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Introduction

In their recent speeches, the European Central Bank¹ president, *Christine Lagarde*, and other central bankers in the Eurozone have suggested a gradual shift in the Eurosystem's² role in addressing climate change. This is in contrast to the previously held view that climate and environmental related considerations fall squarely out of the scope of the ECB's mandate, which is to promote and maintain price stability. This paper examines the impact of the environmental integration principle, laid down in Article 11 TFEU, on the ECB's primary and secondary objectives. Even though Article 11 TFEU offers considerable potential to achieve a greening of the EU's sectoral policies, in the financial sector, the provision has not yet gained enough academic attention. It is argued that in view of the growing awareness about climate change risks for price stability, Article 11 TFEU may in some cases legitimize the ECB's ambitions to pursue climate protection objectives, however, always subject to the limitations imposed by the legal framework, defined by the overarching goal of price stability. Due to the fact that the ECB's primary objective to maintain price stability and objectives related to climate protection are not always in conflict, a differentiated approach has to be developed: In case that climate-related aspects are to be considered within the ECB's mandate to the extent that climate change poses a threat to price stability, Article 11 TFEU applies even to the primary objective of price stability. In all other cases Art. 11 TFEU can only apply to the ECBs secondary objectives.

A. Central banking and climate protection

There is growing recognition among the financial community of the increasing significance of multiple ongoing global crises and finance. Evidence suggests that climate change and the rapid decline of biodiversity pose severe threats to stability of financial systems and are a matter of concern for central banks. A recently published working paper analyzed the financial risks produced by the loss of biodiversity ("biodiversity-related financial risks (BRFR)") specifically for the French financial system.³ This essay helps bring climate-related financial risks to the fore by focusing on the correlation between central banking and the global climate crisis. In this section, we first examine the global climate crisis and the need for a progressive transition to a low carbon economy as the EU's response in order to combat climate change. We then proceed

¹ Hereinafter "ECB".

² The Eurosystem is the central banking system for the euro area, it is constituted by the ECB and the national central banks of the Member States whose currency is the euro (Article 282(1) second sentence TFEU). The European System of Central Banks, hereinafter "ESCB", comprises the ECB and the national central banks of all EU Member States.

³ See *Romain Svartzman et al.*, "A 'Silent Spring' for the Financial System? Exploring Biodiversity-Related Financial Risks in France". Working Paper. Banque de France, 2021.

to discuss the debate on greening the monetary policy in the context of sustainable finance. Ultimately, we illustrate climate change's impact on monetary policy and explain the so-called "emission bias" in this context.

I. The global climate crisis as a challenge for the EU and the necessary transition to a low carbon economy

Human-induced climate change has become a major global crisis threatening the viability of the planet and its inhabitants. It is estimated that human activities have already caused around 1°C of global heating compared to pre-industrial levels. Its catastrophic impact is already visible in many regions in the world.⁴ The International Panel on Climate Change (IPCC) has confirmed that climate change increases the frequency of extreme weather events, such as heat waves and extreme precipitation, dramatically, leading to a rising number of natural disasters.⁵ This is evident from the fact that the number of natural catastrophes increased from 249 in 1980 to 820 in 2019 and resulted in damages estimated at \$210 billion in 2020.⁶

The earth system analysis is a research field which focuses on the complex dynamics of the entire earth system.⁷ It illustrates the complexity of the Earth's underlying processes and systems as well as their mutual interactions. In this context, the concept of "planetary boundaries" was developed by a group of Earth System and environmental scientists led by *Rockström*, which is based on the findings of the Earth System's complexity.⁸ The concept identifies nine key processes and subsystems of the Earth, for which the scientists have aimed to establish and quantify boundaries that should not be transgressed.⁹ These planetary boundaries are "human-determined values of the control variable set at a 'safe' distance from dangerous level or from its global threshold"¹⁰. Crossing one or more of these boundaries may affect the functioning of the Earth System as a whole, leading us to the precipice of catastrophic environmental change. According to the scientists, the planetary boundaries, thus, define the safe operating space,

⁴ IPCC 2014, p. 6 IPCC 2018, p. 4.

⁵ IPCC 2014, pp. 7–8.

⁶ Keynote speech by *Christine Lagarde*, President of the ECB, at the ILF conference on Green Banking and Green Central Banking, Frankfurt am Main, 25.01.2021, available at <https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210125~f87e826ca5.en.html> (accessed 13.07.2021).

⁷ See *Schellnhuber H.J.*, Discourse: Earth System Analysis — The Scope of the Challenge. In: Schellnhuber H.J., Wenzel V. (eds) *Earth System Analysis*. Springer, Berlin, Heidelberg, 1998.

⁸ See *Johan Rockström; Will Steffen; Kevin Noone; Åsa Persson; F. Stuart III Chapin; Eric Lambin et al.*, *Planetary Boundaries: Exploring the Safe Operating Space for Humanity*. In *Ecology and Society*, 2009.

⁹ *Rockström, Johan; Steffen, Will; Noone, Kevin; Persson, Åsa; Chapin, F. Stuart; Lambin, Eric F. et al.* (2009): A safe operating space for humanity. In *Nature* 461 (7263), p. 472.

¹⁰ *Johan Rockström; Will Steffen; Kevin Noone; Åsa Persson; F. Stuart III Chapin; Eric Lambin et al.* (2009): *Planetary Boundaries: Exploring the Safe Operating Space for Humanity*. In *Ecology and Society*, p. 3.

within which humanity can live and operate safely.¹¹ Within these planetary boundaries, the concept also refers to a climate-change boundary, which denotes how much climate change the planet can safely tolerate. In their publication, the group of scientists has suggested the climate-change boundary value of 350ppm (atmospheric CO₂ concentration), which corresponds to a maximum temperature rise of 2°C compared to the pre-industrial level.¹² This means that it is crucial to limit global warming to 2°C if we are to minimize the risk of crossing critical thresholds, failing which could lead to abrupt and irreversible Earth System responses.¹³ In order to achieve this greenhouse gas emissions must be substantially reduced, which in turn requires an immediate and drastic change of activities across all sectors.

Risks contributing to global warming can largely be attributed to unsustainable greenhouse gas emitting economic activity.¹⁴ The reality of the pressing climate crisis has led governments around the world to the adoption of the Paris Agreement and the 2030 UN Sustainable Development Agenda in 2015, agreeing on a global transition towards a more sustainable path for our planet. Global efforts aiming at sustainable development and respecting planetary boundaries require significant investments. The Paris Agreement, in its Article 2(1)(c), includes the commitment that “Finance flows” shall be made “consistent with a pathway towards low greenhouse gas emissions and climate-resilient development”.

The need for urgent action to combat these catastrophic risks associated with climate change has also been recognized in Europe. In November 2019, the European Parliament declared a global “climate and environmental emergency” and urged the EU to commit to the goal of reaching climate neutrality as soon as possible.¹⁵ A month later, the European Commission presented the “European Green Deal” as its new growth strategy, highlighting the EU’s commitment to strive for carbon neutrality by 2050.¹⁶ Annexed thereto is a roadmap for measures to be taken in the next few years in order to implement the European Green Deal.¹⁷ At the heart

¹¹ Johan Rockström et al. 2009, p. 2.

¹² Johan Rockström et al. 2009, pp. 7–10.

¹³ Johan Rockström et al. 2009, p. 9.

¹⁴ IPCC 2014, p. 4.

¹⁵ See press release “The European Parliament declares climate emergency”, 29.11.2019, available at <https://www.europarl.europa.eu/news/en/press-room/20191121IPR67110/the-european-parliament-declares-climate-emergency> (accessed 19.07.2021).

¹⁶ Communication from the Commission “The European Green Deal”, COM(2019) 640 final; Press release “The European Green Deal sets out how to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people’s health and quality of life, caring for nature, and leaving no one behind”, 11.12.2019, available at https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691 (accessed 19.07.2021).

¹⁷ European Commission, Annex to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. The European Green Deal. COM(2019) 640 final.

of this initiative is the proposal for a “European Climate Law”, which stipulates the legally binding long-term objective of greenhouse gas neutrality by 2050. In March 2020, the Commission adopted the first draft version of the underlying regulation¹⁸ which was later modified by an amended proposal¹⁹. In April 2021, a provisional agreement on the key elements to be enshrined in the Climate Law Regulation was finally reached between the European Parliament and the Council. The Council approved the final text in May 2021.²⁰ It provides for a 55% net emission target for 2030 (incorporating the so-called “2030 Climate Target Plan”), an EU-wide climate neutrality target for 2050, the establishment of a European Scientific Advisory Board on Climate Change, as well as the use of an emission budget for setting a 2040 target. It is essential to note that the European Climate Law codifies the climate neutrality goal, as set out in the European Green Deal. It aims to achieve this by ensuring that all EU policies contribute to the climate-neutrality objective and that all sectors play their part. The European Climate Law has entered into force on 29 July 2021.

Specifically, as regards the role of the financial sector, the “European green deal investment plan”²¹ aims at facilitating the sustainable investments necessary for the transition to a climate-neutral economy. Considering that the financial sector will play a crucial role in reaching the climate targets, the Commission has been developing a policy agenda on sustainable finance since 2018. In the same year, the Commission adopted the “action plan on sustainable finance”, comprising a “strategy to further connect finance with sustainability” by redirecting financial flows to sustainable investments, mainstreaming sustainability in risk management and enhancing transparency and long-termism. In the context of the European Green Deal, the Commission announced a renewed sustainable finance strategy, contributing to the objectives of the EU Green Deal Investment Plan. The strategy aims “to provide the policy tools to ensure that [the] financial system genuinely supports the transition of businesses towards sustainability in a context of recovery from the impact of the COVID-19 outbreak”.²²

¹⁸ European Commission, Proposal for a Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law Change Act), COM(2020) 80 final.

¹⁹ European Commission, Amended proposal for a Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law), COM(2020) 563 final.

²⁰ See Council of the European Union, Outcome of Proceedings, No. 8204/21.

²¹ See press release “Financing the green transition: The European Green Deal Investment and Just Transition Mechanism”, 14.01.2020, available at https://ec.europa.eu/commission/presscorner/detail/en/ip_20_17 (accessed 19.07.2021).

²² See “Commission action plan on financing sustainable growth, available at https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy_en (accessed 19.07.2021).

II. Dynamic links between central banking, climate change and the transition to a low-carbon economy

In “the Global Risks Report (2021)”, the World Economy Forum has stressed again that risks related to global warming are amongst the most crucial the world is currently facing.²³ As a matter of fact, the academic and policy debate about the role of central banks in addressing global heating has expanded rapidly recently. Some of these key developments will be outlined in this chapter. The focus is, firstly, on the general debate on greening monetary policy in the context of sustainable finance and, secondly, on the correlation between central banking and global heating specifically.

Considering the magnitude of the global challenge, it is evident that a green transition will not succeed without coordinated efforts coming from every sector including financial institutions. This has sparked a controversial debate as to what role central banks could play in mitigating climate change, as well as what influence could they exert on global warming within the context of “sustainable finance”. Considering the responsibilities and pressures faced by central banks, a fundamental question could thus be raised: “On what basis could we expect central banks also to play a role in climate change policy?”²⁴ In answer to this question, central banks point out that, given their responsibilities and mandate of regulatory oversight over the financial system, they are in a powerful position to ensure further greening of finance approaches. However, there is opposition questioning whether central banks may assume such “promotional role [...] with regard to green finance and sustainability”²⁵. On the one hand, it has been argued that “central banks must take climate change into account to the extent that it is part of their core mandate in delivering monetary and financial stability”²⁶. On the other hand, lies the assertion that environmental sustainability lies fundamentally outside central banks’ traditional core responsibilities. More recently however, there has been a growing recognition of the potential implications of climate change on the financial sector, which has led central banks and financial regulators to start analyzing the dynamic links between climate change and central banking.²⁷ In his speech in 2015, *Carney* elaborated on the implications of climate change for financial stability.²⁸

²³ See the World Economic Forum, “The Global Risks Report 2021”, 16th Edition, 19.01.2021.

²⁴ *Alexander and Fischer* 2019, p. 6.

²⁵ *Dikau and Volz* 2018, p. 1.

²⁶ *Alexander and Fischer* 2019, p. 2.

²⁷ See *Campiglio et al.* 2018, p. 462.

²⁸ Speech “Breaking the tragedy of the horizon – climate change and financial stability” by Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board, at Lloyd’s of London, London, 20.09.2015.

Drawing from the concept of the “Tragedy of the Commons”²⁹, he identified the “Tragedy of the Horizon”, a predicament that by the time climate change related risks materialize it will be too late to prevent them. This analysis considers different time-scales, based on when risks become clearly apparent. The financial system usually only considers short term risks, according to which climate-related catastrophes will only manifest in the long run.³⁰ In this regard, speeches from other central bankers followed, discussing, inter alia, the impact of climate change on monetary policy³¹, the types and sources of climate change-related risks for the financial sector³² and, more generally, reflecting the role of central banks in addressing climate change³³. Amidst this background, a need for more sustainable or “green” financial and banking sector has been recognized. Although the relevance of such “greening” has been increasingly emphasized in the past few years, a universal taxonomy for defining, which (economic) activities can be considered green or sustainable did not exist until very recently. “The Taxonomy Regulation for climate change mitigation”³⁴, a key action in the context of the European Commission’s “action plan on sustainable finance” establishing a classification system for sustainable activities came into force only last year. Herein, green central banking has been defined as “central banking that takes account of environmental risks, including risks from climate change, which may have a material impact on the short- and long-term stability and development of the financial sector and the macroeconomy”. Furthermore, two approaches of “green central banking” are discerned, referring to a passive and a more active role that central banks may take upon. The former describes the passive responses of central banks to environmental risks and factors, which affect their traditional goals, as opposed to central banks’ active efforts in greening the economy by using tools at their disposal to promote “green investment” in the latter.³⁵ Some practical developments of greening the banking sector can be observed too. This can be most clearly seen in the ECB’s new monetary policy strategy, following the conclusion of its

²⁹ See *Garrett Hardin*, “The Tragedy of the Commons”, *Science*, New Series, Vol. 162, No. 3859, 1243-1248, 1968.

³⁰ See *Fabris* 2020, p. 33.

³¹ See e.g. the speech “Monetary policy and climate change” by *Benoît Cœuré*, Member of the Executive Board of the ECB, at the conference on “Scaling up Green Finance: The Role of Central Banks”, Berlin, 08.11.2018, available at <https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181108.en.html> (accessed 19.07.2021).

³² See e.g. the speech “Climate change and the financial sector” by *Christine Lagarde*, President of the ECB, at the launch of the COP 26 Private Finance Agenda, London, 27.02.2020, available at https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200227_1~5eac0ce39a.en.html (accessed 19.07.2021).

³³ See e.g. the speech “climate change and central banking” by *Christine Lagarde*, President of the ECB, at the ILF conference on Green Banking and Green Central Banking, Frankfurt am Main, 25.01.2021, available at <https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210125~f87e826ca5.en.html> (accessed 19.07.2021).

³⁴ 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.

³⁵ *Dikau and Volz* 2018, p. 1.

strategy review of 2020-21 where climate change has played a key role.³⁶ Therein, the ECB announced its commitment to consider the impact of climate change, the carbon transition, as well as incorporation of climate related aspects into its monetary policy framework.³⁷ In this regard, the Governing Council has decided on an ambitious climate-related action plan with a clear roadmap.³⁸ In 2017, a group of central banks and supervisors formed the “Network for Central Banks and Supervisors for Greening the Financial System (NGFS)”.³⁹ The Financial Stability Board also established a task force on climate-related financial disclosures.⁴⁰ In Europe, the European Banking Authority (EBA) published an “Action Plan on sustainable finance” and a discussion paper providing proposals on how environmental, social and governance risks could be integrated into the regulatory and supervisory framework.⁴¹ Furthermore, the ECB Banking Supervision has been encouraging institutions under its supervision to integrate climate-related and environmental risks into their existing risk management framework and decision-making processes.⁴² Specifically, institutions are expected, inter alia, to develop stress tests that incorporate climate-related and environmental risks.⁴³ Despite the foregoing and considering the growing awareness and recent attempts to address climate concerns in the financial sector, actions to stop global warming need to be more ambitious. Considering that, according to *Schnabel*, “The tragedy of an alleged long horizon is increasingly turning into a tragedy that leaves too little time to act”⁴⁴, a case more apparent than ever.

There is clear evidence that climate change affects the economy in its entirety, including financial systems and price stability.⁴⁵ The risk assessment for the banking sector for 2019 by the European Banking Supervision referred to climate risks as one of the key risks for the European banking sector.⁴⁶ In general, with regard to financial systems, there are different types of risks

³⁶ See Press Release, ECB presents action plan to include climate change considerations in its monetary strategy, 08.07.2021, available at https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1~f104919225.en.html.

³⁷ European Central Bank 2021, p. 13.

³⁸ See “Annex: Detailed roadmap of climate change-related actions”, available at https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1_annex~f84ab35968.en.pdf.

³⁹ See <https://www.ngfs.net/en>.

⁴⁰ See <https://www.ngfs.net/en>; <https://www.fsb.org/>.

⁴¹ European Banking Authority, “Action Plan on Sustainable Finance”, 6.12.2019.

⁴² See ECB Banking Supervision, “Guide on climate-related and environmental risks. Supervisory expectations relating to risk management and disclosure”, November 2020.

⁴³ European Central Bank, p. 40.

⁴⁴ Speech “From green neglect to green dominance?” by *Isabel Schnabel*, Member of the Executive Board of the ECB, at the “Greening Monetary Policy – Central Banking and Climate Change” online seminar, organised as part of the “Cleveland Fed Conversations on Central Banking”, 03.03.2021, available at https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210303_1~f3df48854e.en.html.

⁴⁵ See Network for Greening the Financial System 2020, p. 4.

⁴⁶ ECB Banking Supervision, Risk Assessment for 2019, p. 5, available at <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ra/ssm.ra2019.en.pdf> (accessed 12.07.2021).

specifically related to global heating (climate-related risks), which, however, do not constitute wholly new types of risks, but comprise of the existing categories of risks in financial systems (credit, market and operational risk).⁴⁷ Given the non-linear nature of climate change, these risks have become more apparent and urgent. Several transmission channels through which anthropogenic climate change affects central banks, have been identified.⁴⁸ This includes physical risks and transition risks.⁴⁹ Physical risks arise from the environment itself and are particularly related to the impact of climate events and gradual heating. These are driven by the fact that global warming increases the severity and frequency of natural disasters and extreme weather events such as droughts, persistent precipitation, sea-level rise, storms and floods. Transition risks, on the other hand, relate to costs arising from the need of innovation and policy interventions aiming at climate risk mitigation, such as the transition to a low-carbon economy.⁵⁰ These can cause current assets to lose value, arising from unanticipated changes in expected cash flows, and to subsequently become “stranded” due to having become obsolete given the climate change.⁵¹ Climate-related physical risks and transitional risks can directly affect inflation and consequently, have an impact on price stability.⁵² Prior to the outcome of the monetary policy strategy review, emerging awareness amongst central bankers about climate-related risks could still be observed. *Lagarde* emphasised the impact of climate change on price stability at the latest State of the Union conference stating that, “(It) is pretty obvious, climate change will have — has already — an impact on price stability, whether you look at climate related events, whether you look at particularly exposed areas, prices will be determined as a result of that.”⁵³ As regards the impact on the Eurosystem, it has been noted that climate-related risks may affect the value and risk profile of assets held on the Eurosystem’s balance sheet.⁵⁴ Climate change affects price stability by resulting in supply and demand-side shocks. Supply-side shocks may reduce the productive capacity of economies in the long term. In the short-term supply-side shocks can be caused by natural catastrophes and extreme weather events

⁴⁷ ECB, “Guide on climate-related and environmental risks, supervisory expectations relating to risk management and disclosure”, p. 3; See *Fabris* 2020, p. 33.

⁴⁸ See *Carney, M.* 2015. “Breaking the Tragedy of the Horizon – Climate Change and Financial Stability.” Speech given at Lloyd’s of London, 29 September, available at <https://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx>; Speech by *Lagarde* EZB 2021.

⁴⁹ See *Alexander and Fischer* 2019, p. 8.

⁵⁰ See *Alexander and Fischer* 2019, pp. 3, 8; *Fabris* 2020, p. 34.

⁵¹ Network for Greening the Financial System, “Adapting central bank operations to a hotter world. Reviewing some options”, technical document, March 2021, p. 12.

⁵² ECB, “An overview of the ECB’s monetary policy strategy”, July 2021, p. 13, available at https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_overview.en.html (accessed 25.10.2021); See for instance European Central Bank 2020, p. 20; (accessed 12.07.2021).

⁵³ CNBC reports “Climate change is already impacting price stability, ECB’s Lagarde says”, available at <https://www.cnbc.com/2021/05/07/climate-change-is-already-impacting-price-stability-lagarde.html>.

⁵⁴ ECB, “An overview of the ECB’s monetary policy strategy”, July 2021, p. 13.

which may affect agricultural production, destroy crops and thus increase food prices.⁵⁵ In addition, the loss of physical capital, supply chain interruptions and reduced labor supply due to natural catastrophes may lead to a decline in growth and productivity.⁵⁶ Heavy financial and asset losses may also lead to demand shocks resulting in reduced consumption. As regards transition risks, climate policies may impact consumer prices, for instance, by increasing prices of carbon-intensive goods and services.⁵⁷

Furthermore, concerns have been raised that central banks may themselves be contributing to the increase of greenhouse gas emissions and aggravating global heating by way of the “emission bias”⁵⁸, which has been identified within the ECB’s Corporate Sector Purchase Programme (CSPP). In their working paper, *Papoutsi et al.* have showed that as a consequence of the bond market’s structure and the market neutrality approach, the ECB’s portfolio “tilts towards brown, rather than green firms”.⁵⁹ Specifically, there is evidence that the Eurosystem has mainly been purchasing the so-called “brown” bonds, issued by corporations heavily engaged in oil, gas and automotive, which aggravate climate change.⁶⁰ Such firms tend to be capital intensive and therefore have a high level of assets that serve as collateral, which means that they issue a high quantum of bonds. Market indices for corporate bonds therefore weigh heavy in high-carbon companies.⁶¹ Following the market neutrality approach, the Eurosystem purchased assets in proportion to the market composition, which has resulted in a bias towards carbon-intensive companies.⁶² This means that issuers of these “brown” bonds receive financial support through this purchase which furthers their activities, which are detrimental to the environment.

Based on the foregoing, it becomes clear that combatting climate change has become a major focus of the Union’s policies and is at the heart of the European Green Deal. Furthermore, it is evident that central banks are not untouched by these concerns in that climate change poses a significant threat to price stability. To make matters worse, the “emission bias” shows that the

⁵⁵ *Bolton et al.*, p. 16; *Dikau and Volz* 2018, p. 2.

⁵⁶ *Bremus et al.* 2020, p. 212.

⁵⁷ *Bolton et al.*, p. 16.

⁵⁸ See for example Speech by *Isabel Schnabel*, Member of the Executive Board of the ECB, “From green neglect to green dominance?” at the “Greening Monetary Policy – Central Banking and Climate Change” online seminar, organised as part of the “Cleveland Fed Conversations on Central Banking”, 03.03.2021, available at https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210303_1~f3df48854e.en.html (accessed 12.07.2021).

⁵⁹ *Papoutsi et al.*, p. 1.

⁶⁰ See *Matikainen et al.* 2017, p. 13.

⁶¹ *Schoenmaker* 2020, p. 2.

⁶² See *Honohan* 2019, p. 13-14.

ECB has itself contributed to the increase of greenhouse gas emissions through its own programmes, thereby jeopardizing its primary objective of maintaining price stability. Against this background, in the next section Article 11 TFEU is introduced and its role in supporting climate protection is examined by outlining the substantive and procedural requirements. It is argued that Article 11 TFEU may serve to legitimize ECB's endeavors to support climate protection goals alongside international agreements.

B. Potential role of Article 11 TFEU in supporting climate goals in monetary policy

Also referred to as the “integration” or “cross-cutting” clause, Article 11 TFEU reads as follows: *“Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development.”*

At the outset, it should be clarified that Article 11 TFEU does not comprise an additional competence of the EU. Rather, it is a primary law requirement to carry out a strategic environmental impact assessment, which extends to all individual measures, policies, programmes, plans and laws. This requirement obliges all EU institutions (and therefore also the ECB) to integrate environmental considerations into its policies.⁶³ According to the CJEU, the provision's wording demands integration of environmental protection requirements into the definition and implementation of Union's policies, emphasizing the objective's “extension across the range of those policies and activities”⁶⁴. Given the systematic position of Article 11 TFEU, the Treaties make clear that this cross-cutting clause impacts all actions of the Union institutions. In this sense, the term “integrating” means that environmental protection “must be regarded as an objective, which also forms part of” any Union policy.⁶⁵ Indeed, the provision shall be considered an obligation “to take due account of ecological interests in policy areas outside that of environmental protection *stricto sensu*”⁶⁶. Environmental protection can, for instance, be identified as a guiding principle within the Union's competition policy.⁶⁷ There is, however, potential for conflict particularly vis-a-vis the Common Agriculture Policy⁶⁸ and the Transport Policy⁶⁹. As

⁶³ See e.g. *Kahl*, Umweltprinzip und Gemeinschaftsrecht, S. 178; *Epiney*, Umweltrecht in der Europäischen Union, S. 162 f.

⁶⁴ Case C-320/03, *Commission v. Austria*, EU:C:2005:684, para. 73.

⁶⁵ See e.g. Case C-428/07, *Horvath*, EU:C:2009:458, para. 29; Case C-440/05, *Commission v. Council*, EU:C:2007:625, para. 60.

⁶⁶ Opinion of *AG Geelhoed*, Case C-161/04, *Austria v. Parliament and Council*, EU:C:2006:66, para. 59.

⁶⁷ *Terhechte*, ZUR 2002, 274.

⁶⁸ See e.g. *Karnitschnig*, AgrarR 2002, 101.

⁶⁹ See *Calliess*, ZAU 1994, 322 ff.

a result, Article 11 TFEU enables the EU's institutions to consider environmental protection objectives alongside other objectives within a certain policy area. This also applies to the ECB's monetary policy.

Integrating or taking environmental requirements into account as mentioned above does not mean that these concerns must take absolute priority over all other objectives and interests.⁷⁰ In fact, as Advocate General Geelhoeds points out in his opinion in the *Austria v. Parliament and Council* case, the provision “cannot be regarded as laying down a standard according to which in defining Community policies environmental protection must always be taken to be the prevalent interest”. It rather means that environmental protection concerns shall be taken into account and incorporated, with the aim of achieving a balance with opposing interests.⁷¹ As a result, within the framework of Article 11 TFEU, the requirements of environmental protection must be weighed against all conflicting concerns, such as economic freedom or the welfare state principle. In this respect, policy-makers, first and foremost the legislator, is necessarily entitled to political leeway in the implementation of its provisions. It follows from Article 11 TFEU, that the process of balancing conflicting interests is twofold: Firstly, the requirements of the environment, pursuant to Article 191(1) and (2) TFEU and in particular the precautionary principle must be taken into account within the balancing process. Secondly, the concept of integration stipulates that environmental concerns may not simply be “weighed away”. On the contrary, they must be an integral part of the measure and visibly shape the respective EU measure.⁷²

The political margin of appreciation of the European institutions is thus exceeded if the measure is recognizably designed one-sidedly to the detriment of environmental protection. Such a measure, which would in all likelihood lead to considerable, noticeable environmental damage, may not be adopted under Article 11 TFEU. Such policy would infringe the specifications of Article 11 TFEU.

As the wording of Art. 3 and the preamble of the TEU suggest, the incorporation of environmental protection requirements shall, in particular, promote the principle of sustainable development. Environmental integration has been significantly acquiring increasing importance. As

⁷⁰ See also *Solana* 2019, p. 558.

⁷¹ See *Ritter*, NVwZ 1987, 929.

⁷² In depth *Calliess*, Die neue Querschnittsklausel des Article 6 ex 3c EGV als Instrument zur Umsetzung des Grundsatzes der nachhaltigen Entwicklung, DVBl. 1998, p. 559 ff; *Appel*, in: Koch, Umweltrecht, 2018 § 2 Rn. 44 ff.

already shown above, there is growing recognition that environmental assets such as ecosystems, environmental media and climate are closely interlinked, and that there are therefore strong connections between individual environmental areas and problems.

Considering the object and purpose of Art. 11 TFEU, the provision can be regarded as an authoritative instrument for the implementation of the principle of sustainable development in Union law.⁷³

Nevertheless, it is not entirely clear whether Article 11 TFEU merely represents a non-binding political program clause or comprises a legally binding rule.⁷⁴ So far, the CJEU has not provided a clear answer. In this sense, Advocate General Jacobs in his opinion in the *PreussenElektra* case emphasized⁷⁵ that the cross-cutting clause is not merely programmatic but is rather legally binding. However, in the (legally non-binding) Declaration No. 20 to the Final Act of the Maastricht Treaty, the Intergovernmental Conference provided “that the Commission undertakes to take full account of the environmental impact and the principle of sustainable development in its proposals and that the Member States undertake to do so in their implementation”. The Commission has issued instructions to this effect.⁷⁶ Here, the question of the legally binding nature of the cross-cutting clause was discussed on the occasion of its revision by the Maastricht Treaty. No limitations were prescribed to the discretionary power of the Commission and the Council.⁷⁷ The wording of Article 11 TFEU also only prescribes general conditions for future measures of the Union without specifying the timeframe or form of realization. Further, since no legal consequences in the event of non-observance can be discerned, it may be questioned whether the clause is a mere principle or a legally binding rule.⁷⁸

On the other hand, majority of the scholarly opinion rightly points out that the use of the word “must” points to a clear obligation to incorporate environmental requirements.⁷⁹ Therefore, the

⁷³ See *Calliess*, DVBl. 1998, 559.

⁷⁴ Relatively *Heselhaus*, in: Pechstein/Nowak/Häde, Frankfurter Kommentar EUV/GRC/AEU, Article 11 TFEU, marginal no. 12.

⁷⁵ *AG Jacobs* Concluding Observations on ECJ Case C-379/98 [2001] ECR I-2099, para. 231 (*PreussenElektra AG/Schleswig AG*).

⁷⁶ Doc. SEC (93) 785; cf. *EuZW* 1997, 642.

⁷⁷ *Jahns-Böhm*, *Umweltschutz durch europäisches Gemeinschaftsrecht am Beispiel der Luftreinhaltung*, 1994, p. 262.

⁷⁸ *Krämer*, *EC Treaty and environmental law*, London 1996, p. 58 f.; meanwhile differently *id.*, in: Kingston (ed.) *European Perspectives on Environmental Law and Governance*, p. 83 (90) „policy objective“; *id.*, in: *GSH, EU-Recht*, Article 11 TFEU, para. 25.

⁷⁹ *Stroetmann*, Introduction, in: Rengeling (ed.), *Umweltschutz und andere Politiken der EG*, 1993, p. 3; *Kahl*, *Umweltprinzip und Gemeinschaftsrecht*, p. 58.

requirement to “include” goes beyond a mere “obligation to consideration” in the weighing process.⁸⁰ This also corresponds to the purpose behind the two revisions of the horizontal clause which were aimed at making it more binding and more influential.⁸¹ This means that Article 11 TFEU contains an “imperativist mandate to act”⁸² which affords it more force than a mere political consideration dependent on the goodwill of the Union institutions.⁸³ Even though the manner of implementation is left to the discretion of the Union institutions, the commanding language clearly speaks to a legal imperative to reorientate all Union policy in accordance with the objectives and principles outlined in Article 191 TFEU.⁸⁴

In addition to its significance as being a legal requirement, Article 11 TFEU also serves as a standard of interpretation against other norms of Union law.⁸⁵ This function particularly comes into play in the interpretation of indeterminate legal concepts and in the context of discretionary power. The requirement of environment-friendly interpretation of secondary Union law pursuant to Article 11 TFEU has also been emphasised in the *Concordia Bus*⁸⁶ case, where the CJEU confirmed that environmental considerations ought to be taken into account in EU public procurement law.

I. Substantive requirements of Article 11 TFEU: protection concept and guiding law

The requirement to protect the environment is the point of reference for Article 11 TFEU. This comprises a substantive core of objectives with a prohibition of undercutting.⁸⁷ This requirement to protect the environment under Article 11 TFEU are derived from the contemporaneous Union’s objective of environmental protection under Article 191 TFEU. These are also supple-

⁸⁰ Cf. *Heselhaus*, in: Pechstein/Nowak/Häde, Frankfurter Kommentar EUV/GRC/AEUV, Article 11 TFEU, para. 14.

⁸¹ *Calliess*, IUR 1992, 219 (224).

⁸² *Wiegand*, DVBl. 1993, 533 (536).

⁸³ *Schmitz*, Die EU als Umweltunion, 1996, p. 151; critically *Epiney/Furrer*, EuR 1992, 369 (386 f.), who do not see any changes in the legal situation in the new formulation, but probably already assumed a legal requirement under the EEA.

⁸⁴ In conclusion also *Wiegand*, DVBl. 1993, 533 (536); *Jahns-Böhm/Breier*, EuZW 1992, 49 (52); *Breier*, NuR 1992, 174 (181); *Schmitz*, Die EU als Umweltunion, 1996, p. 151; *Epiney*, NuR 1995, 497 (502); *Calliess*, KJ 1994, 284 (287); *Scherer/Heselhaus*, in: Hb.EUWirtR, O., marginal no. 53; *Stroetmann*, introduction, in: Rengeling (ed.), Umweltschutz und andere Politiken der EG, 1993, p. 3; *Breier*, in: Lenz/Borchardt (ed.), EU-Verträge, Article 11 AEUV, marginal no. 10; *Käller*, in: Schwarze (ed.), EU-Kommentar, Article 11 TFEU, marginal no. 18; *Weidemann*, Die Bedeutung der Querschnittsklauseln für die Kompetenzen innerhalb der europäischen Gemeinschaft aus deutscher Sicht, 2007, p. 72 ff.

⁸⁵ *Nettesheim*, in: Grabitz/Hilf/Nettesheim, EU, Article 11 TFEU, para. 31; *Breier*, in: Lenz/Borchardt (eds.), EU Treaties, Article 11 TFEU, para. 15 f.; *Kahl*, in: Streinz, EUV/AEUV, Article 11 TFEU, para. 29 f.

⁸⁶ ECJ, Case C-513/99, [2002] ECR I-7213, para. 57 (*Concordia Bus*).

⁸⁷ *Brönneke*, Umweltverfassungsrecht, 1999, pp. 272 ff. and 471 ff.; *Sommermann*, Staatsziele und Staatszielbestimmungen, 1997, p. 439 ff.

mented by the fundamental rights obligations of the EU and the Member States, to protect human life and health (Article 3 EU Charter of Fundamental Rights) which aims at keeping away from planetary boundaries as well preserving the “ecological subsistence level of humanity”.⁸⁸ Considering the concept of planetary boundaries, as outlined in chapter A, it is clear that this scientific concept can only indicate that measures are necessary. It, however, does not specify which concrete measures the EU or individual states are obliged to undertake. The scientific situation must rather be assessed normatively and politically to derive concrete conclusions.⁸⁹ Essential normative guidelines for dealing with planetary boundaries are derived from the precautionary principle. The dimensions of the precautionary principle, risk and resource precaution⁹⁰ both aim to avoid critical loads and tipping points, which if reached will threaten the “ecological subsistence level of humanity” through serious and irreparable damage to environmental assets. An independent principle of non-exhaustion of planetary boundaries can be developed from the legal precautionary principle. This defines a threshold from which precautionary action must be taken. In order to prevent the threshold from being exceeded, it is essential to steer away from it.⁹¹

However, which concrete measures are to be taken, inter alia, which among the many and very different groups of polluters, must make what kind of necessary adjustments, to what extent and within what timeframe still remains far from sight. Essentially, it is primarily up to the legislator to draw conclusions from scientific findings on environmental pollution limits. Nevertheless, the more serious the foreseeable consequences of exceeding planetary boundaries become, the more weight should be attached to the principle of keeping away from planetary boundaries in the political and legislative decision-making. Specifically concerning climate protection, the more imminent an overstepping of the planetary limits, for instance, the 1.5 to 2° Celsius target for climate protection gets, the greater is the weight to be attached to the distance requirement in the political trade-off.

European law demands action if an unmitigated environmental use exceeds (or, as in the case of climate protection, has already exceeded) the planetary boundaries and thus endangers the

⁸⁸ Comprehensive *Calliess*, Rechtsstaat und Umweltstaat, 2001, pp. 298 ff. and 410 ff.

⁸⁹ *Köck*, Erfordernisse des Umweltrechts im Anthropozän – Rechtskonzepte für eine „Große Transformation“, ZUR 2017, 257 ff; *Schlacke*, in: Dilling/Markus (eds.): *Ex Rerum Natura Ius?*, 2014, p. 93 (96 f.).

⁹⁰ *Calliess*, Rechtsstaat und Umweltstaat, 2001, p. 176 ff.

⁹¹ *Calliess*, Rechtsstaat und Umweltstaat, p. 177 f.; cf. also *Appel*, Staatliche Zukunfts- und Entwicklungsvorsorge 2005, p. 299 f.

stability of the Earth System, as well as the ecological foundations of human life, with a scientifically based degree of probability. Such a protection concept is, however, only effective as an “absolute guard rail” of policy, if it is enacted by the legislature in the form of a binding guiding law.⁹²

Specific measures for mitigation of climate change may take various forms. For instance, strategic building blocks of the European Green Deal should be concretized and made binding within the framework of the 8th Environmental Action Programme (EAP) and a European Climate Law. Moreover, a monitoring framework for the long-term regarding the implementation of these contents of the European Green Deal must be developed, which can serve as a control benchmark for the implementation of the strategy. Finally, the European Climate Law⁹³ should provide a binding framework for decarbonization in the EU as a “guiding law”, ensuring an ambitious and transparent reduction pathway. Furthermore, as mentioned above, the sustainability goals concretized via the European Green Deal (in the form of priority “Sustainable Development Goals” – SDGs) should be integrated with⁹⁴ economic and budgetary policy coordination at the European level, specifically the “European Semester”, in order to ensure a transmission belt to the member states.

II. Procedural requirements under Article 11 TFEU

Seeing as how weak the enforcement of environmental and climate protection goals is in the current political decision-making, even the already adopted government strategies warrant additional consideration to safeguarding the ecological sustainability. This can be achieved by putting procedures in place. This should ensure effective monitoring of the protection concept in European decision-making as well as Member State implementation process by means of an institutionally secured scrutiny reservation along the political decision-making process.⁹⁵

Concerning the implementation of procedural limb of Article 11 TFEU, sustainability officers entrusted with the task of reviewing the implementation of the European Green Deal against the yardstick of the European Climate Change Act and the 8th EAP could be appointed in the

⁹² In-depth *Calliess*, Rechtsstaat und Umweltstaat, 2001, p. 235 et seq.; *Calliess*, Abstand halten, ZUR 2019, p. 385 (386); similarly SRU, Demokratisch regieren in ökologischen Grenzen – Zur Legitimation von Umweltpolitik, 2019, p. 182 et seq.

⁹³ *Köck/Markus*, Der europäische „Green Deal“ – Auf dem Weg zu einem EU-„Klimagesetz“, ZUR 5/2020, p. 257.

⁹⁴ For more details, see *Schoenfleisch*, Integration durch Koordinierung, 2015, esp. p. 107 ff.

⁹⁵ On this already *Calliess*, Die neue Querschnittsklausel des Article 6 ex 3c EGV als Instrument zur Umsetzung des Grundsatzes der nachhaltigen Entwicklung, DVBl. 1998, p. 559 (566 f.).

Commission's Directorates-General. Here any conflicts political or otherwise in implementation could be made visible by means of a suspensive veto right, where disputes could be referred to the round of directors-general and heads of cabinet. If these cannot be resolved in this manner, they could then be referred to the College of Commissioners and, if necessary, decided upon by exercising the directive competence by the President of the Commission, who has declared the European Green Deal to be the agenda-setting priority. In addition, strengthening the responsibilities of the Commissioner through interdepartmental initiatives and veto rights could also be considered. Similar measures could also be considered with regard to other Union authorities, including the ECB.

Moreover, an independent institution to monitor the sustainability and climate protection strategy in the European legislative process could be introduced. This includes, in particular, an evaluation of the implementation of the sustainability and climate protection strategy. Furthermore, this institution should be able to review concrete upcoming political and legislative decisions for compatibility with the sustainability goals and, if necessary should be able to express concerns.⁹⁶ If we look at the current European institutions, the European Economic and Social Committee (ESC) already provided for in the European treaties is best suited to subsume this task. The ESC already advises the Council, the Commission and the European Parliament on economic and social matters. In contrast, ecological issues are not systematically included. Therefore, the new envisaged task of the ESC would require a fundamental reorganization and also political upgrading. Current primary law would allow for this upgrade to strengthen the ESC as a representative of environmental and sustainability interests. In the medium term, the ESC could be fully aligned with the guiding principle of sustainability and renamed the "European Sustainability Council".⁹⁷

⁹⁶ Considerations in this direction were already made for the European level at the beginning of the 1990s under the keywords "Ecological Senate" or "Ecological Council"; cf. *Calliess*, in: Baumeister (ed.), *Wege zum ökologischen Rechtsstaat*, 1993, p. 71 (77 f.); *Kloepfer, Rehlinger et al*, *AK Europäische Umweltunion*, NuR 1994, 346 ff.

⁹⁷ In detail SRU, *Für eine entschlossen Umweltpolitik in Deutschland und Europa*, May 2020, Chapter 8, para. 746 ff.

Judicial significance of Article 11 TFEU however is limited⁹⁸ and has not yet been conclusively clarified.⁹⁹ As AG Geelhoed states in his opinion: “It is only where ecological interests manifestly have not been taken into account or where they have been completely disregarded that Article 6 EC may serve as the standard for reviewing the validity of Community legislation.”¹⁰⁰ In two judgments on transport policy, the CJEU has referred to the basic idea of the horizontal clause, by stating that the liberalization of road haulage can only take place “in an orderly manner” within the framework of a common transport policy, which takes into account not only economic and social but also “environmental problems [...]”.¹⁰¹ Similarly, since the *Walloon Waste* decision, the CJEU has consistently emphasised that EU waste policy follows an “environmentally oriented management approach”.¹⁰² Granting a privilege to environmental protection in the justification of measures restricting fundamental freedoms has been seen in the ruling on the German Electricity Feed Act.¹⁰³ Furthermore, the recent EEG ruling of 28 March 2019¹⁰⁴ makes it clear that the CJEU does not place environmental and climate protection above other interests and therefore cannot disregard the element of state aid entirely on the basis of Article 11 TFEU.¹⁰⁵

In academic literature, the justiciability of the cross-section clause has mostly been correctly affirmed. Due to legislative leeway, however, the scope of judicial review is limited. The decisive connecting factor in this respect is the obligation to state reasons, according to Article 296 TFEU.¹⁰⁶ Moreover, within the framework of infringement proceedings (see Article 258 TFEU), the CJEU is jointly responsible for ensuring that the requirements of the integration clause are observed in the (practical) implementation of Union policies by the Member States.

⁹⁸ ECJ, Case C-428/07, EU:C:2009:458, para. 29 (Horvath); *GA Kokott* in Rs. C-298/12, EU:C:2013:319, para. 30 (Confédération paysanne); Case C-161/04, EU:C:2006:66, para. 60, (Austria v. Parliament and Council).

⁹⁹ *Jahns-Böhm/Breier*, EuZW 1992, 49 (49 ff.); *Calliess*, ZAU 1994, 322 (332 ff.) with further references; but cf. the Opinion of *GA Geelhoed* on ECJ, Case C-161/04, [2006] ECR I-7183, para. 59; *Heselhaus*, in: Pechstein/Nowak/Häde, Frankfurter Kommentar EUV/GRC/AEUV, Article 11 TFEU, para. 16, assesses the question as „partially clarified“.

¹⁰⁰ Opinion of *AG Geelhoed*, Case C-161/04, Austria v. Parliament and Council, EU:C:2006:66, para. 59.

¹⁰¹ ECJ, Case C-17/90, [1991] ECR I-5253, para. 11 (Pinaud Wieger); ECJ, Case C-195/90, [1992] ECR I-3141, para. 33 (Commission v Germany).

¹⁰² ECJ, Case C-2/90, [1992] ECR I-4431 (Commission v. Belgium); Case C-155/91, [1993] ECR I-939, para. 10 ff. (Commission v. Council); Case C-187/93, ECR 1994, I-2857 (EP v. Council); on this case law *Weidemann*, NVwZ 1995, 866 (867).

¹⁰³ ECJ, Case C-379/98, [2001] ECR I-2099 (PreussenElektra AG/Schlesweg AG) = NuR 2002, 149; *Nowak*, VerwArch 2002, 368; similarly *Faber*, NuR 2002, 140.

¹⁰⁴ ECJ, Case C-405/16 P, ECLI:EU:C:2019:268 (Germany v Commission).

¹⁰⁵ So also *Frenz*, EuR 2019, 400 (419).

¹⁰⁶ *Jahns-Böhm/Breier*, EuZW 1992, 49 (53 f.); *Zils*, Die Wertigkeit des Umweltschutzes in Beziehung zu anderen Aufgaben der EG, p. 32; *Ress*, Vorträge aus dem Europa-Institut der Universität des Saarlandes, 1992, no. 291, p. 9; *Schröder*, in: Rengeling (ed.), Handbuch zum europäischen und deutschen Umweltrecht, marginal no. 28; *Calliess*, ZAU 1994, 322 (332 ff.); *Käller*, in: Schwarze (ed.), EU-Kommentar, Article 11 TFEU, marginal no. 18.

As noted above, there is so far no clear judicial guidance as regards the scope of the obligation or how exactly to integrate environmental requirements. It can, however, be assumed that in the area of monetary policy where the ECB is granted a broad discretion, the standard of compliance may be more lenient.¹⁰⁷

Based on above, it can be concluded that alongside other EU institutions, the ECB too is equally bound by the environmental integration clause i.e. Article 11 TFEU. This means that the ECB is required to take climate objectives into account. In light of the recent developments especially, Article 11 TFEU may provide the necessary legitimization for the ECB to incorporate climate concerns into its monetary policy. Having thus established the requirements of considering Article 11 TFEU as a legitimation basis, the next chapters analyze the effect of Article 11 TFEU on the ECB's primary and secondary objectives (chapter C) as well as on the design and implementation of the ECB's monetary policy (chapter D).

C. Application of Article 11 TFEU to the ECB's primary and secondary objectives

Substantively, Article 11 TFEU integrates climate-related considerations into the ECB's mandate. In light of the foregoing, it follows that Article 11 TFEU enables and requires the ECB to consider climate protection alongside other objectives within its monetary policy. However, any such endeavor is always subject to the limitations imposed by the legal framework, and in particular, the ECB's primary objective to maintain price stability. This chapter aims at analyzing climate protection goals vis-a-vis the ECB's primary and secondary objectives. To start with, the ECB's primary and secondary objectives are outlined and the fundamental meaning of price stability is illustrated by delineating its precedence. Then, the effect of Article 11 TFEU with regard to both objectives is examined. Contrary to the general assumption that price stability may preclude the integration of climate concerns into monetary policy¹⁰⁸, it is argued that the primary objective of price stability may itself demand a consideration of climate change aspects.

I. Overview of the ECB's primary objective

According to Article 127(1) TFEU, the ECB's core responsibility in the context of its monetary policy is to ensure "price stability" in the euro area (*"The primary objective of the European*

¹⁰⁷ See also *Solana* 2019, p. 561.

¹⁰⁸ See e.g. *Daniel Nees*, Klimaschutz durch die EZB? Reichweite und Grenzen des Mandats der EZB in Bezug auf den Erwerb sogenannter „grüner“ Anleihen, *EuR* 2021, 119.

System of Central Banks (hereinafter referred to as 'the ESCB') shall be to maintain price stability"). Apart from this provision outlining the ECB's core mandate, the Treaty contains multiple references to the objective of price stability. As such, in primary law, "price stability" can be found in Articles 119(2), 127(1), 141(2) 2nd indent, 219(1) and (2), 282(2), 140(1), and Article 2 of the ESCB/ECB Statute. There is little doubt the maintenance of price stability constitutes the ECB's primary mandate.¹⁰⁹ According to Articles 119(2), 219(1) TFEU, price stability is to be pursued in the context of monetary policy. In particular, Article 127(1) TFEU requires that the ECB, in the context of its monetary policy, places this primary objective at the forefront of its operations.¹¹⁰ In the Treaty's part six, Title 1 (institutional provisions), Chapter 1 (the institutions), Article 282(2)2 TFEU specifies the primary objective to maintain price stability specifically for the ECB as an institution.¹¹¹ In light of the above provisions, it becomes clear that the Treaties place a clear emphasis on ensuring price stability in monetary policy as a goal. Safeguarding of this objective thereby constitutes a legally binding obligation for the ECB, when conducting its monetary policy.

II. Overview of the ECB's secondary objective

In addition to the ECB's primary commitment to maintaining price stability and without any prejudice thereto, the Treaty also requires the Eurosystem, in Article 119(2) TFEU, to "support the general economic policies in the Union". This secondary objective is also found in Article 2 of ESCB/ECB Statute as well as in Article 127(1) TFEU, stipulating that the ECB "shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union". In this sense, "economic policies" can be broadly defined as policies that affect society and the environment, such as, inter alia, sustainable growth, maximum employment. The objectives of the Union are articulated in Article 3 of the Treaty on European Union (TEU). In defining the goals of the Treaty, Article 3 TEU assumes great significance, constituting the constitutional "*Grundnorm*" regarding the integration program of the Union. While the Union strives to achieve its objectives through integration, in order to be legitimate, all its actions need to be traceable back to these aforementioned goals.¹¹² These are addressed to the Union's organs and are legally binding upon them. When implementing Union Law, these goals shall guide the Union organs

¹⁰⁹ See Case C-62/14, *Gauweiler*, ECLI:EU:C:2015:400, para. 44.

¹¹⁰ *Waldhoff* in: Siekmann (ed.), *EWU Kommentar zur Europäischen Währungsunion*, 2013, Art. 127 AEUUV, paras. 2, 14, 15.

¹¹¹ *Siekmann* in: Siekmann (ed.), *EWU Kommentar zur Europäischen Währungsunion*, 2013, Einführung, para. 78; Art. 119, para. 99.

¹¹² *Ruffert* in: Calliess/Ruffert, *EUV/AEUUV Kommentar*, 5. Edition 2016, Art. 3 EUV, paras. 1, 3.

within their discretionary decisions.¹¹³ The ECB shall support the Union’s general economic policies but only indirectly the Union’s goals.¹¹⁴ In the context of the internal market, Article 3(3) TEU refers to the “magic rectangle” (“*magisches Viereck*”) of economic stability, that is: “economic growth”, “price stability”, “a highly competitive social market economy” and “a high level of protection and improvement of the quality of the environment” as parameters for the Union in order to work for the sustainable development of Europe.¹¹⁵ The diversity in Union’s goals suggests that the ECB may support economic policies covering a wide range of objectives, which have a general economic dimension. As such, there is no hierarchical order to the goals laid down in Article 3 TEU, i.e. they are all at the same level.¹¹⁶ Nevertheless, references to “environmental protection and improvement” and “sustainability” can be seen as clear indications of the significance of green goals and climate-related efforts within the Union. As it had been underlined by the ECB itself, the reference to its supportive role regarding economic policies as a secondary objective demonstrates the “broad need for mutual co-operation and dialogue among policy-makers”.¹¹⁷ It follows from the strict limitation of its mandate that the support for the EU’s economy may only be realized through the implementation of monetary policy instruments. So far, however, the ECB has not relied on the secondary objective as an explicit legal basis for its monetary policy measures. Consequently, in the context of the ECB’s measures, the meaning and scope of the secondary objective has not yet been examined in detail.¹¹⁸

III. The precedence of price stability

German scholarship posits that since price stability being the primary objective of the ECB, there is no room for the incorporation of climate objectives into the monetary policy.¹¹⁹ This gives rise to the need for brief clarification of the fundamental meaning of the ECB’s primary objective, as emphasized in the Treaties, propounded in legal scholarship and well as laid down in jurisprudence of the German Federal Constitutional Court (FCC). These interpretations are assessed as to their compatibility with climate protection objectives.

¹¹³ Ruffert in: Calliess/Ruffert, EUV/AEUV Kommentar, 5. Edition 2016, Art. 3 EUV, para. 8.

¹¹⁴ Michael Ioannidis et al., p. 17.

¹¹⁵ Ruffert in: Calliess/Ruffert, EUV/AEUV Kommentar, 5. Edition 2016, Art. 3 EUV, para. 23.

¹¹⁶ Michael Ioannidis et al., p. 17.

¹¹⁷ European Central Bank 1999, p. 41.

¹¹⁸ Michael Ioannidis et al., p. 13.

¹¹⁹ See e.g. Nees 2021, p. 131.

Article 3(3) TEU mentions “price stability” as a fundamental objective of the Union. In the context of the EMU, Article 119(3) TFEU declares “stable prices” as one of the “guiding principles” alongside sound public finances, monetary conditions, sustainable balance of payment.¹²⁰ With regard to the monetary union in particular, Article 119(2) TFEU clearly confers the objective of price stability a distinctive position. This suggests that price stability takes precedence over other objectives as well as guiding principles in ECB’s monetary policy.¹²¹ As such, Article 127 TFEU, the provision outlining the ECB’s mandate, refers to the precedence of price stability twice in its very first paragraph. Article 127(1) first sentence TFEU clearly lays down that the achievement of price stability ought to be the ECB’s primary focus, while Article 127(1) second sentence underlines that the ECB’s supportive duty to the general economic policies in the Union only exists as long as the primary objective of price stability is not prejudiced.¹²² This means that the ECB’s supportive role is qualified by and secondary to the price stability objective. Accordingly Article 127 TFEU provides that the objectives of the Union (Article 3 TEU) can be specified as secondary objectives.¹²³ Against this background, when interpreting and implementing the relevant provisions regarding monetary policy, the primary objective of price stability serves as an essential point of reference.

Existence of this abovementioned hierarchy between primary and secondary objectives also finds support in literature. In their fundamental work regarding “The Law of the European Central Bank”, *Zilioli and Selmayr*, recommended describing the ECB’s objective of maintaining price stability as the “*Grundnorm*” of the then “new Community”. Similarly, the then Treaty establishing the European Community (EC) committed the ECB to price stability as its primary objective, in its Article 105(1) first sentence EC, and required the ECB to contribute to the achievement of the Community objectives (Article 2 EC) without prejudicing price stability, following Article 105(1) second sentence EC. With regard to the Community objectives, *Zilioli and Selmayr* point to the “unity of ideals”, following that the ECB was “indirectly” bound by those secondary Community objectives. In case of conflict between the objectives, they stress that the ECB was “legally obliged to give precedence to price stability”.¹²⁴ Moreover, as to the Treaty text, they point out the emphasis placed on price stability by Primary Law as well as the

¹²⁰ *Siekmann* in: *Siekmann* (ed.), *EWU Kommentar zur Europäischen Währungsunion*, 2013, Einführung, para. 77.

¹²¹ *Waldhoff* in: *Siekmann* (ed.), *EWU Kommentar zur Europäischen Währungsunion*, 2013, Art. 119 AEUV, para. 107.

¹²² See *Waldhoff* in: *Siekmann* (ed.), *EWU Kommentar zur Europäischen Währungsunion*, 2013, Art. 119 AEUV, para. 106.

¹²³ See *Waldhoff* in: *Siekmann* (ed.), *EWU Kommentar zur Europäischen Währungsunion*, 2013, Art. 127 AEUV, para. 28.

¹²⁴ *Zilioli and Selmayr*, p. 36.

ECB's independent nature, which "is not an end in itself", but exists "in order to secure freedom from inflation within the EU" as history has taught us.¹²⁵ The German scholars argue that the goal of price stability is not "*abwägungsfähig*" i.e. it cannot be compromised by subjecting it to a balancing against opposing interests.¹²⁶ It follows that, in case of any conflict, the interpretation that serves the objective of price stability best, is to always take precedence.¹²⁷ Some scholars even go as far as characterizing the goal of price stability as a "key concept" within the scope of the EMU.¹²⁸

IV. Price stability under dispute

The argument that the ECB's primary objective being price stability leaves no room for incorporation for climate objectives attains further clarity upon taking into account the jurisprudence of the German Federal Constitutional Court. The distinctive role of the price stability objective has been particularly underlined in the Court's judgment regarding the Maastricht Treaty¹²⁹. In the Maastricht-decision, the FCC has declared the "community of stability" ("*Stabilitätsgemeinschaft*") as the fundamental concept signifying the monetary union.¹³⁰ In terms of the European integration process, the Court has referred to the intention of the then German Federal Parliament (*Bundestag*) to allow the monetary union only to start upon the condition of the fulfilment of strict stability criteria ("*strikte Stabilitätskriterien*").¹³¹ In fact, the German Federal Parliament has sought to ensure that the transition complies strictly with the stability criteria as had previously been agreed upon, emphasizing that it will oppose any attempts to soften this criteria.¹³² According to the *Bundesverfassungsgericht*, the Maastricht Treaty articulates long-term standards, which define the stability goal as the monetary union's leading criterion, which pursue the realization of this primary objective through institutional provisions.¹³³ The Court has continued to stress that in case the monetary union was unable to further develop the stability as it existed upon entry into the third stage in a way that is compatible with the agreed mandate of stability ("*Stabilisierungsauftrag*"), it would refuse to comply with the very concept

¹²⁵ Zilioli and Selmayr, p. 36.

¹²⁶ Siekmann in: Siekmann (ed.), EWU Kommentar zur Europäischen Währungsunion, 2013, Art. 119 AEUV, para. 41.

¹²⁷ Siekmann in: Siekmann (ed.), EWU Kommentar zur Europäischen Währungsunion, 2013, Art. 127 AEUV, para. 7.

¹²⁸ See Rodi in Vedder/Heintschel von Heinegg, Art. 119 AEUV Rn 11, not followed by Siekmann in: Siekmann (ed.), EWU Kommentar zur Europäischen Währungsunion, 2013, Art. 119 AEUV, para. 100.

¹²⁹ Judgment of the German Federal Constitutional Court on the Maastricht Treaty of 12 October 1993 – Cases 2 BvR 2134/92, 2 BvR 2159/92 (BVerfGE 89, 155).

¹³⁰ BVerfGE 89, 155, para. 144.

¹³¹ BVerfGE 89, 155, para. 145.

¹³² BVerfGE 89, 155, para. 24.

¹³³ BVerfGE 89, 155, para. 147.

upon which the Maastricht Treaty is founded.¹³⁴ This means that if the stability goal proves to be impossible to achieve, the Maastricht Treaty's specifications would not preclude a withdrawal from the Community as the ultima ratio solution.¹³⁵ That the agreement to design the monetary union based upon the concept of a "community of stability" is ultimately the fundamental basis for the German Act of Consent to ratify (*Zustimmungsgesetz*) the Maastricht Treaty only bolsters this position.¹³⁶

To sum up, the overriding priority of price stability is highlighted by EU Primary Law above all. Furthermore, legal literature and the jurisprudence of the German Federal Constitutional Court confirm this position. Finally, the ECB itself finds that the best contribution to economic growth that can be made by the single monetary policy is to "focus unambiguously on maintaining price stability over the medium term and thereby creating the stable environment in which other policies can be most effective".¹³⁷ Following this, the maintenance of price stability appears to be a pre-condition for a long-term sustainable economy.¹³⁸ It must not be jeopardized by the pursuit of other goals, even those motivated by climate protection concerns.

V. Effect of Article 11 TFEU on the ECB's primary objective

In chapter A, it has been outlined that combatting climate change is a major priority within the Union's economic policies. Further, in chapter B, it has been shown that Article 11 TFEU not only legitimizes, but requires the ECB to take into account climate considerations within its mandate. However, the integration of climate protection goals pursuant to Article 11 TFEU does not demand that climate protection is addressed as an absolute priority. It need to be seen and contextualized precisely within the legal framework defined by the ECB's primary objective of maintaining price stability. Thus arises the question, whether and how climate protection considerations may be considered within the ECB's mandate? This is a complicated question, which needs further differentiation. To illustrate the point, we can think of "price stability", on the one hand, and "climate protection", on the other, as two circles that partially overlap. The

¹³⁴ BVerfGE 89, 155, para. 148.

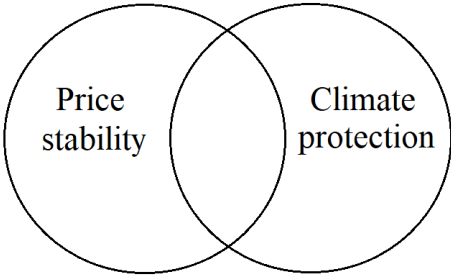
¹³⁵ BVerfGE 89, 155, para. 147.

¹³⁶ BVerfGE 89, 155, para. 138.

¹³⁷ European Central Bank 1999, p. 41; European Central Bank 2011, pp. 7, 14.

¹³⁸ See *Alexander and Fischer* 2019.

following picture emerges: On the one hand, climate protection is in tension with the primary goal of price stability. On the other hand, price stability and climate protection partially overlap.



1. Climate protection and price stability overlap

In some cases, climate protection and price stability may overlap, which means that both objectives are not in conflict. This is illustrated by taking into account the impact of climate change on price stability. In view of the evidence that climate-related physical risks such as natural catastrophes can lead to an increased inflation rate strongly shows that price stability is under enormous threat. Thus, climate change clearly adversely impacts ECB’s primary goal of maintaining price stability, which can only be expected to worsen with continued global heating. Against this background, it is relevant to consider the “Tragedy of the Horizon”, which describes the phenomenon and the predicament that, once climate related risks start to materialize, it will be too late to prevent them. The emphasis is upon the difference in time-scales, when financial and climate-related risks become clearly visible. Despite the currently available evidence on the impact climate change has on price stability, as mentioned above the “Tragedy of the Horizon” phenomenon may have contributed to the lack of immediate action.

In this context, it is essential to consider the application of Article 11 TFEU and particularly the precautionary principle concerning the Earth System. As regards the concept of planetary boundaries, it has been outlined that the concept aims at defining “a safe operating space for humanity”. In doing so, the concept draws on a safety margin, when determining critical threshold values, such as the 1.5 to 2 degrees Celsius target for climate protection, which represents a threshold value or a tipping point in the climate system. It further points out that, if the tipping points are exceeded, there is a threat of irreversible environmental damage, which may in turn result in a kind of “devastation scenario”. It follows from the “principle of non-exhaustion of ecological stress limits” and the imperative to keep distance to these limits that action should be taken well prior to a concrete danger arising.

Considering the “Tragedy of the Horizon” phenomenon in the light of the findings in Earth System science, and the scientifically established possibility of exceeding tipping points in the climate system, indicate that action for combatting climate change is required to be taken without any further delay. Even though climate-related risks and the abovementioned “devastation scenario” will come to pass in the long-term, the evidence as to climate change impact on price stability right now, coupled with the imperative to keep distance to the climate stress limit, precisely demands actions to be considered well in advance so as to prevent such consequence in the first place. In this sense, the precautionary principle shifts the necessity to act against climate-related risks from the long term to short-term. Indeed, the imperative to keep distance to the climate stress limit demands climate-related risks to be taken seriously in the short-term in order to avoid a future “climate tragedy”. Furthermore, the Earth System perspective suggests that the more severely the planetary impact limits are risked, the more weight ought to be attached to the principle of keeping distance. This means that the available evidence about the high pressure on the climate stress limits requires, that in conducting the integrating process, the principle of keeping distance is to be strictly observed.

2. Climate protection and price stability do not overlap

In some cases though, climate protection might be in tension with price stability. The ECB’s primary objective, however, must not be jeopardized by the pursuit of other goals, which means that the goal of price stability cannot be balanced with opposing interests, even climate-related ones. In this case, price stability takes absolute priority.

There are two scenarios which become relevant in this regard: The first scenario refers to the case, in which measures to maintain price stability are not in line with climate protection. For instance, the so-called “emission bias” within the ECB’s CSPP, as outlined above, suggests that some (monetary policy) measures may be in pursuit of price stability, but are not in favor of climate protection. In the second scenario, climate protection measures are not in line with price stability. To illustrate the point, the measures presented within the European Green Deal for instance do not necessarily support the maintenance of price stability. To the contrary, some might even be in conflict with the primary objective. This conflict becomes clear with regard to the so-called transition risks, which have been outlined in Chapter A. Transition risks arise if the need of innovation and policy interventions, which aim at climate risk mitigation, may result in additional costs, which then have a negative effect on price stability.

VI. Effect of Article 11 TFEU on the ECB's secondary objective

Article 11 TFEU directly impacts the ECB's secondary goal. The integration clause requires the ECB to "consider" and "take into account" climate protection goals, when supporting the general economic policies in the Union through its monetary policy.

The wording "to support" suggests that Article 11 TFEU demands that, as part of its general supportive role, the ECB is obliged to support climate protection as well. Further, Article 3 TEU, which lists the overall objectives of the EU, does not merely refer to environmental protection as one of the Union's objectives, but also to several other goals. These goals do not appear in any particular order of priority and are therefore at the same level. This means that environmental protection does not take priority over other goals laid down in Article 3 TEU. The level of priority among these goals therefore remains unchanged even after integration of environment protection within the ECB's secondary objectives. Nevertheless, in choosing which of the "general economic policies" shall first be supported, the ECB can exercise its discretion.¹³⁹ Within this discretion, Article 11 TFEU offers valid legitimization for the ECB to prioritize the support for the Union's environmental and climate policies, thereby promoting climate protection. This argument is reinforced by the fact that currently the EU's general economic policies are striving for carbon neutrality and are in conformity with the underlying commitment to combat climate change. The CJEU has itself acknowledged in its rulings in the *Weiss* and *Gauweiler* cases that monetary policy measures may have indirect economic effects.¹⁴⁰ Within this margin of potential economic effects, Article 11 TFEU allows for and legitimizes the integration of climate considerations.

Integrating environmental and climate considerations does not mean that other economic policy considerations are sacrificed. Quite the contrary. In fact, Article 11 TFEU demands a careful balancing of environmental protection with other conflicting interests. In this balancing process, the requirements of Article 191(1) and (2) TFEU, particularly the precautionary principle have to be taken into account. It therefore follows that climate protection goals have to be balanced with other goals, laid down in Article 3 TEU. Furthermore, it has already been clarified that Article 11 TFEU cannot affect the current allocation of competences. The provision neither

¹³⁹ ECB Occasional Paper Series No 276, September 2021, p. 17.

¹⁴⁰ See Case C-62/14, *Gauweiler*, ECLI:EU:C:2015:400, paras. 52, 59; Case C-493/17, *Weiss*, ECLI:EU:C:2018:1000, para. 61.

shifts responsibilities nor does it broaden existing competences conferred upon the union institutions. In consequence, the ECB needs to ensure that it always acts within its primary mandate of maintaining price stability.

Conclusion

According to Article 11 TFEU combatting climate change is a major priority of the EU, yet the ESCB's primary objective of price stability must not be compromised for the pursuit of other goals. With regard to this tension defined by two legally binding objectives a differentiated approach has to be developed:

1. It follows that the primary goal of price stability cannot be balanced with opposing interests, not even with interest that might be climate-related. This means that the environmental integration principle of Article 11 TFEU does not allow for an easing of price stability defining the core principle of the EMU.
2. However, considering the evidence regarding the threat that climate change poses for financial systems and the adverse effects that global warming could have on the ESCB's primary goal of price stability, in some cases, Article 11 TFEU may even allow for the integration of climate-change factors in the pursuit of the ESCB's primary goal. In this context, the environmental integration principle implies a guiding function regarding the ESCB's policy measures for ensuring price stability. Therefore, if the ESCB implements policy measures in the pursuit of its primary goal to maintain price stability, it shall take climate-related aspects into consideration to the extent that climate change poses a threat to price stability.
3. Moreover, Article 11 TFEU can directly impact the ESCB's secondary goal, and thus obliges the ECB to take into account (integrate) climate change factors, when supporting the general economic policies in the Union. Against this background, it can be said: As long as the primary goal of price stability is not affected, Article 11 TFEU in connection with Article 119 TFEU and the ESCB/ECB Statute grants and demands a focus of the ECB's monetary policy on environmental and climate policies for the realisation of the EU's sustainability strategy as expressed by the European Green Deal.

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