, the multiple economic effects of the war continue to add up. Europe is highly dependent on fossil fuels. According to the European Central Bank, around 80% of the energy consumed in the euro area corresponds to gas and oil.

Improving interconnections in the short term is also essential. The case of liquefied natural gas (LNG), which is key to replacing Russian gas in the current crisis, offers a prime example: 25% of the EU's LNG import capacity is located on the Iberian Peninsula, which in practical terms is disconnected from the large European market. In this regard, the recent agreement between Portugal, Spain and France for the construction of a sea pipeline between Barcelona and Marseille, which in the medium term could temporarily transport gas from the Iberian Peninsula to the rest of the continent and in the long term will be used for green hydrogen, is another attempt to recover an old (and controversial) project.

On the other hand, LNG has a bigger ecological footprint than pipeline gas. The cooling, liquefying and transport processes as well as the post-transport warming procedures require a lot of energy. The liquefying process alone commands between 10% and 25% of the gas' total energy content.

The new pipeline, dubbed H2Med, will handle only green hydrogen - produced from renewable sources of energy - and will effectively supersede an earlier plan to complete a partially constructed gas pipeline connecting Catalonia to southern France. The project is expected to cost €2.5 billion and could be developed as a European Union Project of Common Interest, which would allow expedited processing and access to EU funding.

Under the plan, the pipeline would be operational by 2030. This timing is thought to be another reason that led the proponents to restrict the project to hydrogen and not include natural gas, given EU targets on decarbonisation.

Once operational, H2Med is expected to move up to 2 million tonnes per annum of hydrogen, equivalent to about 10% of the forecast EU annual consumption.

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