EUROPEAN CENTRAL BANK

EUROSYSTEM

Occasional Paper Series

Laurent Abraham, Marguerite O'Connell,
Iñigo Arruga Oleaga

The legal and institutional feasibility of an EU Climate and Energy Security Fund

No 313 / March 2023

Contents

Abstract

In recent years, several proposals have emerged from the policy and academic spheres to address climate and energy-related public investment needs in the European Union (EU) with an EU-level instrument. This paper provides an analytical contribution to the discussion by examining the rationale for an EU Climate and Energy Security Fund, with a focus on its legal and institutional feasibility.

Our assessment is that such an EU-level instrument would be legally and institutionally feasible, as well as effective and efficient. Indeed, delivering European public goods – such as mitigating the climate emergency, including by lowering both physical and transition risks, or increasing the EU's energy security – requires a common tool to address the issue of limited returns on individual Member State action and to ensure coordination at European level. In the light of existing estimates of public investment needs, the Fund could be designed to provide €500 billion by 2030.

We examine the precedent of Next Generation EU (NGEU) as an EU instrument providing financing to a range of EU programmes and supporting reforms and investment by Member States in priority areas in the wake of the COVID-19 pandemic. We also consider legal requirements on both the expenditure and revenue sides, and their impact on design options for a Climate and Energy Security Fund. Lastly, this paper discusses the issue of ensuring the democratic legitimacy and accountability of such an EU instrument.

JEL classification: E22, E62, F45, H87, O52.

Keywords: climate crisis, climate emergency, energy security, public investment, European public goods, Next Generation EU (NGEU), REPowerEU.

Summary

There are compelling environmental, economic and legal arguments for the European Union (EU) and its Member States to increase their action to address the climate emergency through additional investment.

First, in addition to its worldwide consequences for humanity, the climate emergency will have a significant economic impact in the EU. In particular, it will damage capital stock and affect production and the welfare of households, along with posing potential risks to fiscal sustainability in several Member States. The intensity of this economic impact will be directly linked to the level of global warming in 1.5°C, 2°C and 3°C scenarios, and thereby to the level of ambition of climate action now being taken. Second, the EU and its Member States are subject to a legal obligation under the Paris Agreement to mitigate the climate emergency by reducing greenhouse gas (GHG) emissions. This binding commitment under international law has been incorporated in the EU legal framework by the European Climate Law. Moreover, national courts in Member States are increasingly requiring governments to take effective climate action to protect citizens' fundamental rights, in particular the right to life and the right to private and family life. National courts have held that the obligation to take suitable measures to protect fundamental rights applies to environmental hazards – specifically the climate crisis – even if the hazards only materialise over the long term.

Thus, the climate emergency calls for immediate action in line with the EU's objectives under Article 3 Treaty on European Union (TEU) and with the principle of solidarity under the Treaties. This reflects the shared responsibility of the EU and Member States to comply with obligations under international law, and the interdependence of Member States in mitigating the impacts of the climate and energy security crises.

The European Commission estimates that in each year of the 2021-2030 decade, the EU needs €454 billion (in 2022 prices) of additional investment to fulfil its 2030 climate commitments. A substantial share of this investment is expected to come from the private sector, with public policies such as carbon pricing having a key steering role to play to address market failures. However, significant additional public investment is also needed to foster breakthrough innovations and provide the EU-wide and national infrastructures that will make the transition possible for all actors; this investment will make public policies supporting climate objectives more effective and ensure a just transition.

Fiscal policy therefore remains central to tackling the climate emergency in the current environment. The discussion on how best to accommodate these significant additional public investment needs is particularly relevant, given that the fiscal space which EU Member States have varies, and is generally lower than their climate investment needs, and given that higher interest rates may have a negative impact on green investment when compared with fossil fuel investment.

In addition, this discussion will need to take into account supply-side constraints following the COVID-19 and energy crises, which limit the capacity to quickly scale up investments. In the longer term, reducing demand for fossil fuels and increasing renewable energy generation will also be of the essence, including to contain inflationary pressures.

In addition to the climate emergency, Russia's war of aggression against Ukraine has increased concerns over energy security, strengthening the desire to frontload improvements in energy efficiency and increase domestic clean energy supply. Thus, in December 2022, the European Council reiterated the importance of stepping up investment in innovation, infrastructure, renewable energy and energy efficiency projects, in order to phase out the EU's dependency on Russian fossil fuels, accelerate the green transition and ensure security of supply.

An EU Climate and Energy Security Fund providing €500 billion by 2030 would be an effective and efficient option for addressing these climate and energy-related public investment needs. Based on the lower end of estimates from ECB staff research and assuming the Fund starts operating in 2024, it could cover around 50% of estimated additional green public investment needs by 2030.

Similar and complementary proposals have been put forward by institutional and academic actors. For instance, in its February 2023 Communication on a Green Deal Industrial Plan, the European Commission announced that it intends to propose a European Sovereignty Fund in the context of the review of the Multiannual Financial Framework (MFF) before summer 2023, to support investment in critical and emerging technologies relevant to the green and digital transitions. Moreover, a Social Climate Fund addressing energy and transport poverty and supporting investments in energy efficiency and decarbonisation is expected to start operating in 2026. An EU Climate and Energy Security Fund could complement or even encompass such instruments.

The EU Climate and Energy Security Fund proposed in this paper would improve coordination of national initiatives, while supporting cross-border and pan-European projects involving European public goods. It could also help address the issue of limited returns on Member States' individual actions to tackle the climate emergency and the associated risk of free riding. Only a coherent, joint effort will be effective in mitigating the climate emergency and meeting the EU and Member States' commitments under the Paris Agreement. Moreover, it can ensure that the required investment occurs where needed, despite national fiscal constraints. In other words, the heterogeneity of climate public investment needs across Member States, together with the heterogeneity of Member States' climate investment capacity, could be addressed by a Fund that ensures investment takes place where it is most productive in helping meet the EU's climate targets.

While the Fund would primarily focus on mitigating the climate emergency and lowering physical risks over the long term, it could also finance targeted climate adaptation projects, so as to mitigate physical risks over the short- to medium term. Moreover, the Fund has the potential to enhance the credibility and effectiveness of the EU's climate strategy, which may help limit transition risks.

To achieve the Fund's goals, two complementary approaches should be combined. First, the Fund could finance projects directly managed by the Commission or by EU bodies, which could include some existing EU budget programmes in the climate and energy fields. Second, the Fund could finance investments submitted by Member States, based on clear criteria and guidance set at EU level and drawing lessons from the Recovery and Resilience Facility (RRF).

Such funding should ideally take the form of grants, so that the limited fiscal space some Member States have does not hamper effective and coherent action across the EU. The guidance and criteria for allocating these two types of funding should incentivise cross-border projects with high European added value. For instance, European financing, along with an enhanced and faster assessment and approval procedure, could make Important Projects of Common European Interest (IPCEIs) in clean tech more attractive. While beyond the scope of this paper, the extent to which investment could generate additional revenue for new EU own resources could also be explored.

The legal design of this Climate and Energy Security Fund could be built on three pillars, drawing on the experience of designing and implementing the Next Generation EU (NGEU) programme.

First, the revenue pillar would enable EU borrowing for the purpose of providing grants or loans to support investment under the Fund. This would require an amendment of the Own Resources Decision in accordance with Article 311 of the Treaty on the Functioning of the European Union (TFEU). The possibility of introducing new EU own resources could also be explored. Second, the Fund could be established and accommodated within the EU's financial framework by means of a regulation which would attribute the nature of "external assigned revenue" to the EU borrowing or new own resources flowing into the Fund. This would require a regulation to be adopted in accordance with Article 122 TFEU, often referred to as the EU's "solidarity clause". Third, one or more spending programmes could be established, setting out detailed rules on the conditions for using the Fund, including investment selection and disbursement conditions. A combination of legal bases under the EU's competences in the fields of environment (Article 192 TFEU), energy (Article 194 TFEU) and cohesion policy (Articles 175(3) and 177(2) TFEU) could be used to adopt a package of legal acts establishing a variety of spending elements, including such programmes. Under the package, funding could also be channelled into suitable EU budget programmes already existing in the fields of climate and energy.

Establishing a Fund in this manner will face the same legal restrictions that have applied to NGEU. Compliance with these restrictions can be demonstrated by the fact that the Fund would be an exceptional, one-off and temporary measure, being one necessary step in an array of measures to tackle the climate emergency. The existential threat that the climate emergency poses to large parts of the world's population, including within the EU, is an even more potent and immediate challenge than the COVID-19 pandemic. There is scientific and legal consensus at global and EU level on the need for immediate action within the current decade. In the EU, this consensus is manifested in the European Climate Law and an array of secondary

legislation. This consensus provides a solid basis and solid arguments for addressing the legal requirements for setting up a Climate and Energy Security Fund. Moreover, as a temporary measure, the Fund would provide an essential bridge towards comprehensive EU action over the long term, which could be fully designed within the MFF.

Finally, it will also be essential to safeguard the democratic legitimacy and accountability of such a Fund. Thus, it should be designed to include specific procedures to appropriately ensure the involvement of the European Parliament, particularly in view of the potential social impact of climate crisis mitigation policies and the significant impact of their success or failure on future generations.

1 Introduction

The climate emergency is the biggest global challenge of our time, as it may eventually, but irreversibly, lead to an uninhabitable world (Im et al., 2017). In its 2022 report, the Intergovernmental Panel on Climate Change (IPCC) emphasised that human-induced climate change is already causing dangerous and widespread disruption in nature, affecting the lives of billions of people around the world (IPCC, 2022). Increased heatwaves, droughts and floods are already exceeding plants and animals' tolerance thresholds, driving mass mortalities in species such as trees and corals. These weather extremes are occurring simultaneously, causing cascading impacts that are increasingly difficult to manage. There are already hundreds of millions of people exposed to acute food and water insecurity in the Global South.

The IPCC highlighted that if global warming reaches 1.5°C in the near term (2021 to 2040), it will cause unavoidable increases in multiple climate hazards and present multiple risks to ecosystems and humans. Near-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to the climate emergency in human systems and ecosystems, compared to higher warming levels, but cannot eliminate them all. The IPCC notes that exceeding 1.5°C global warming in the coming decades will lead to additional severe risks, including some irreversible effects, even if global warming is ultimately reduced.

The climate emergency will also have significant economic impacts, by damaging capital stock and affecting economic production and the welfare of households (Feyen et al., 2020), along with posing risks to fiscal (debt) sustainability in several countries (Gagliardi et al., 2022). The significance of these impending economic impacts is directly linked to the level of ambition on climate action which is being taken now. Research focusing on climate crisis impacts in Europe suggests that exposing the present economy to global warming of 3°C would result in an additional annual welfare loss of at least €175 billion (1.38% of GDP). Under a 2°C scenario, the additional welfare loss would be €83 billion/year (0.65% of GDP), while restricting warming to 1.5°C would reduce the additional welfare loss to €42 billion/year (0.33% of GDP). These estimates are only partial as they do not cover the full range of climate crisis impacts, including effects associated with crossing climate tipping points, ecosystem degradation and loss of habitats and species. Moreover, welfare losses in the southern regions of Europe are estimated to be several times larger than those in the north (European Environmental Agency, 2019). Recent estimates also foresee significant impacts on central Europe: for instance, the average annual temperature in Germany has already risen by 1.6°C – more than anywhere else in the world (Kahlenborn et al., 2021).

The risks posed by the climate emergency were particularly evident across Europe in 2022. Extreme weather events in the form of multiple heatwaves and droughts are putting human life at risk (WHO, 2022) and harming food production (Baruth et al., 2022), water supply (Good et al., 2022) and energy supply from

nuclear (Dempsey et al., 2022) and hydroelectric power plants (Jack, 2022), at a time when the war against Ukraine is already severely affecting energy security in Europe.

In addition to these economic considerations, the EU and its Member States are under a legal obligation under the Paris Agreement and the European Climate Law[1] to mitigate the climate emergency by reducing GHG emissions. While the action required to meet these commitments will need to take a wide variety of forms, one part of the possible solution is to increase clean energy supply and improve energy efficiency through public investment. While a large share of investment is expected to come from the private sector, this still leaves an investment gap. Significant additional public investment is needed to foster the breakthrough innovations and provide the infrastructure that will make this transition possible for all actors, thereby catalysing private investment. While there is no consensus on the most appropriate solution for addressing the substantial, public, green investment needs, one option would be an EU-level climate investment fund, which would also have positive consequences for the EU's energy security.

Indeed, an EU-level investment fund could be designed to address not only climate mitigation, but also energy security and the EU's strategic independence and industrial competitiveness. The vulnerability of the EU's energy supply has demonstrated that investments in climate and energy have become critical, not only to achieve the EU's commitments under the Paris Agreement, but also to protect its energy security by ensuring it has the means to produce clean and affordable energy at home (Borrell, 2022). The future role of clean tech in shaping the EU's industrial competitiveness has also been at the centre of discussions on the EU's response to the US Inflation Reduction Act (IRA).

This paper explores the legal and institutional feasibility of an EU Climate and Energy Security Fund focusing on investment. Section 2 outlines the EU and Member States' legal obligations to meet climate commitments and the role of public investment in supporting compliance with those obligations. Section 3 examines the legal and institutional considerations to establishing such a Fund, exploring the legal bases to support both revenue for and expenditure by the Fund, and accountability considerations. Section 4 concludes.

[1] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (OJ L 243, 9.7.2021, p. 1).

2 Legal obligations to meet climate commitments, and the role of public investment

2.1 The Paris Agreement, the European Climate Law and fundamental rights

The EU and its Member States are subject to binding commitments under international law, as signatories to the Paris Agreement. The Paris Agreement establishes a climate mitigation goal of keeping global average temperature increases to well below 2°C above pre-industrial levels, and preferably to 1.5°C. It also requires its parties to submit, and periodically update, national climate mitigation targets ("Nationally Determined Contributions"). Nationally Determined Contributions are expected to reflect a party's "highest possible ambition". The Paris Agreement was adopted by 196 parties at COP 21[2] in Paris, on 12 December 2015, and entered into force on 4 November 2016.

The Paris Agreement has been signed by all EU Member States and by the EU itself. In its decision on the conclusion of the Paris Agreement on behalf of the EU, the Council specifically relied on Article 192(1) TFEU to justify its competence.[3] Therefore, the Paris Agreement is a so-called mixed agreement under EU law (Council of the EU, 2016). These international law commitments thus give a shared responsibility to the EU and its Member States. Moreover, under Article 216(2) TFEU, international agreements concluded by the EU are binding on its institutions. This means that EU institutions must adopt any rules required to give effect to provisions of the international agreement that require implementation. The EU has taken on a substantial role in respect of compliance with the Paris Agreement. It is the Council of the EU which submits the Nationally Determined Contributions of the EU and its Member States to the United Nations. Failure by Member States to comply with their obligations under the Paris Agreement will amount to non-compliance by the EU with its obligations thereunder.

In its December 2019 Conclusions, the European Council endorsed the objective of achieving a climate-neutral EU by 2050. It indicated that "all relevant EU legislation and policies need to be consistent with, and contribute to, the fulfilment of the climate neutrality objective". On the financing side, the European Council acknowledged that "the transition [towards a climate-neutral EU] will require

2 The 2015 United Nations Climate Change Conference (COP 21) was the 21st yearly session of the Conference of the Parties (COP) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC).

3 Council Decision (EU) 2016/1841 of 5 October 2016 on the conclusion, on behalf of the European Union, of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change (OJ L 282, 19.10.2016, p. 1).

significant public and private investments" and that "funding of transformation efforts must continue after 2030".

The EU has transposed this objective into a binding and directly applicable EU Regulation – the European Climate Law. The European Climate Law sets the overall framework for the EU's contribution to the Paris Agreement, which comprises substantive targets and procedural mechanisms. It sets legally binding targets of reducing GHG emissions by at least 55% compared to 1990 levels by 2030, and of net zero GHG emissions by 2050. It requires relevant EU institutions and the Member States to take the necessary measures to achieve the climate-neutrality objective.[4]

Systemic climate litigation is also driving the development of clear and actionable legal obligations on Member States to take ambitious climate action.[5] A growing number of national court judgments are identifying and enforcing obligations on Member States to take action based not only on their international climate commitments, but also on constitutional and fundamental rights – most notably the right to life and the right to private and family life (e.g. Setzer et al., 2021; Setzer et al., 2022; Network for Greening the Financial System, 2021; Elderson, 2021). In the landmark 2019 case of *Urgenda Foundation v the Netherlands*, the Dutch Supreme Court, relying *inter alia* on the European Convention on Human Rights, found that the Dutch State was under an obligation to reduce GHG emissions. The Court held that the obligation to take suitable measures to protect fundamental rights applies to environmental hazards – specifically the climate crisis – that threaten large groups or the population as a whole, even if the hazards will only materialise over the long term. It ordered the State to reduce GHG emissions by at least 25% by the end of 2020 compared to 1990. The *Urgenda* case has led to further successful litigation in other Member States, most notably France, Ireland and Germany, with similar claims currently before the courts in Austria, Belgium, the Czech Republic, Italy, Poland and Spain.[6]

These legal obligations on the EU and its Member States should be considered in the light of the current mediocre level of compliance with climate commitments. The largest impediment to rapid decarbonisation is the considerable lack of progress by governments in implementing prior climate commitments (Schnabel, 2023). For example, the NGO-led Climate Action Tracker (2022) qualifies the overall rating of the EU's compliance with the Paris Agreement's objective of

---

4 These EU targets are not unanimously considered to be ambitious enough. Non-governmental organisations have suggested the EU should increase its 2030 climate target under the Paris Agreement to reductions of at least 65% in GHG emissions compared to 1990, with carbon removals being increased in addition to and separately from mitigation efforts. Moreover, the EU should also achieve climate neutrality before mid-century and by 2040 at the latest (e.g. Climate Action Network Europe, 2022). By comparison, the United States plans to reduce its GHG emissions by 50-52% from 2005 levels by 2030. It is also noted that, at a global level, the IPCC considers that to limit global warming to around +1.5°C, GHG emissions will need to peak in 2025 and be halved by 2030, with methane needing to be reduced by about a third (IPCC, 2022).

5 Systemic climate litigation refers to climate-aligned cases against governments that challenge the overall effort of a state or its organs to mitigate or adapt to the climate crisis. See Dubash and Mitchell (2022).

6 The Court of Justice of the European Union held in 2021 that a similar application at European level, based on the Charter of Fundamental Rights of the European Union, was inadmissible, and that it had thus not yet had the opportunity to assess whether such obligations would also flow from the EU Treaties and Charter of Fundamental Rights. See Case T-330/18 Carvahlo.

keeping global warming below 2°C above pre-industrial levels as “insufficient”. This is despite the recitals to the European Climate Law referring to the Paris Agreement’s more ambitious objective of keeping global warming below 1.5°C above pre-industrial levels. This demonstrates the magnitude of the compliance effort still needed in the EU.

2.2 Public investment needs and policy tools to address them

Sufficient investment will be a key driver in reducing GHG emissions in order to reach climate mitigation goals. The benefits of such investments are likely to outweigh their costs in the long run, as they can create new opportunities while reducing an existential threat (Carney, 2021). Reaching the goals of the Paris Agreement requires policymakers to properly identify and quantify climate-related investment needs and to consider how best to finance and deliver them.

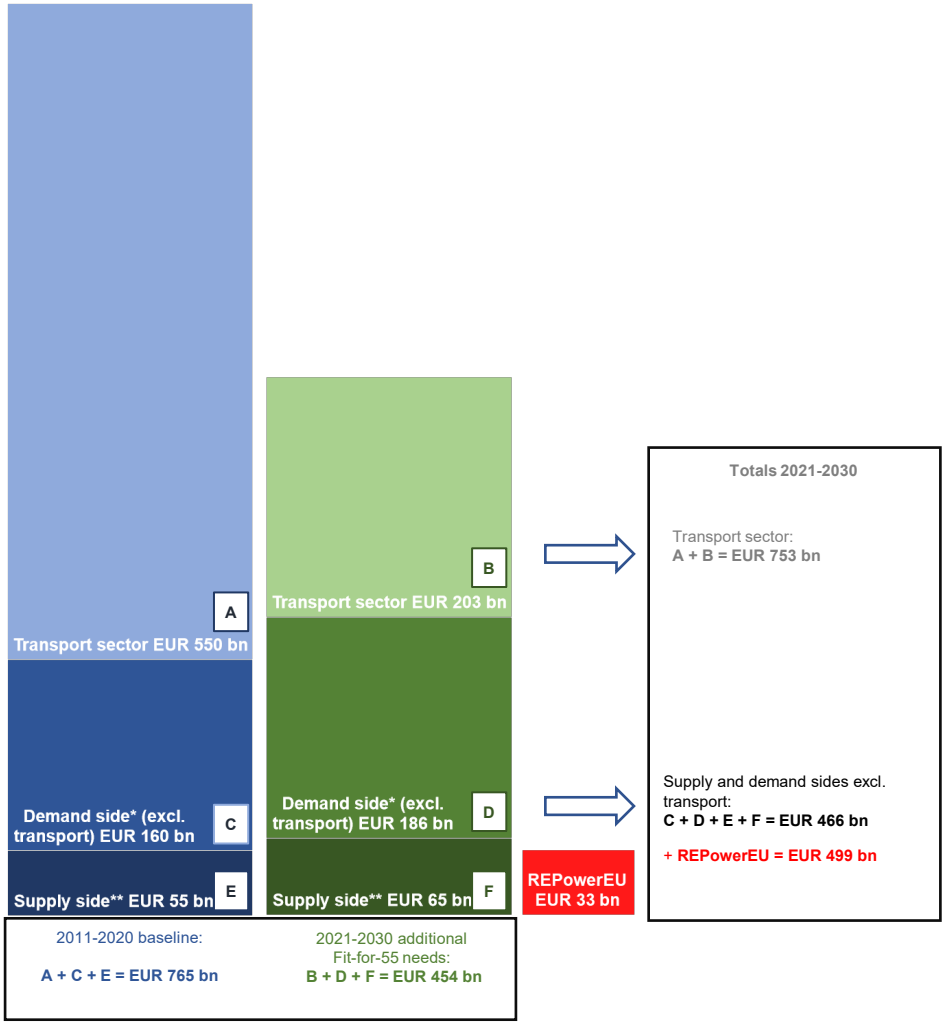
The European Commission estimates that an additional €454 billion per year[7] of investment is needed on average from 2021 to 2030 for EU Member States to reach their climate objectives (European Commission, 2021b, see Figure 1 below). This estimate represents the additional average annual investments required from both private and public sectors for EU climate and energy policy compared to the 2011-2020 baseline. It does not include climate adaptation and other environmental objectives. In addition to these needs, Russia’s war of aggression against Ukraine has made energy security a major concern, and the objectives outlined in the Commission’s REPowerEU plan require an additional €33 billion per year until 2030 (European Commission, 2022b). This has already triggered an acceleration of the EU’s clean energy transition: renewable electricity supply growth in the EU is expected to double in 2022-2027 compared to 2016-2021. However, other objectives, such as renewable heat and transport, are still on a sluggish growth track and holding back higher renewable energy penetration in the EU (International Energy Agency, 2022). It should also be noted that reaching net zero by 2050 will require investment to be sustained for a long period and even after 2030 at a higher level, relative to GDP, than has been the case so far (European Commission, 2021b).

[7] Estimates in this section are in 2022 prices.

Figure 1

Overview of annual climate and energy security-related investment needs in the EU

Public and private average annual investment needs, 2021-2030, EUR billion in 2022 prices



Total 2021-2030 climate and energy security private and public investment needs:
A + B + C + D + E + F + REPowerEU = EUR 1.25 tn

Source: L. Abraham and C. Grynberg, based on Commission estimates (European Commission, 2021b and 2022b).
Fit-for-55 needs are based on the Commission's MIX 55 scenario, which assumes carbon price signal extension to road transport and buildings and intensification of energy and transport policies for the EU to achieve 55% emissions cut by 2030.
REPowerEU needs look at investments required to build an energy system that is independent from Russia as a fossil fuel producer.
Additional green investment needs for wider environmental objectives (€150 billion per year at 2022 prices) are not shown in this figure.
***Demand side excl. transport** covers improvements to reduce energy consumption and related CO2 emissions in industrial, residential and tertiary sectors.
****Supply side** covers energy production, including power grid, power plants, boilers and new fuels production and distribution.

Public investment will play an essential role in ensuring that the investment needs for climate mitigation and energy security are addressed. Climate mitigation policies require collective and concerted action by all stakeholders. Public policies, such as carbon pricing, have a key steering role to play to correct market failures (Schnabel, 2020). However, significant additional public investment is also needed to foster breakthrough innovations, provide the infrastructure that will make this transition possible for all actors and catalyse private investment. This can be done through different approaches: direct public investment, cofinancing, private-

public partnerships or state guarantees (Delgado-Téllez et al., 2022). Defining clear objectives or missions, instrumental in reaching climate mitigation goals, could also shape the perception of future growth opportunities (Mazzucato, 2018).

Based on the share of public green investment in Member States' National Energy and Climate Plans and taking into account the 2030 climate targets, ECB staff research suggests that between 1% and 1.8% of EU GDP[8] could be required for annual additional green public expenditure in the period 2021-2030 (Delgado-Téllez et al., 2022). This does not include additional needs linked to REPowerEU objectives. Data from the National Energy and Climate Plans also show large differences across Member States regarding investment needs as a share of GDP, as well as the expected share of public investment compared to overall investment needs.

The discussion on how fiscal policy can best tackle these significant additional public investment needs is therefore particularly relevant. In its reply to the Communication from the European Commission on the economic governance review of 19 October 2021, the Eurosystem stressed that fiscal policy should become more growth-friendly and that addressing the challenges of the green and digital transitions would require significant private and public investment. The Eurosystem also noted the potential of EU-wide action and the role of national investment, supported by additional sources of revenue or a reprioritisation of expenditure (Eurosystem, 2021).

The option of a "green golden rule" that excludes net green investment from the fiscal indicators used to measure compliance with fiscal rules has been considered (Darvas and Wolff, 2021). ECB staff analysis suggests that such green golden rules should be carefully designed to properly balance stimulating additional green investment against the risk of challenges for fiscal sustainability (Ferdinandusse et al., 2022). The Commission's latest Report on Public Finances in EMU (2022c) also noted there was no clear empirical evidence that golden rules have supported public investment in the past. Moreover, leaving sole responsibility for higher investment to individual Member States might lead to suboptimal outcomes, such as underinvestment or narrowing fiscal space (Panetta, 2022a).

On 9 November 2022, the European Commission published its Communication setting out orientations for a reformed EU economic governance framework (European Commission, 2022d). The proposed approach would see Member States committing to national medium-term fiscal-structural plans that could feature a longer fiscal adjustment path if they include a sufficient set of reforms and investments to respond to EU priorities, including the European Green Deal, and address country-specific recommendations. The Communication stresses the need for sustained high levels of public investment to facilitate and accelerate the green transition and ensure energy security.

Against this backdrop, the option of a common EU approach to financing these public investment needs, such as a Climate and Energy Security Fund,

[8] Or €145 billion to €260 billion based on 2021 EU GDP.

has also been considered and supported by a wide range of academic and institutional actors. Such proposals often point out the EU public good dimension of climate crisis mitigation and energy security. For example, the respective advantages and drawbacks of a climate fund and a green golden rule have been compared, showing the key role that redistribution would play in the design of the former (Darvas, 2022). MEP Luis Garicano has called for a new climate facility, overseen by an independent fiscal agency, to provide €57 billion annually in public investment (Garicano, 2022). Likewise, in an International Monetary Fund (IMF) staff proposal for reforming fiscal rules (Arnold et al., 2022), the authors suggest putting in place an EU fiscal capacity which could include a "climate investment fund". The proposal contains several arguments in favour of such an EU-wide approach. It notes that it could help address, within the EU, the issues of limited returns on individual action in tackling the climate emergency and of leakage. It also notes that such a climate fund could enhance spillovers and improve coordination through cross-border investments and projects and would ensure that the required investment occurs, despite possible national political or fiscal constraints. In early October 2022, Commissioners Gentiloni and Breton proposed taking inspiration from the SURE mechanism to help Europeans and industrial ecosystems in the current energy crisis. They suggested this could be a potential first step towards providing "European public goods" in the energy and security sectors. More recently, in its February 2023 Communication on a Green Deal Industrial Plan, the European Commission indicated that it intends to propose a European Sovereignty Fund in the context of the review of the MFF before summer 2023 (European Commission, 2023). The instrument would aim to preserve a European edge on critical and emerging technologies relevant to the green and digital transitions. It would build on the experience of multi-country projects under IPCEIs, seeking to enhance all Member States' access to such projects. Commissioner Thierry Breton has suggested €350 billion will need to be invested in the production of industrial goods to generate green energies (Breton, 2023).

Recognition of the essential role that a common EU approach could play is also gaining traction at a political level. The European Council noted that all relevant tools at national and EU level should be mobilised to enhance the resilience of the economy in the wake of the energy crisis. It also stressed the importance of close coordination and of common European level solutions, where appropriate, and the need to step up investments in energy efficiency and futureproof energy infrastructure, including interconnections, storage and innovative renewable technologies (European Council, 2022a and 2022b).

Increasing climate and energy-related public investment is essential and compatible with current fiscal policy considerations. In December 2022, in its statement on draft budgetary plans, the Eurogroup acknowledged the need to further expand investment to support the green transition and energy security, along with accelerating fiscal-structural reforms which would strengthen potential growth, competitiveness and debt sustainability (Eurogroup, 2022). Moreover, ECB analysis of NGEU shows that, provided grants were used for productive government investment, the medium-term effect of NGEU on euro area inflation was deemed to be contained. This was based on the assessment that the effect on inflation will be

determined by the interplay between the short-term demand effect and longer-term disinflationary effect of NGEU (Bańkowski et al., 2022). Succeeding in reducing dependency on fossil fuels and stimulating the production of cheaper renewable energy sources may also help reduce inflation (Panetta, 2022b). Lastly, it should also be noted that failure to mitigate the climate emergency will increase "climateflation", i.e. the impact on prices and activity of more frequent and stronger natural disasters and severe weather events (Schnabel, 2022). In parallel, in periods of higher interest rates, green investment may be penalised far more than fossil fuel investment because of the concentration of capital it needs in the initial years (Egli et al., 2022; Schnabel 2023).

An EU Climate and Energy Security Fund designed to provide €500 billion of public investment by 2030 could have a significant effect on closing the public investment gap. Assuming that the Fund starts operating in 2024, this would cover 50% of the lower end of estimated additional green public investment needs over the period (see estimates above from Delgado-Téllez et al., 2022). While leaving a share of the investment needs to be funded directly at national level, such a volume would guarantee a minimum level of funding in all Member States and ensure that the most important priorities, notably those with an EU-wide dimension, can be addressed. If the range of priorities that the Fund can immediately address is reduced, lower volumes could still prove beneficial, especially while NGEU is also still supporting climate-related investment[9]. The Fund will contribute to rapid investment shifts in low-carbon EU infrastructure (power plants, electricity grids, railway infrastructure) of the kind urgently needed to reach a pathway towards net zero GHG emissions (Klaassen and Steffen, 2023).

This paper analyses the institutional and legal feasibility of such a Fund, exploring how climate crisis mitigation and energy security policies could be delivered as European public goods. In doing so, this paper examines how the NGEU programme was established to provide an EU-wide fiscal tool focused on reforms and investments in response to the COVID-19 pandemic. The NGEU example can provide a basis to develop design and legal options to establish a Climate and Energy Security Fund. In terms of design, it will be essential to consider how such a Fund could be best tailored both to its goal – providing European public goods, such as climate crisis mitigation and energy security – and to the current economic and geopolitical environment – including high energy prices and inflation, normalisation of ECB monetary policy and limited fiscal space in some Member States. On the legal side, NGEU was established as an exceptional, one-off and temporary measure, triggering significant legal debate (e.g. Dermine, 2020; Steinbach, 2020; Leino-Sandberg and Ruffert, 2022). Therefore, the next section investigates how design choices can be assessed within the legal options and constraints to establish a Climate and Energy Security Fund.

9 According to data from the Commission's Recovery and Resilience Scoreboard, up to January 2022, about €500 billion of NGEU funds had been committed in grants and loans to national Recovery and Resilience Plans. Of this amount, 40% (€200 billion) is dedicated to climate expenditure.

3 Establishment of a Climate and Energy Security Fund – legal and institutional perspectives

3.1 Revenue

Identifying suitable revenue to finance an EU Climate and Energy Security Fund remains the most legally and politically challenging aspect of its establishment. A key limitation is the need to permit additional EU borrowing and put in place new EU own resources to provide sufficient revenue.

This section explores the different legal options that might be available to establish the revenue side of such a Fund. First, this section outlines the approach taken for NGEU and considers whether a similar approach could be taken for the Fund. Second, it considers the option of the Fund providing loans rather than grants to projects or Member States. Third, this section considers the possibility of identifying and establishing new own resources for the Fund, with reference to the discussions on establishing a Social Climate Fund.

3.1.1 EU borrowing to provide grants and loans

The major innovation of the NGEU programme was to empower the EU to borrow for the purpose of providing both grants and loans to Member States. EU borrowing for the purpose of direct EU spending or the provision of grants to Member States raised particular and novel legal considerations. By contrast, EU borrowing for the purpose of on-lending to Member States (back-to-back lending) or providing budgetary guarantees was considered a more established budgetary technique (see Section 3.1.2).

The limits on EU borrowing arise from the legal framework underpinning the EU budget, which requires compliance with several principles of "constitutional importance" to the EU's legal order (Council Legal Services, 2020; de Gregorio Merino, 2021). These include, most notably, the principles of budgetary balance, budgetary discipline and unity of the EU budget (Article 310 TFEU) and the integrity of the EU's own resources system (Article 311 TFEU).[10]

The construction of NGEU constituted an innovative application of the EU legal framework, introducing an exceptional and temporary financing programme for the EU until 2026. NGEU provides €806.9 billion of funding (in

[10] Other relevant principles include the requirement that the EU has the financial means are made available to allow the Union to fulfil its legal obligations in respect of third parties (Article 323 TFEU), and the principle of universality, also referred to as the principle of non-assignment, found in Article 20 of the Financial Regulation (Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union (OJ L 193, 30.7.2018, p. 1).

current prices) to various spending programmes, through EU borrowing on the capital markets. This borrowing is provided to Member States in the form of grants and loans under specific EU spending programmes. The legal framework underpinning NGEU comprises three pillars: the new Own Resources Decision (ORD), the Recovery Instrument and specific EU spending programmes, the largest being the RRF (Dermine, 2020; de Witte, 2021a).

Examining the legal pillars of NGEU in more detail can provide insights into the legal considerations of establishing an EU Climate and Energy Security Fund. This includes whether the legal bases and justifications underpinning NGEU as an instrument for tackling the global pandemic can be applied equally to the climate emergency and energy security crisis, thereby justifying EU borrowing.

The first legal pillar was the amendment of the ORD[11], adopted on the basis of Article 311 TFEU, to empower the EU to borrow, to increase the own resources ceiling, to cover liabilities arising from the borrowing and to set out further modalities for repayment. First, the ORD amendment authorised the Commission to borrow on behalf of the EU on the capital markets. Second, to ensure compliance with the principle of budgetary balance in Article 310 TFEU and with Article 323 TFEU, the amendment established an ear-marked compartment, by means of an extraordinary and temporary increase in the own resources' ceiling, to create sufficient budgetary space to ensure full coverage of the EU's NGEU-related liability each year until it is fully repaid. Moreover, the ORD amendment set out a clear framework for repayment of EU borrowing, limiting the maximum amounts and establishing a specific start and end date for repayment using EU own resources (2028-2058). Repayment of such borrowing will be financed by future income to the EU budget – either future new own resources or existing ones, such as Member States' Gross National Income (GNI)-based contributions.

The second legal pillar was the Recovery Instrument[12], adopted on the basis of Article 122 TFEU – often referred to as the EU's "solidarity clause"[13] – which laid down a general allocation of the borrowed funds to various EU spending programmes. The Recovery Instrument accommodated NGEU within the EU's financial framework by attributing the nature of "external assigned revenue" to the proceeds of EU borrowing used to provide grants to Member States.

The third legal pillar comprised specific EU spending programmes, the largest being the RRF[14]. The RRF implemented the general allocation made in the Recovery Instrument by setting out the framework and modalities for expenditure of

---

11 Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom (OJ L 424, 15.12.2020, p. 1).

12 Council Regulation (EU) 2020/2094 of 14 December 2020 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis (OJ L 433I, 22.12.2020, p. 23).

13 As outlined in further detail in section 3.2.1 below, Article 122(1) TFEU provides for the adoption of measures if severe difficulties arise in the supply of certain products, notably in the area of energy, while Article 122(2) TFEU provides for the granting of EU financial assistance where a Member State is in difficulties or is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control.

14 Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (OJ L 57, 18.2.2021, p. 17).

a large proportion of the grants and loans under NGEU. The RRF was established by the European Parliament and the Council based on Article 175(3) TFEU – the flexibility clause for economic social and territorial cohesion "where specific actions prove necessary" outside the EU Structural Funds. In terms of the other spending programmes, the Just Transition Fund[15] was established on the basis of Articles 175(3) and 322 TFEU, while REACT-EU was established by amending the Common Provisions Regulation for the Cohesion Funds[16], on the basis of Articles 177 and 322 TFEU. Other programmes receiving NGEU financing include the Rural Development Fund, InvestEU, Horizon Europe and RescEU.

Despite its relative novelty, the legal construction for NGEU has proven robust. By contrast to the flight to intergovernmental solutions in the wake of the Great Financial Crisis, existing legal bases under the Treaties were given a fresh interpretation in the light of the unique circumstances faced by the EU (de Witte, 2021b), which have proven "sufficiently solid to erect the architecture of NGEU" (Fabbrini, 2022). The only notable challenge to NGEU has been a case before the German Federal Constitutional Court, which temporarily delayed ratification of the ORD by Germany (Leino-Sandberg and Ruffert, 2022).[17]

The opinion of the Council Legal Service, which was made public at the time of negotiations on NGEU, provided detailed legal reasoning as to how the unique construction of NGEU could be reconciled with principles of the EU budget (Council Legal Service, 2020).[18] In particular, the opinion noted that one crucial aspect of the Recovery Instrument is that it provides that the funds used for direct support to Member States be treated as "external assigned revenue", a budgetary technique which can ensure compliance with the principle of budgetary balance.[19] However, the opinion also emphasised that the substantial amount of external

---

15 Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund (OJ L 231, 30.6.2021, p. 1).

16 Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy (*OJ L 231, 30.6.2021, p. 159)*.

17 A number of complainants submitted a constitutional complaint against the German law ratifying the own resources decision to the German Federal Constitutional Court (GFCC) and an application for a preliminary injunction to suspend promulgation of the law until a decision on the merits. They argued, *inter alia,* that the Commission does not have the right to borrow on financial markets under Article 311 TFEU in view of the no bail-out clause laid down in Article 125 TFEU. On 26 March 2021, the GFCC ordered the country's President not to sign the agreement into law until the court had decided on the application for a preliminary injunction. Subsequently, on 21 April 2021, the GFCC rejected the application for a preliminary injunction directed against the German Act ratifying the ORD. This allowed the German President to sign the Act ratifying the ORD, pending the GFCC's substantive decision on the constitutional challenge against it. On 6 December 2022, the GFCC handed down its ruling on the case, rejecting the challenges. The GFCC held that the empowerment of the EU to borrow funds on capital markets for the purposes of NGEU did not violate the complainants' rights under the German constitution. The GFCC reached this conclusion on the basis that the ORD – including EU borrowing – does not manifestly exceed the current European integration agenda and does not impair the overall budgetary responsibility of the German Parliament.

18 Leino-Sandberg and Ruffert (2022) and de Witte (2021a) point to the fact that this unusual step was likely to have been political and strategic, aimed at providing support for national governments in debates concerning the legal implications of the envisaged scheme.

19 The Council Legal Service (2020) also noted that a further crucial element is the fact that the ORD ensures that repayment of the EU's debt is guaranteed within the ceilings of own resources, in a manner that constitutes an irrevocable, definitive and enforceable guarantee of payment. See also de Gregorio Merino (2021).

assigned revenue under NGEU required adequate safeguards in order to protect the integrity of the EU own resources system (Article 311 TFEU).

The opinion considered that the integrity of the EU own resources system was adequately safeguarded by three crucial factors: the exceptional character of the COVID-19 pandemic, the one-off nature of NGEU, and its limited duration – factors which were duly reflected in the legal acts underpinning NGEU. This reasoning was underpinned, first, by reference to the principle of solidarity, as a core principle underlying the Treaties and as one of the values upon which the EU is founded under Article 2 TEU. The reasoning was also underpinned by Article 311 TFEU, which establishes that "The Union shall provide itself with the means necessary to attain its objectives and carry through its policies", and Article 3(6) TEU, which provides that the "Union shall pursue its objectives by appropriate means commensurate with the competences which are conferred upon it in the Treaties". Thus, the opinion concluded that for the purposes of responding to the exceptional situation of the pandemic, the EU legislator could decide what financial means would be commensurate in volume to the challenge faced by the EU and its Member States.

Based on this line of reasoning, it is clear that the climate emergency is equally exceptional in nature and that the Fund could also be designed as a robust one-off response over a limited duration. First, as outlined in the introduction, the climate emergency may eventually, but irreversibly, lead to an uninhabitable world. Its most catastrophic impacts will impose heavy costs on future generations and be felt beyond the traditional horizons of most current actors: this makes the climate crisis the "tragedy of the horizon", as explained by Mark Carney (2015). By the time this impact occurs, it will be too late to mitigate its affects. The current energy security crisis is also exceptional, insofar as it is directly linked to the war against Ukraine and affects certain citizens and Member States in a disproportionate manner.

In this sense, joint action in the form of a Fund can clearly be justified in the light of the EU's objectives under Article 3 TEU, along with its climate commitments outlined in Section 2.1. Article 3(3) sets out that the Union "shall work for the sustainable development of Europe", based inter alia on "a high level of protection and improvement of the quality of the environment". Moreover, the Union shall promote "solidarity between generations" and "economic, social and territorial cohesion, and solidarity among Member States".

Indeed, this is particularly salient in view of the principle of solidarity under the Treaties, given the shared responsibility of the EU and Member States to comply with obligations under international law, and the interdependence of Member States in mitigating the impacts of the climate and energy security crises. Interdependence means that the effectiveness of the EU's climate transition depends on all Member States succeeding in implementing it. In the absence of sufficient mitigation or adaptation measures, Member States are at risk of being deeply affected by the climate crisis (Feyen et al., 2020) or energy supply-related shock (di Bella et al., 2022), together with higher transition risks and costs, with a knock-on impact on the entire EU. Ideally, the Fund would ensure essential public

investment in all Member States, prioritising such investment where it is most productive in helping meet the EU's climate targets and enhancing the EU's energy security. This is particularly relevant in circumstances where public investment may not otherwise take place in certain Member States, due to fiscal constraints. Moreover, uneven public investment could also result in uneven and heterogenous stimulation of private investment.

In other words, the heterogeneity of climate public investment needs across Member States, together with the heterogeneity of Member States' climate investment capacity, calls for an approach that ensures that investment takes place where it is most productive in helping meet the EU's climate targets. This may result, at least partly, in funds being allocated according to an appropriate distribution key based on empirical criteria linked to climate and energy investment needs and capacity. In the context of the principle of solidarity, this allocation should be seen as a key feature in the Fund's design. Indeed, allocation has always been a core feature of the EU's cohesion policy (Leino-Sandberg and Ruffert, 2022). Moreover, Monfort and Salotti (2021) have shown that spillovers account for a substantial share of the total impact of cohesion policy. Thus, an approach to the allocation of funds based on empirical criteria linked to investment needs should be viewed as a positive sum game.

The Fund should be established as soon as possible to ensure it can address the investment gap without delay and thereby offer a robust, one-off response over a limited duration. This could be done in parallel with the current MFF, which runs from 2021 to 2027. A long-term solution could then be established within the EU budget, i.e. within the 2028-2034 MFF. The Fund could already be considered under the mid-term review of the MFF[20], and be established as a temporary facility[21], to ensure that the EU delivers the necessary significant climate investment within the next decade to remain on track to meet its climate mitigation objectives. A long-term solution, beyond the scope of the Fund, could then be addressed by the future design of the MFF after 2028, possibly supported by new EU own resources.

A further important point to mention is that Article 125 TFEU (the no bailout clause) does not preclude the establishment of such a Fund. First, like NGEU, the Fund would not entail joint and several liability of Member States. They would only be liable pro-rata for their respective share of the commitments they have made to the EU for future repayment of issued debt (Council Legal Service, 2020). Second, the set-up would neither result in the EU assuming commitments of Member States as a means of treasury financing, nor replace or supplement Member States´ financing on the markets with EU financing. Rather, the Fund would aim to achieve the EU's objectives through suitable expenditure programmes (Council Legal Service, 2020). Finally, Article 125 TFEU does not take precedence over other

[20] The mid-term review of the MFF 2021-2027 in Q2 2023 will be a first opportunity to re-assess if the current EU budget continues to provide the means for common responses to common challenges and could offer a first opportunity to explore a long-term solution to the matter of climate and energy security investment needs.

[21] Leino-Sandberg and Ruffert (2022) have emphasised that Article 122 TFEU can only be a suitable legal basis for a temporary measure. They reason this on the basis that the CJEU in Case C-370/12 Pringle, para. 65 and 105, had noted that Article 122(2) TFEU would not be a suitable legal basis for a permanent stability mechanism such as the ESM.

provisions of EU law, in particular those that foresee funding in pursuance of EU policies. The objectives pursued by the different policies of the EU on the basis of primary law are presumed compatible with Article 125(1) TFEU (see also Dermine, 2020; de Witte, 2021a).

Thus, from a substantive perspective, the solution applied to fund NGEU could be applied to a Climate and Energy Security Fund. This conclusion follows from the exceptional, one-off nature of such a Fund, which would only be in place for a limited duration.

From a procedural perspective, amending the ORD requires the unanimous agreement of Member States and ratification in accordance with national constitutional requirements. In this respect, the political dynamics may pose a particular challenge to amending the ORD.

3.1.2 Provision of loans to Member States

The possibility of the EU borrowing to on-lend to Member States, by means of back-to-back transactions, provides a further legally feasible option for the design of a Climate and Energy Security Fund. If the Fund provides loans to Member States, financing could be achieved through back-to-back operations, with the Commission empowered to borrow on financial markets and on-lend to Member States at favourable conditions. This budgetary technique has already been used on a number of occasions, such as for the European Financial Stabilisation Mechanism.[22] Moreover, the technique was extensively used during the EU's economic response to the pandemic, for the SURE programme[23], and for the loan component of NGEU. While subject to certain limitations[24], this technique does, in principle, facilitate EU borrowing for the purpose of on-lending without creating major legal obstacles (Council Legal Services, 2020). However, in order to establish this possibility under a Climate and Energy Security Fund, a revision of the ORD would likely be advisable, given the need to ensure sufficient budgetary space (also referred to as budgetary headroom) to fully cover the EU's contingent liabilities, as required by Article 323 TFEU (Croonenborghs, 2020). While this drawback was addressed in the context of the SURE Regulation, where EU borrowing was backed by voluntary Member State guarantees (Croonenborghs, 2020), it is not clear that this solution could be applied to borrowing for on-lending on the scale needed for the Fund.

A further option would be to explore whether the Fund could be established under an intergovernmental solution, such as the European Stability Mechanism (ESM). Establishing a Climate and Energy Security Fund within the

22 Council Regulation (EU) No 407/2010 of 11 May 2010 establishing a European financial stabilisation mechanism (OJ L 118, 12.5.2010, p. 1).

23 Council Regulation (EU) 2020/672 of 19 May 2020 on the establishment of a European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) following the COVID-19 outbreak (OJ L 159, 20.5.2020, p. 1).

24 These limitations arise from the need to ensure the EU's contingent liabilities are appropriately covered. This may be achieved where the EU still has budgetary space (also referred to as 'headroom', or where such liabilities are covered by Member State guarantees.

ESM would carry some disadvantages. First, the ESM was designed as a euro area instrument and is thus available only to euro area Member States. Second, an amendment to the ESM Treaty is likely to be required, to permit the development of the ESM's purpose beyond providing stability support "to the benefit of ESM Members which are experiencing, or are threatened by, severe financing problems, if indispensable to safeguard the financial stability of the euro area as a whole and of its Member States" (Article 3 ESM Treaty). Finally, this option would entail a further, unwarranted, departure from the Community method and the role of the EU institutions – particularly the European Parliament – thereunder. That said, in 2022 ESM staff published a proposal for the ESM to host a fiscal stabilisation fund. This proposal addresses the fact that a euro area fiscal stabilisation capacity is one of the missing pieces in the architecture of Economic and Monetary Union (Misch and Rey, 2022). Such a fiscal stabilisation fund, which is specifically relevant for countries sharing one currency, would seem a better fit for the ESM, given its stabilisation and euro area-related DNA, and could therefore be complementary to an EU Climate and Energy Security Fund.

A practical drawback to the Fund providing loans is that such financing cannot readily address the challenge of limited fiscal space in some Member States. While the EU's credit rating may facilitate providing loans to Member States at favourable interest rates, this does not address the issue of Member States' fiscal constraints, in particular arising from the need to comply with the deficit and debt rules under the Stability and Growth Pact (Darvas, 2022).[25] While the outcome of the economic governance review may help address some of these challenges by better facilitating growth-friendly public investment, in particular to finance the green and the digital transition, it remains to be seen whether this will be enough, also in view of the timeframe required to propose and adopt the necessary legislative measures to implement the review. It is also noted that the initial low take-up of loans under NGEU by Member States (Freier et al., 2022) illustrates that providing loans may only facilitate public investment to a limited extent.

3.1.3 New own resources

The political agreement on NGEU includes interinstitutional commitments on the role of new own resources in repaying NGEU borrowing. The December 2020 Interinstitutional Agreement (IIA) between the European Parliament, the Council and the Commission noted that the repayment of NGEU debt should be financed by the EU's general budget, including by sufficient proceeds from new own resources introduced after 2021. The Commission was therefore invited to propose new own resources in two packages, with the aim of having the first fully in place by

[25] For instance, by virtue of Eurostat treatment of RRF spending by Member States, spending financed by RRF grants does not increase national budget deficits, while spending financed by RRF loans does increase national budget deficits.

2023 and the second by 2026.[26] This is in addition to the new plastics own resource in place since 1 January 2021, consisting of a national contribution based on the amount of non-recycled plastic packaging waste.

Delivering on this agreement, on 22 December 2021 the Commission published a first package proposing three new own resources. These new own resources are based on (1) a revised and expanded emissions trading system (ETS II), (2) an EU carbon border adjustment mechanism, and (3) the share of residual profits from multinationals that will be reallocated to EU Member States under the OECD/G20 agreement on a reallocation of taxing rights ("Pillar One") (European Commission, 2021c). The Commission initially estimated that, starting in 2023, these new own resources would provide gradually increasing additional funds to the EU budget, reaching €15.5 billion to €17 billion per year in 2026-2030. However, as negotiations on these new own resources and their implementation are still ongoing, the final amount that will accrue to the EU budget is still uncertain. The second package of own resources foreseen in the IIA is expected to be proposed by the Commission by June 2024. The IIA outlined that this second package could include a financial transaction tax and a financial contribution linked to the corporate sector.

If the objective of introducing new EU own resources to cover NGEU debt repayment is fulfilled, this could help establish a Climate and Energy Security Fund, both from a financing and a political perspective. Crucially, it would reduce the reliance on GNI-based contributions from Member States for repayment of EU borrowing. However, there is no financial ultimatum to drive agreement. If new own resources are not agreed, this would not endanger the annual NGEU debt repayment of €15 billion, starting in 2028.[27] Such repayments will, in any case, be covered by GNI-based contributions from Member States, in accordance with the ORD. That said, failure to reach agreement on new own resources could have a significant impact on future EU budget programmes, if Member States decide to keep overall GNI-based contributions constant during the next MFF negotiations.

The Social Climate Fund could also offer a concrete example of how additional resources can create the EU budgetary space and political incentives to set up an EU fiscal instrument supporting climate goals. The SCF is an EU budget instrument proposed under the Fit-for-55 package, which aims to help Member States address the social impact of higher carbon prices for the most vulnerable groups. In particular, under the provisional agreement reached on 17 December 2022, the SCF would finance temporary direct income measures to tackle energy and transport poverty, as well as long-lasting structural investments, including building renovation, decarbonisation solutions and integration of renewable energy, purchasing and infrastructure for zero and low-emission vehicles, and the use of

---

[26] Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources Interinstitutional Agreement of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources (OJ L 433I, 22.12.2020, p 28).

[27] See answer given by Commissioner Hahn to a parliamentary question on NGEU repayment, 28 September 2021.

public transport and shared mobility services. It will operate from 2026 to 2032 and its financing be complemented by an additional 25% from national resources, reaching an estimated total of €86.7 billion. The financing will be provided as external assigned revenue by the auctioning of ETS allowances (in the first year) and ETS II allowances (in subsequent years).

However, the envisaged size of the Fund proposed by this paper, i.e. €500 billion by 2030, will require additional revenues – national contributions or new own resources – of around €70 billion per year. This would require a 40% increase in the current EU budget, to be fully dedicated to climate and energy security. While reprioritising the EU budget and augmenting it through national contributions (EFB, 2022) or new own resources should not be excluded, joint borrowing appears a first best to tackle climate investment needs in view of their size and the need to frontload them as much as possible.

While beyond the scope of this paper, it would also be a long-term option to explore to what extent investment projects financed by the Fund could contribute to new EU own resources. Investments in projects which produce renewable energy are likely to generate significant profits, in particular given that the cost of investing in renewables has fallen exponentially in the last decades, and is expected to continue to fall, as the world learns from the experience of building more solar and wind projects (Adrian et al., 2022; Schnabel, 2023). Moreover, should a financial contribution based on the corporate sector be introduced as a new own resource (see above), it would benefit from the EU being positioned as the leading economy in strategic areas such as clean tech.

3.2 Expenditure

The expenditure side of such a Fund may be more straightforward to establish, by means of a package of legal acts. First, if the NGEU model is followed, a regulation would need to be adopted to create the Fund and accommodate it within the EU's financial framework by attributing the nature of "external assigned revenue" to the proceeds of Union borrowing. Like the Recovery Instrument under NGEU, this could take place under Article 122 TFEU. Second, this revenue could be channelled into new or existing EU spending programmes in the fields of climate and energy. To establish new spending programmes, one or more regulations would be needed to set out the modalities for expenditure under the Fund, for instance on the basis of Article 192 TFEU (environment) and Article 194 TFEU (energy), possibly in combination with further legal bases under the cohesion policy.

3.2.1 Establishing the Fund: Article 122 TFEU

The climate emergency and the energy security crisis would appear to fall squarely within the situations which Article 122 TFEU was designed to address (see also Maduro et al., 2021). The first sub-paragraph of Article 122 TFEU provides for the adoption of measures appropriate to the economic situation, in a

spirit of solidarity between Member States, in particular if severe difficulties arise in the supply of certain products, notably in the area of energy. The second sub-paragraph of Article 122 TFEU provides for the granting of EU financial assistance where a Member State is in difficulties or seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control. Indeed, several recent legislative initiatives on the basis of Article 122 TFEU concerned emergency interventions to address high energy prices as a result of Russia's war of aggression against Ukraine.[28]

Article 122 TFEU can be considered an appropriate legal basis for a Fund, which is exceptional, temporary and economic in nature (Council Legal Services, 2020). Section 3.1.1 above already sets out the exceptional and temporary nature of the Fund. It is clear that the types of emergencies envisaged by Article 122 TFEU are imminent, or already directly affecting Member States. In addition to scientific consensus, the extreme meteorological events in the summer of 2022 demonstrate that the climate crisis is not a hypothetical future crisis, but rather a serious threat to Member States. The Fund would be economic in nature, insofar as it would address the EU's climate mitigation and energy security needs, and thus the severe economic impacts of these crises (Feyen et al., 2020).

The adoption of a regulation based on Article 122 TFEU would be crucial, not only to establishing the Fund, but also to demonstrating its exceptional and temporary nature, and thus its compatibility with the EU's budgetary principles. Indeed, the choice of Article 122 TFEU for the Recovery Instrument under NGEU could be seen as a political signal emphasising the measure's temporary and exceptional nature (Fabbrini, 2022; de Witte, 2021a), with the European Financial Stabilisation Mechanism and SURE as precedents, thus endowing the regulation with a "special meaning and value" in the context of NGEU (de Gregorio Merino, 2021).

In terms of procedure, legislation under Article 122 TFEU can be adopted by the Council, on a proposal from the Commission, acting by qualified majority voting. When adopting NGEU, the European Parliament, the Council and the Commission also adopted a Joint Declaration on budgetary scrutiny of new proposals based on Article 122 TFEU[29], acknowledging the increased relevance of Article 122 TFEU for the adoption of measures to address specific crisis situations. This Joint Declaration seeks to enhance the assessment of the budgetary implications of new proposals under Article 122 TFEU, along with improving the dialogue with the European Parliament on such initiatives.

---

28 See Council Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices (OJ L 261I, 7.10.2022, p. 1) and Council Regulation (EU) 2022/2576 of 19 December 2022 enhancing solidarity through better coordination of gas purchases, reliable price benchmarks and exchanges of gas across borders (OJ L 335, 29.12.2022, p. 1).
Moreover, in October 2022 the European Council (2022a) called on the Commission to present proposals on the possible fast-tracking of the simplification of permitting procedures to accelerate the rollout of renewables and grids, including with emergency measures on the basis of Article 122 TFEU.

29 Joint declaration of the European Parliament, the Council and the Commission on budgetary scrutiny of new proposals based on Article 122 TFEU with potential appreciable implications for the Union budget (OJ C 444I, 22.12.2020, p. 5).

3.2.2 Spending programmes

The "external assigned revenue" referred to in Section 3.1 could be channelled into new and existing EU spending programmes in the fields of climate and energy. While this section focuses on the legal considerations underpinning the creation of new EU spending programmes, it may also be possible to supplement the financing of some targeted existing EU programmes, as was the case for NGEU, particularly those directly managed by the Commission or other EU bodies, provided these are specifically focused on addressing the climate emergency and energy security concerns.[30] Examples of relevant existing programmes include Horizon Europe[31], which focuses on research and innovation; the Connecting Europe Facility[32], which focuses on infrastructure investment; the LIFE programme[33], which focuses on environmental action; the Renewable Energy Financing Mechanism[34]; and the Innovation Fund programme, which contributes to GHG emission reduction[35].

Turning to the establishment of new spending programmes, the EU and Member States have a shared competence in the fields of environment and energy, and the EU may adopt measures in both fields by ordinary legislative procedure.[36] Thus, a regulation establishing the modalities for expenditure could be adopted under a combination of legal bases, most notably Article 192 TFEU (environment) and Article 194 TFEU (energy), possibly in combination with other legal bases in the field of cohesion policy. Alternatively, depending on the scope and modalities of expenditure of the Fund – which may require the adoption of legal acts with different procedural requirements – a package of legal acts establishing a variety of expenditure elements could be considered.

The legal basis for EU measures in the field of environment is Article 192 TFEU. Article 192(1) TFEU allows the European Parliament and the Council to take action, by ordinary legislative procedure, "to achieve the objectives of Article 191 TFEU", i.e. preserving, protecting and improving the quality of the environment. Thus, Article 192(1) TFEU is likely to provide a suitable legal basis to establish

---

30 For instance, the European Climate, Environment and Infrastructure Executive Agency (CINEA), established under Commission Implementing Decision (EU) 2021/173 of 12 February 2021 establishing inter alia the European Climate, Infrastructure and Environment Executive Agency (OJ L 50, 15.2.2021, p. 9).

31 Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination (OJ L 170, 12.5.2021, p. 1).

32 Regulation (EU) 2021/1153 of the European Parliament and of the Council of 7 July 2021 establishing the Connecting Europe Facility (OJ L 249, 14.7.2021, p. 38).

33 Regulation (EU) 2021/783 of the European Parliament and of the Council of 29 April 2021 establishing a Programme for the Environment and Climate Action (LIFE) (OJ L 172, 17.5.2021, p. 53).

34 Article 33 of Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action (OJ L 328, 21.12.2018, p. 1).

35 Commission Delegated Regulation (EU) 2019/856 of 26 February 2019 supplementing Directive 2003/87/EC of the European Parliament and of the Council with regard to the operation of the Innovation Fund (OJ L 140, 28.5.2019, p. 6).

36 When the Treaties confer on the EU a competence shared with the Member States in a specific area, the EU and the Member States may legislate and adopt legally binding acts in that area. The Member States may exercise their competence to the extent that the EU has not exercised its competence. See Article 2(2) TFEU.

measures to achieve most of the Fund's climate-related objectives, which would refer to the objectives of the European Climate Law.

In the event the Fund may significantly affect certain sensitive topics, most notably Member States' "choice between different energy sources and the general structure of its energy supply", Article 192(2)(c) TFEU may be the more appropriate legal basis. Procedurally, this would require the Council to act unanimously in accordance with a special legislative procedure and after consulting the European Parliament, the Economic and Social Committee and the Committee of the Regions. The application of this provision would depend on the Fund's scope and ambition. However, if the Fund leaves it to Member States to decide how to adjust their choices between energy sources and the structure of their energy supply, there may be scope to argue that this provision is not engaged.

The legal basis for EU measures in the field of energy policy is Article 194 TFEU, which refers to measures adopted in the "spirit of solidarity between Member States". While EU measures are subject to the caveat that such measures should not limit Member States' choice of energy mix or the general structure of their energy supply, this limitation has been interpreted narrowly and should be read together with the EU's competence for environment policy referred to above (Huhta, 2021). Thus, Article 194 TFEU could be one of the legal bases for the legislation underpinning a Climate and Energy Security Fund.

It may also be useful to combine the legal bases of Articles 192 and 194 TFEU with those of the Cohesion Funds, notably Articles 177(2) or 175(3) TFEU. Article 177(2) TFEU may be suitable, since it allows for a Cohesion Fund to be established "to provide a financial contribution to projects in the fields of environment and trans-European networks in the area of transport infrastructure". Moreover, Article 192(5) TFEU foresees that if a measure based on the provisions of Article 192(1) TFEU involves costs deemed disproportionate for the public authorities of a Member State, such measure must lay down appropriate provisions in the form of, among others, financial support from the Cohesion Fund set up pursuant to Article 177 TFEU. In the alternative, Article 175(3) TFEU may be suitable, as it allows for "specific actions […] necessary outside the Funds". Both Articles 177(2) and 175(3) TFEU share the same procedural requirements as Article 192(1) TFEU, namely ordinary legislative procedure and Opinion of the Committee of the Regions and the Economic and Social Committee. A further option to consider would be the use of the European Regional Development Fund under Article 176 TFEU, which participates, inter alia, in the conversion of declining industrial regions.

There are already two relevant precedents to demonstrate how the combination of these legal bases can be used to establish a spending programme such as the Fund. First, the Commission has already proposed combining Articles 192(1) and 194 TFEU for the purpose of establishing a Social Climate Fund, as described in more detail above (together with Article 91 TFEU on transport policy).

Likewise, the REPowerEU Regulation[37] has amended several legal acts, most notably the RRF Regulation[38], using a combination of the legal bases relevant to environment, energy and cohesion policy. The legal bases are Article 175 third paragraph, Article 177 first paragraph, Article 192(1), Article 194(2) and Article 322(1) TFEU. The proposal amends the RRF Regulation to add the new objective of increasing the resilience of the EU's energy system by decreasing dependence on fossil fuels and diversifying energy supplies at EU level. In addition to the €225 billion still available from RRF loans, REPowerEU entails €20 billion in new grants[39], which will be delivered via the RRF. Furthermore, Member States will have the opportunity to transfer up to €5.4 billion from the Brexit Adjustment Reserve, as well as up to 7.5% of unspent allocations from the cohesion policy under the 2021-2027 programming period (in addition to the 5% that could already be transferred to the RRF). While not explored in further detail here, it should be noted that a Climate and Energy Security Fund would be complementary to the REPowerEU initiative, albeit on a larger scale.

The establishment of the expenditure aspect of the Fund based on the EU's shared competence in the fields of energy and environment would be compatible with the principle of subsidiarity. This principle means that the EU may act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at EU level (see Article 5(3) TEU). There are three main arguments to support why targeted action on climate-related public investment should be taken at European level as an essential complement to Member States' actions and investments. First, climate protection and energy security have been identified as quintessential examples of European public goods, with policies in these areas generating significant cross-border spillover effects and EU-level action bringing potential economies of scale (Thöne and Kreuter, 2021; Calliess, 2021; Buti and Papaconstantinou, 2022). As noted above, the scale of public investment needed, along with the heterogeneity of climate public investment needs and capacity across Member States, are arguments to support the fact that action can be better achieved at EU level. Moreover, where the Fund succeeds in addressing crucial investment needs without delay, this will imply, in principle, lower transition risks. It will also result in lower costs for Member States in the medium and long term, adding to the Fund's effectiveness and efficiency. Second, a clear legislative framework would ensure that financing is channelled into effective climate initiatives, in line with the latest scientific understanding of the climate crisis and avoid risks of greenwashing. This would be achieved through a clear set of criteria and appropriate

37 Regulation of the European Parliament and of the Council of 21 February 2023 amending Regulation (EU) 2021/241 as regards REPowerEU chapters in recovery and resilience plans (2022/0164/COD).

38 Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (OJ L 57, 18.2.2021, p. 17).

39 These grants will be financed through the frontloaded sale of Emissions Trading System (ETS) allowances and the resources of the Innovation Fund, to be partly replenished through the Market Stability Reserve.

links to existing EU legislation, such as the Taxonomy Regulation[40]. Third, EU action could also ensure that funding is also channelled into cross-border and inter-regional projects. To that end, clear criteria, or even dedicated envelopes, could be established to ensure a suitable mix of national and cross-border projects.[41] From this perspective, a focus could also be put on IPCEIs, which allow Member States and industry to jointly invest in breakthrough innovation and infrastructure. Along with an improved and accelerated assessment and approval procedure for these IPCEIs, EU financing (or cofinancing) could increase incentives for Member States and the private sector to develop new IPCEIs in key areas of clean tech.

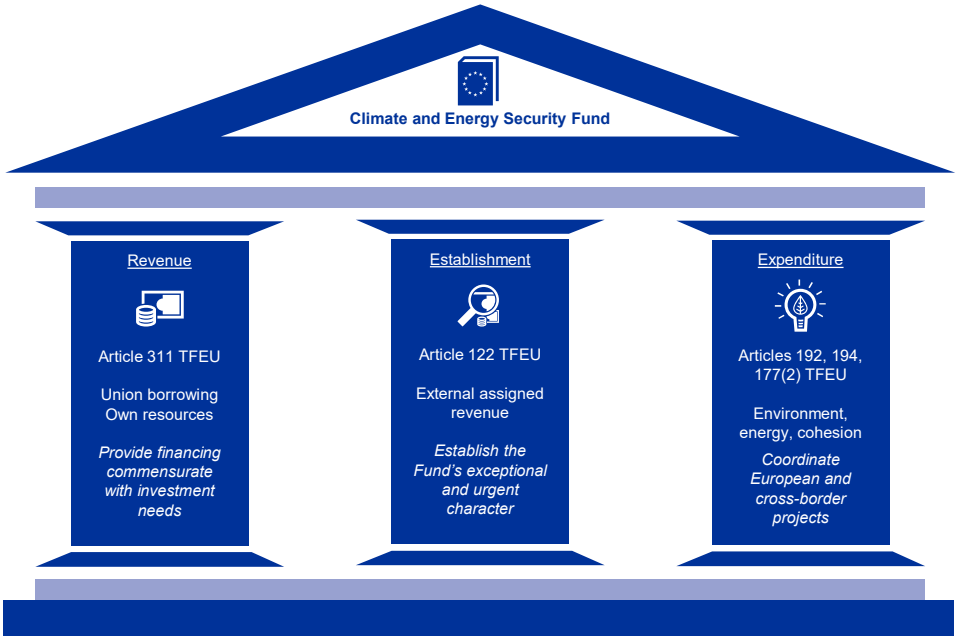
Like the example of the RRF, the Fund's spending programmes could set out detailed rules on the conditions for using the Fund, including investment selection and disbursement conditions. It will be necessary to determine how such investments should be pursued from an administrative perspective, in particular the extent to which competence for administering the funding should be held at European versus national level. Building on the experience with the RRF, it may be useful to explore a combination of funding administered by Member States and European projects administered by the Commission or an EU agency.[42] Just like NGEU, the Fund could therefore encompass several instruments operating at different levels, including to prioritise delivery of pan-European projects and support cross-border initiatives. The financing of EU-wide programmes to provide a positive incentive for sustainable investment should also be considered, as this could catalyse the shift of private capital towards sustainable projects and reinforce the EU sustainable finance strategy.

40 Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (OJ L 198, 22.6.2020, p. 13). See, for example, the cross-references in Articles 18(4)(d) and (e), 19(3)(d) and (e) and Annex VI RRF Regulation.

41 Unlike the climate (37%) and digital (20%) targets for investment set out in the RRF Regulation, no quantitative targets are in place for cross-border or multi-country projects.

42 This approach was proposed by the Commission in its original NGEU proposal. Following negotiations in the European Council, the share of Commission-administered programmes was largely reduced, with most financing being directed to the RRF, where the investment and reforms are designed by Member States.

Figure 2
Legal construction of a Climate and Energy Security Fund



Source: Authors.

3.2.3 Considerations of democratic legitimacy and accountability

The Climate and Energy Security Fund should be designed to include appropriate and robust safeguards to ensure democratic legitimacy and accountability, which would also help support its legal feasibility. This ensures that a repetition of the NGEU model through similar legal means does not raise concerns of a permanent federalist step "through the back door", without full democratic legitimacy and without taking into account the potential impact on national budgetary sovereignty.

In particular, the Council Legal Services (2020) emphasised the need to design NGEU in a manner that would respect the budgetary prerogatives of the European Parliament, in the light of the substantial amounts of external assigned revenue. The approach under NGEU, with decision-making dominated by the Council (Dermine, 2020) and driven by the European Council (Fromage, 2020), contrasted with other budgetary procedures where the European Parliament must consent to the EU's MFF and approves the EU's annual budget jointly with the Council. Under NGEU, the arrangements seeking to address this contrast include an

interinstitutional agreement[43] and specific procedures under the RRF Regulation (de Witte, 2021a; Leino-Sandberg and Ruffert, 2022; Fabbrini, 2022).

Lessons for the design of the Fund can be drawn from discussions around the specific procedures under Article 26 RRF Regulation. These procedures empower the competent committees of the European Parliament to invite the Commission to Recovery and Resilience Dialogues (RRDs) every two months to discuss the recovery in the EU, the national plans and issues related to their implementation. The RRF Regulation also states that the European Parliament may express its views on the same issues through the adoption of resolutions. As of January 2023, eight RRDs have taken place and the European Parliament has adopted two resolutions, illustrating its commitment to continue scrutinising implementation of the RRF. At the same time, the European Parliament reaffirmed in its June 2022 Resolution that it should be on an equal footing with the Council when scrutinising RRF implementation and called on the Commission to ensure that equal treatment for both institutions would be applied in future EU initiatives.[44]

Likewise, it will be essential that the EU's financial interests are robustly protected through appropriate scrutiny by the European Court of Auditors.[45] Article 22 RRF Regulation sets out a framework for this, which also foresees appropriate roles for the European Anti-Fraud Office and the European Public Prosecutors Office.

The potential social impact of climate crisis mitigation policies and the significant impact of their success or failure on future generations mean that specific attention must be given to democratic accountability in designing the Fund. An RRD-like approach, ensuring strong engagement with MEPs, would support the European Parliament in assessing the effective and proper spending of the financing provided by the Fund. Depending on the Fund's design, a stronger role for the European Parliament could also be considered for pan-European projects financed by the Fund and exceeding a certain size.

---

43 Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources Interinstitutional Agreement of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources (OJ L 433I , 22.12.2020, p. 28).

44 European Parliament resolution of 23 June 2022 on the implementation of the Recovery and Resilience Facility (2021/2251(INI)) (OJ C 32, 27.1.2023, p. 42 & p. 23).

45 See, for example, European Court of Auditors (2022).

4 Conclusion

It may still be possible to mitigate the effects of the climate crisis, and there are compelling economic and legal arguments for the EU and its Member States to take immediate and meaningful action through public investment. First, the climate emergency will have a significant economic impact in the EU, by damaging capital stock and affecting economic production and the welfare of households, along with posing risks to fiscal sustainability in several countries. Second, the EU and its Member States are under a legal obligation under the Paris Agreement to mitigate the climate emergency by reducing GHG emissions. This binding commitment under international law has been implemented in the EU legal framework by the European Climate Law, which sets out legally binding targets of reducing GHG emissions by at least 55% compared to 1990 levels by 2030, and of net zero GHG emissions by 2050. Moreover, national courts in Member States are increasingly requiring governments to take effective climate action to protect citizens' fundamental rights, in particular the right to life and the right to private and family life. Finally, urgent action is needed to support EU energy security and bolster its strategic independence.

The current level of compliance by the EU and its Member States with their obligations under the Paris Agreement is considered insufficient. Scenarios of global warming above 1.5°C, and in particular of 2°C and above, imply significant welfare losses across the whole EU, with particularly strong impacts in southern and central Europe. Physical risks will increase over the medium term, which will aggravate transition risks.

The climate emergency, like the energy crisis caused by Russia's war of aggression against Ukraine, calls for immediate action, in line with the EU's objectives under Article 3 TEU and with the principle of solidarity under the Treaties. This reflects the shared responsibility of the EU and Member States to comply with their obligations under international law, and the interdependence of Member States in mitigating the impacts of the climate and energy security crises.

Sufficient and proximate investment will be a key driver to reducing GHG emissions and securing the production of clean and affordable energy by the EU. Public investment can play an essential role in ensuring that the investment needs for climate mitigation and energy security are addressed within the next few years, which is particularly true for power plants, electricity grids and railway infrastructure. Also, public investment may be particularly needed in the current circumstances of higher interest rates, given that higher interest rates may have a negative impact on green investment when compared with fossil fuel investment.

Several academic and institutional actors have recently proposed a common EU approach to financing these public investment needs. These proposals argue that an EU fund could ensure that investment takes place where it is most productive in helping meet the EU's climate targets and ensuring its energy security. It would also help position the EU as a leader in clean technologies.

Drawing on the design of NGEU, this paper argues that it is legally feasible to establish an EU Climate and Energy Security Fund within the current Treaty framework, built on three legal pillars. First, the revenue pillar would enable EU borrowing for the purposes of providing grants or loans to support investment under the Fund, while the possibility of identifying new EU own resources could also be explored. This would require an amendment to the ORD in accordance with Article 311 TFEU. Second, the Fund could be established and accommodated within the EU's financial framework by means of a regulation adopted in accordance with Article 122 TFEU, which would attribute the nature of "external assigned revenue" to EU borrowing and new own resources flowing into the Fund. Third, funding could be channelled into suitable new and existing spending programmes in the fields of climate and energy. New spending programmes could be established to set out detailed rules on the conditions for using the Fund, including investment selection and disbursement conditions. A combination of legal bases under the EU's competences in the fields of environment (Article 192 TFEU), energy (Article 194 TFEU) and cohesion policy (Articles 175(3) and 177(2) TFEU) could be used to adopt a package of legal acts establishing a variety of spending elements.

The establishment of the Fund in this manner will face the same legal restrictions as NGEU. It must be demonstrated that the Fund is an exceptional, one-off and temporary measure. There are solid legal arguments to suggest that this high threshold can be met. The existential threat posed by the climate emergency to the EU and to humanity in general clearly renders this an even more potent challenge than the COVID-19 pandemic and calls for immediate action in line with the Treaties.

The Fund should be designed to deliver climate protection and energy security as European public goods. This means that support should ideally be provided in the form of grants rather than loans, to avoid the limited fiscal space in some Member States hampering effective and coherent action across the EU and therefore overall compliance of the EU and its Member States with the Paris Agreement. In addition, the Fund should cover not only national projects but also European and cross-border projects.

The Fund could provide €500 billion by 2030 and would be complementary to and compatible with existing and forthcoming EU initiatives. These include REPowerEU, the Social Climate Fund and the expected proposal for a European Sovereignty Fund that focuses on ensuring European industry can take a leading role in the green transition. The Climate and Energy Security Fund would also be compatible with current fiscal policy considerations in the EU regarding the need to scale up green investment and would be conducive to lower inflation in the long term because it would help phase out fossil fuels, also in line with the European Green Deal.

It is essential to safeguard the democratic legitimacy and accountability of such a Fund. Thus, the instrument should be designed to include specific procedures to appropriately safeguard the involvement of the European Parliament, particularly in view of the potential social impact of climate crisis mitigation policies and the significant impact of their success or failure on future generations.

References

Adrian, T., Bolton, P. and Kleinnijenhuis, A. (2022), "The Great Carbon Arbitrage", IMF Working Paper, No 107.

Arnold, N., Balakrishnan, R., Barkbu, B., Davoodi, H., Lagerborg, A., Lam, W., Medas, P., Otten, J., Rabier, L., Roehler, C., Shahmoradi, A., Spector, M., Weber, S. and Zettelmeyer, J. (2022), "The EU Fiscal Framework: Strengthening the Fiscal Rules and Institutions", IMF Departmental Paper, 5 September.

Bańkowski, K., Bouabdallah, O., Domingues Semeano, J., Dorrucci, E., Freier, M., Jacquinot, P. Modery, W., Rodríguez-Vives, M., Valenta, V. and Zorell, N. (2022), "The economic impact of Next Generation EU: a euro area perspective", ECB Occasional Paper, April.

Baruth, B., Bassu, S., Ben Aoun, W., Biavetti, I., Bratu, M., Cerrani, I., Chemin, Y., Claverie, M., De Palma, P., Fumagalli, D., Manfron, G., Morel, J., Nisini Scacchiafichi, L., Panarello, L., Ronchetti, G., Seguini, L., Tarnavsky, E., Van Den Berg, M., Zajac, Z. and Zucchini, A. (2022), "Crop monitoring in Europe - July 2022", JRC MARS Bulletin, Vol. 30, No 7, Publications Office of the European Union, Luxembourg.

Borrell, J. (2022), EU Ambassadors Annual Conference 2022: Opening speech, 10 October.

Breton, T., (2023), Interview with El Pais, 16 January.

Breton, T. and Gentiloni, P. (2022), Germany's latest response to energy crisis raises questions, op-ed published in the Irish Times, Corriere della Sera, Les Echos and FAZ.

Buti, M. and Papaconstantinou, G. (2022), European public goods: How we can supply more, VoxEU Column, 31 January.

Calliess, C. (2020), Public goods in the debate on the distribution of competences in the EU, Bertelsmann Stiftung, Cologne.

Carney, M. (2015), Breaking the tragedy of the horizon – climate change and financial stability, Speech, London, 29 September.

Carney, M. (2021), Investing in net-zero climate solutions creates value and rewards, Interview, 22 January.

Climate Action Network Europe (2022), EU's announcement at COP27 to increase emissions reduction is still far off track to limit temperature rise to 1.5°C, Press Release, 15 November.

Council Legal Services (2020), Opinion of the Legal Services on the proposals on Next Generation EU, Brussels.

Council of the EU (2016), Climate change: Council speeds up process for EU ratification of Paris Agreement, Press release, Brussels, 30 September.

Croonenborghs, K. (2020), "The European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) – an innovative (social) approach to EU financial assistance", EU Law Live Weekend Edition, No 19, 29 May.

Darvas, Z. (2022), A European climate fund or a green golden rule: not as different as they seem, Bruegel Blog, 3 February.

Darvas, Z. and Wolff, G. (2021), A green fiscal pact: climate investment in times of budget consolidation, Bruegel.

De Gregorio Merino, A. (2021), "The Recovery Plan: Solidarity and the living constitution", EU Law Live Weekend Edition, No 50, 5 March.

De Witte, B. (2021a), "The European Union's COVID-19 recovery plan: The legal engineering of an economic policy shift", Common Market Law Review, Vol. 58(3), pp. 635-682.

De Witte, B. (2021b), "The innovative European response to COVID-19: decline of differentiated integration and reinvention of cohesion policy", ECB Legal Conference 2021, Continuity and change - how the challenges of today prepare the ground for tomorrow, Publications Office of the European Union, Luxembourg, pp. 394-402.

Delgado-Téllez, M, Ferdinandusse, M. and Nerlich, C. (2022), "Fiscal policies to mitigate climate change in the euro area", Economic Bulletin, Issue 6, ECB.

Dempsey, H., Tani, S. and Hodgson, C. (2022), Blistering heatwave plays havoc with Europe's strained energy system, Financial Times, 20 July.

Dermine, P. (2020), "The EU's Response to the COVID-19 Crisis and the Trajectory of Fiscal Integration in Europe: Between Continuity and Rupture", Legal Issues of Economic Integration, Vol. 47(4), pp. 337-358.

Di Bella, G., Flanagan, M., Foda, K., Maslova, S., Pienkowski, A., Stuermer, M. and Toscani, F. (2022), "Natural Gas in Europe: The Potential Impact of Disruptions to Supply", IMF Working Paper, No 145.

Dubash, N. and Mitchell, C. (2022), "National and sub-national policies and institutions", Climate change 2022: Mitigation of climate change. Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC.

Egli, F *et al.* (2022), "Financing the energy transition: four insights and avenues for future research", *Environmental Research Letters,* Vol. 17, No 5, 10 May.

Elderson, F. (2021), When you need change to preserve continuity: climate emergency and the role of law, speech at the ECB Legal Conference, 25 November.

Eurogroup (2022), Statement on the fiscal policy response to high energy prices and inflationary pressures, 3 October.

European Central Bank (2021), Eurosystem reply to the Communication from the Commission 'The EU economy after COVID-19: implications for economic governance' of 19 October 2021, Frankfurt am Main, 1 December.

European Commission (2021a), The EU economy after COVID19: implications for economic governance, Communication, Brussels, 19 October.

European Commission (2021b), "Impact assessment report accompanying the Proposal for a Directive of the European Parliament and the Council amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC, and repealing Council Directive (EU) 2015/652", Staff Working Document, Brussels, 14 July.

European Commission (2022c), The next generation of own resources for the EU budget, Communication, Brussels, 22 December.

European Commission (2022a), REPowerEU Plan, Communication, Brussels, 18 May.

European Commission (2022b), "Implementing the REPowerEU Action Plan: investment needs, hydrogen accelerator and achieving the biomethane targets", Staff Working Document, Brussels, 18 May.

European Commission (2022c), Report on Public Finances in EMU 2021, 12 July.

European Commission (2022d), Communication on orientations for a reform of the EU economic governance framework, Brussels, 9 November.

European Commission (2023), Communication: A Green Deal Industrial Plan for the Net-Zero Age, Brussels, 1 February

European Council (2022a), Conclusions following the European Council meeting of 20 and 21 October, Brussels, 21 October.

European Council (2022b), Conclusions following the European Council meeting of 15 December 2022, Brussels, 15 December.

European Court of Auditors (2022), Special report 21/2022: The Commission's assessment of national recovery and resilience plans – Overall appropriate but implementation risks remain, Luxembourg, 8 September.

European Environmental Agency (2019), Projected Welfare Impacts of Climate Change for Different EU Regions and Sectors under two Emissions Scenarios, 11 December.

European Fiscal Board (2022), 2022 Annual Report, 26 October.

Fabbrini, F. (2022), "Next Generation EU: Legal Structure and Constitutional Consequences", Cambridge Yearbook of European Legal Studies, Vol. 23, pp. 1-22.

Ferdinandusse, M., Nerlich, C. and Osterloh, S. (2022), "Can green golden rules help to close the green investment gap?", *Box 3 in Delgado-Téllez, M., Ferdinandusse, M. and Nerlich, C. (2022), "Fiscal policies to mitigate climate change in the euro area", Economic Bulletin, Issue 6, ECB.*

Feyen, L., Ciscar, J.C., Gosling, S., Ibarreta, D. and Soria, A. (2020), Climate change impacts and adaptation in Europe, JRC PESETA IV final report, Publications Office of the European Union, Luxembourg.

Freier, M., Grynberg, C., O'Connell, M., Rodríguez-Vives, M. and Zorell, N. (2022), "Next Generation EU: a euro area perspective", Economic Bulletin, Issue 1, ECB.

Fromage, D. (2020), "Towards Increasing Unity and Continuing Executive Predominance Within the E(M)U Post-COVID?", Legal Issues of Economic Integration, Vol. 47(4), pp. 385-408.

Gagliardi, N., Arevalo, P. and Pamies, S. (2022), "The Fiscal Impact of Extreme Weather and Climate Events: Evidence for EU Countries", Discussion Paper, No 168, European Commission, Brussels.

Garicano, L. (2022), Combining environmental and fiscal sustainability: A new climate facility, an expenditure rule, and an independent fiscal agency, VoxEU Column, 14 January.

Good, R., Sandford, A. and Ashkew, J. (2022), Drought and heatwaves: How is Europe tackling unprecedented water shortages?, Euronews, 9 August.

Huhta, K. (2021), "The scope of state sovereignty under article 194(2) TFEU and the evolution of EU competences in the energy sector", International & Comparative Law Quarterly, Vol. 70(4), pp. 991-1010.

International Energy Agency (2022), Renewables 2022, December.

Im, E., Pal, J. and Eltahir, E. (2017), "Deadly heat waves projected in the densely populated agricultural regions of South Asia", Science Advances, Vol. 3, No 8.

International Panel on Climate Change (2022), "Summary for Policymakers", in IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, pp. 3–33.

Jack, V. (2022), Watts going down? Europe's scorching summer parches hydropower, Politico, 9 August.

Kahlenborn, W., Porst, L., Voß, M., Fritsch, U., Renner, K., Zebisch, M., Wolf, M., Schönthaler, K. and Schauser, I. (2021), "Climate Impact and Risk Assessment 2021 for Germany", Climate Change, 27/2021, German Environment Agency, November.

Klaassen, L and Steffen, B. (2023), "Meta-analysis on necessary investment shifts to reach net-zero pathways in Europe", Nature Climate Change, Vol. 13, pp. 58-66, January.

Leino-Sandberg, P. and Ruffert, M. (2022), “Next Generation EU and its constitutional ramifications: A critical assessment”, Common Market Law Review, Vol. 59(2), pp. 433-472.

Maduro, M., Martin, P., Piris, J., Pisani-Ferry, J., Reichlin, L., Steinbach, A. and Weder di Mauro, B. (2021), “Revisiting the EU framework: Economic necessities and legal options”, CEPR Policy Insight, No 114, December.

Mazzucato, M. (2018), Mission-oriented research in and innovation in the European Union, Report for the European Commission, February.

Misch, F. and Rey, M. (2022), “The case for a loan-based euro area stability fund”, ESM Discussion Paper, No 20, 5 May.

Monfort, P. and Salotti, S. (2021), “Where does EU cohesion policy produce its impact?”, DG Regional and Urban Policy Working Paper, WP 2/2021, European Commission, Brussels.

Network for Greening the Financial System (2021), Climate-related litigation: Raising awareness about a growing source of risk, Paris.

Panetta, F. (2022a), Europe’s shared destiny, economics and the law, Lectio Magistralis on the occasion of the conferral of an honorary degree in Law by the University of Cassino and Southern Lazio, 6 April.

Panetta, F. (2022b), Greener and cheaper: could the transition away from fossil fuels generate a divine coincidence?, speech at the Italian Banking Association, Rome, 16 November.

Schnabel, I. (2020), When markets fail – the need for collective action in tackling climate change, speech at the European Sustainable Finance Summit, Frankfurt am Main, 28 September.

Schnabel, I. (2022), A new age of energy inflation: climateflation, fossilflation and greenflation, speech at The ECB and its Watchers XXII Conference, Frankfurt am Main, 17 March.

Schnabel, I. (2023), Monetary policy tightening and the green transition, speech at the International Symposium on Central Bank Independence, Sveriges Riksbank, Stockholm, 10 February.

Setzer, J. and Higham, C., (2022), Global trends in climate litigation: 2022 snapshot, LSE Grantham Research Institute on Climate Change and Environment, London.

Setzer, J., Higham, C., Jackson, A. and Solana, J. (2021), “Climate change litigation and central banks”, ECB Legal Working Paper Series, No 21.

Steinbach, A. (2020), The Next Generation EU. Are We Having a Hamiltonian Moment?, EU Law Live Weekend Edition, No 2, 26 June.

Thöne, M. and Kreuter, H. (2021), Public Goods in a Federal Europe, Bertelsmann Stiftung, Cologne.

World Health Organisation (2022), Heatwave in Europe: local resilience saves lives – global collaboration will save humanity, Press Release, 22 July.

Acknowledgements
We would like to thank Ettore Dorrucci, Marien Ferdinandusse, Charlotte Grynberg, Irene Heemskerk, Nils Hernborg, Stefan Huemer, Johannes Lindner, Fatima Pires, Mila Quacquarelli, Hanni Schölermann, Fabio Tamburrini, Lucas ter Braak, Agnieszka Trzcinska, Bram van der Eem, Isabel Vansteenkiste and Chiara Zilioli for their helpful input, comments, and encouragement. We are also grateful to Jacopo Cimadomo, Nadine Leiner-Killinger, Ralph Setzer, Wolfgang Modery, Carolin Nerlich, Gilles Noblet and Christoph Zwick, who reviewed an earlier version of this paper and provided valuable suggestions.

The views expressed are those of the authors and all errors and omissions their own.

Laurent Abraham
European Central Bank, Frankfurt am Main, Germany; email: laurent.abraham@ecb.europa.eu

Marguerite O'Connell
European Central Bank, Frankfurt am Main, Germany; email: marguerite.connell@ecb.europa.eu

Iñigo Arruga Oleaga
European Central Bank, Frankfurt am Main, Germany; email: inigo.arruga@ecb.europa.eu

Postal address 60640 Frankfurt am Main, Germany
Telephone +49 69 1344 0
Website www.ecb.europa.eu

PDF ISBN 978-92-899-6057-1, ISSN 1725-6534, doi:10.2866/354742, QB-AQ-23-004-EN-N