CENTRAL BANKS AND CLIMATE CHANGE (PART 1). DOES CLIMATE CHANGE FIT IN CENTRAL BANKS' MANDATES?*

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ABSTRACT

Climate change is humanity's defining challenge for the twenty-first century. Central banks have for a long time been absent from the policy picture, but today, this is no longer the case. Central banks are promising a climate-based focus on matters ranging from communication to prudential regulation and supervision, including monetary policy. This sudden shift has resulted in an often-confusing mix of views for and against such renewed focus. Our methodology distinguishes between (1) arguments of "fit" that analyze whether central banks can tackle climate change given their mandates; (2) arguments of "opportunity" that analyze when central banks may, or should, act; and (3) arguments of "suitability" that analyze how central banks may (and may not) intervene. We propose a further distinction between the way these arguments may be considered by central banks themselves (arguments of "duty" or standard of conduct), and the way they may be considered by the courts if there is a legal challenge to action or inaction (standard of review). This first part in a series of two papers analyzes arguments of "fit", using a historical perspective, and a comparative analysis of different central bank laws. This article argues that climate change fits within the narrower central bank mandates, which are focused on price stability. Climate change affects price stability, and affects multiple elements of the transmission mechanism, which have been considered factors justifying action in the past. Furthermore, climate change presents an aggravated version of the problem of time

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inconsistency, which justifies the existence of independent central banks in the first place. Other "peripheral" mandates or objectives and "transversal" environmental principles can play a supporting role, but cannot be the main justification for central bank intervention. Prudential regulation and supervision can also be a main point for assimilation, provided the competences allocated to the central bank allow this action. Finally, courts vary widely in their consideration of climate change considerations when scrutinizing governmental action, which makes it difficult to predict the path followed by future decisions on governmental actors. However, central banks are different, and their decisions tend to be considered almost non-justiciable by some courts (US or Canada) and granted wide deference by other courts (e.g., the Court of Justice in the EU). The least deferential, and most intrusive court (the German Constitutional Court) tends to be among those keenest to grant climate change considerations constitutional status. Central banks incorporating climate considerations in their price stability mandates seem to be on relatively firm ground.

Keywords. Central banks, climate change, mandates, monetary policy, prudential regulation, networks, uncertainty, social norms, judicial review.

TABLE OF CONTENTS

I. INTRODUCTION. CENTRAL BANKS' CLIMATE PARADOX, AND THE CONCEPTUAL FRAMEWORK TO EXPLAIN IT: ARGUMENTS OF "FIT", "OPPORTUNITY", "SUITABILITY" AND (JUDICIAL) "REVIEW".

Climate change is humanity's defining challenge for the Twenty First century.[1] It is the most important economic problem,[2] and one of the most important human rights problem which we currently face.[3] Furthermore, this is no longer a new or untested theory; experts (scientists and others) have been telling us the existence and effects of climate change for some time now.[4] This makes the commitments of various governments range from insufficient to grossly inadequate.[5] This variety of outcomes may reflect an insufficient awareness among the overall population or even political disfunctions: if there is no likely political gain and only potential losses in addressing climate change, elected leaders may (wrongly, but rationally) choose to let it be the "next guy's problem." However, it is true that this political situation has started to change, and that both governments and the overall population have started to significantly pay attention to climate change.

In this context, the behavior of one specific set of government actors remains puzzling and often misunderstood; namely, the behavior of central banks. On one hand, central banks are not affected by the same considerations as elected leaders. They do not depend on the electoral cycle. Moreover, their independence (although varying) is considered a virtue, and is generally protected through the self-restraint of democratically elected bodies either legally in their founding norms or as a matter of practice. Thus, they are free to avoid the problems of "time inconsistency" that affect politicians, and can think with a long-term horizon to tackle phenomena like climate change. On the other hand, central banks have been surprisingly absent from the debate on climate change until very recently. For example, the former President of the European Central Bank (ECB) candidly admitted that up until 2018 the institution gave "no consideration" to climate change, including in major initiatives like the Corporate Sector Purchase Program,[6] and its senior officials considered that it "should not" pay attention to it.[7] The ECB's

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[1] *Climate Change*, UNITED NATIONS, https://www.un.org/en/global-issues/climate-change (last visited Feb. 28, 2023).
[2] *See generally*, William Nordhaus, *Climate Change: The Ultimate Challenge for Economics*, 109 AM. ECON. REV. 439, 440 (2019).
[3] John H. Knox, *Linking Human Rights and Climate Change at the United Nations*, 33 HARV. ENVT'L. L. REV. 477, 477 (2009).
[4] Maria Abou Chakra et al., *Immediate action is the best strategy when facing uncertain climate change*, 9:2566 NATURE COMMC'N'S 1, 1-9 (2018). *See also* Spencer Weart, *The Discovery of Global Warming [Excerpt]*, SCI. AM. (Aug. 17, 2012), https://www.scientificamerican.com/article/discovery-of-global-warming/.
[5] Robert W. Kates, William R. Travis, and Thomas J. Wilbanks, *Transformational Adaptation When Incremental Adaptations to Climate Change are Insufficient*, 109 PROC. NAT'L ACAD. SCI. 7156, 7156–61 (2012).
[6] *See* Javier Solana, *The Power of the Eurosystem to Promote Environmental Protection*, EUR. BUS. L. REV. 547, 566 (2019).
[7] Yves Mersch, Member of European Central Bank Executive Board, Address at Workshop Discussion: Sustainability is Becoming Mainstream (Nov. 27, 2018), *in* Climate Change and Central Banking, EUR. CENT. BANK, https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181127.en.html (last visited Feb. 28, 2023).

attitude changed recently, and climate change is a greater concern in the European Union than in practically any other area in the World. However, dismissive views were widely shared across central bankers: the general policy was "no comment" until very recently.

This perspective has changed drastically in recent years. Mark Carney, former Chair of the Bank of England was a forerunner in 2015, when he vividly described the problem as "the Tragedy of the Horizon".[8] However, a key development was the establishment at the Paris "One Planet Summit" in December 2017 driven by the Network for the Greening of the Financial System (NGFS).[9] From an initial membership of eight central banks and supervisory authorities (including five institutions from Europe, two from Asia and one from (Latin) America[10]), it now includes the central banks and financial supervisors from all the major countries and financial centers, spanning the five continents.[11] From an initial "stock-taking" exercise in 2018,[12] its activity accelerated, and branched into all conceivable areas affecting central banking and supervisory activity. This included disclosures and integration of sustainability (Environmental, Social, Governance – ESG) factors in sustainable finance and investment,[13] data gaps,[14] portfolio

[8] Mark Carney, Governor of the Bank of England & Chairman of Financial Stability Board, Address at Lloyd's of London City Dinner: Breaking the Tragedy of the Horizon – Climate Change and Financial Stability (Sept. 29, 2015) (transcript available from the Bank of England).

[9] *Origin and Purpose*, NETWORK FOR GREENING THE FIN. SYS., https://www.ngfs.net/en/about-us/governance/origin-and-purpose (last visited Feb. 28, 2023).

[10] These included Banco de Mexico, the Bank of England, the Banque de France and Autorité de Contrôle Prudentiel et de Résolution (ACPR), De Nederlandsche Bank, the Deutsche Bundesbank, Finansinspektionen (The Swedish FSA), the Monetary Authority of Singapore, and the People's Bank of China. *See Joint Statement by the Founding Members of the Central Banks and Supervisors Network for Greening the Financial* System, NETWORK FOR GREENING THE FIN. SYS. (Dec. 12, 2017), https://www.banque-france.fr/en/communique-de-presse/joint-statement-founding-members-central-banks-and-supervisors-network-greening-financial-system-one [hereinafter: NGFS Founding Statement].

[11] *Membership*, NETWORK FOR GREENING THE FIN. SYS., https://www.ngfs.net/en/about-us/membership (last visited Jan. 25, 2023).

[12] "The Network will conduct a stock-taking exercise during 2018 and hold a physical meeting in early 2018. It will also hold a high-level conference focused on climate risk management and supervision on April 6th, 2018 in Amsterdam, organized by three Network members: ACPR, Bank of England and De Nederlandsche Bank." *See* NGFS Founding Statement, *supra* note 10.

[13] NETWORK FOR GREENING THE FIN. SYS., SUSTAINABLE FINANCE MARKET DYNAMICS: AN OVERVIEW 3 (2021); *Dashboard on Scaling Up Green Finance*, NETWORK FOR GREENING THE FIN. SYS. (Mar. 31, 2021), https://www.ngfs.net/sites/default/files/media/2021/06/17/dashboard-on-scaling-up-green-finance-march_2021_0.pdf.

[14] NETWORK FOR GREENING THE FIN. SYSTEM, PROGRESS REPORT ON BRIDGING DATA GAPS 5 (2021).

management,[15] "green" and "brown" factors,[16] monetary policy operations,[17] (general) risk analysis[18] and financial stability,[19] scenario analysis,[20] prudential supervision,[21] or litigation risk.[22] The role of the NGFS has not been limited to providing technical and intellectual support to its members' efforts to integrate climate change into their activities; rather, it has also been a vehicle for policy commitments, like the Joint COP26 statement, together with Finance Ministers,[23] and the "Glasgow Declaration" (this one is only signed by NGFS members).[24]

The NGFS members heed the views of the NGFS and amplify them with their own speeches, statements, policy papers, and developing methodologies. These are highlighted with notable developments in the Bank of Japan (BoJ) in monetary policy,[25] the People's Bank of China (PBoC) on monetary policy, financial supervision,[26] and green finance

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[15] NETWORK FOR GREENING THE FIN. SYS., A SUSTAINABLE AND RESPONSIBLE INVESTMENT GUIDE FOR CENTRAL BANKS' PORTFOLIO MANAGEMENT 6 (2019); NETWORK FOR GREENING THE FIN. SYS., PROGRESS REPORT ON THE IMPLEMENTATION OF SUSTAINABLE AND RESPONSIBLE INVESTMENT PRACTICES IN CENTRAL BANKS' PORTFOLIO MANAGEMENT 5 (2020).

[16] NETWORK FOR GREENING THE FIN. SYS., A STATUS REPORT ON FINANCIAL INSTITUTIONS' EXPERIENCES FROM WORKING WITH GREEN, NON GREEN AND BROWN FINANCIAL ASSETS AND A POTENTIAL RISK DIFFERENTIAL 3 (2020).

[17] NETWORK FOR GREENING THE FIN. SYS., SURVEY ON MONETARY POLICY OPERATIONS AND CLIMATE CHANGE: KEY LESSONS FOR FURTHER ANALYSES 3 (2020); NETWORK FOR GREENING THE FIN. SYS., ADAPTING CENTRAL BANK OPERATIONS TO A HOTTER WORLD REVIEWING SOME OPTIONS 2 (2021).

[18] NETWORK FOR GREENING THE FIN. SYS., OVERVIEW OF ENVIRONMENTAL RISK ANALYSIS BY FINANCIAL INSTITUTIONS 3 (2020).

[19] *See* NETWORK FOR GREENING THE FIN. SYS., THE MACROECONOMIC AND FINANCIAL STABILITY IMPACTS OF CLIMATE CHANGE RESEARCH PRIORITIES 3 (2020).

[20] *See* NETWORK FOR GREENING THE FIN. SYS., GUIDE TO CLIMATE SCENARIO ANALYSIS FOR CENTRAL BANKS and SUPERVISORS 1 (2020); NETWORK FOR GREENING THE FIN. SYS., NGFS CLIMATE SCENARIOS FOR CENTRAL BANKS and SUPERVISORS 2 (2021); NETWORK FOR GREENING THE FIN. SYS., SCENARIOS IN ACTION A PROGRESS REPORT ON GLOBAL SUPERVISORY AND CENTRAL BANK CLIMATE SCENARIO EXERCISES 2 (2021).

[21] *See* NETWORK FOR GREENING THE FIN. SYS., GUIDE FOR SUPERVISORS INTEGRATING CLIMATE-RELATED AND ENVIRONMENTAL RISKS INTO PRUDENTIAL SUPERVISION 1 (2020); NETWORK FOR GREENING THE FIN. SYS., PROGRESS REPORT ON THE GUIDE FOR SUPERVISORS 2 (2021).

[22] *See* NETWORK FOR GREENING THE FIN. SYS., OVERVIEW OF ENVIRONMENTAL RISK ANALYSIS BY FINANCIAL INSTITUTIONS 9 (2020).

[23] *See* Statement, Coal. of Fin. Ministers for Climate Action and Network of Cent. Banks and Supervisors for Greening the Fin. Sys., Chairs Joint COP26 Statement (Nov. 3, 2021) (available at https://www.financeministersforclimate.org/news/coalition-chairs-release-joint-cop26-statement-ngfs-chair#:~:text=Chairs%20Joint%20COP26%20Statement,-November%203%2C%202021&text=Our%20two%20entities%20recognized%20from,broader%20alignment%20of%20economic%20policies).

[24] *See* Press Release, Network of Cent. Banks and Supervisors for Greening the Fin. Sys., NGFS Glasgow Declaration Committed to Action (Nov. 3, 2021) (available at https://www.ngfs.net/sites/default/files/ngfsglasgowdeclaration.pdf).

[25] *See* Monetary Policy Release, Bank of Japan, Outline of Climate Response Fin. Operations (Sept. 22, 2021) (available at https://www.boj.or.jp/en/mopo/mpmdeci/mpr_2021/rel210922c.pdf).

[26] *See* Hilal Atici, *PBoC to Grade Financial Institutions on Green Bonds*, GREEN CENT. BANKING (June 15, 2021), https://greencentralbanking.com/2021/06/15/pboc-grade-financial-institutions-green-bonds/.

incentives,[27] or the Swiss National Bank on investment policy.[28] Perhaps the most visible change has taken place at the ECB, where one of the key changes in the Strategy Review that took place in 2021 was the acknowledgement that climate change would be fully addressed within its mandate and activities,[29] and the formulation of a clear plan to gradually assimilate it.[30]

These ideas have also encountered some opposition among the press,[31] experts[32] and central bankers themselves.[33] These parties argue that climate change is a very important issue, just not one for central banks who are prevented from doing anything by their mandate. In the alternative, they argue that central banks should abstain from doing anything at the risk of doing more harm than good, or acting illegitimately by usurping democratic competences.

Meanwhile, some central banks may not have the luxury of carefully pondering the differing arguments regarding taking a position on climate. In the EU some NGOs have commissioned legal opinions to create a *legal obligation* by the European System of Central Banks (ESCB) to integrate environmental protection in its high-level policies.[34] For

[27] *China Central Bank Plans Fresh Incentives to Support Green Financing*, REUTERS (June 16, 2017), https://www.reuters.com/article/us-china-banking-greenfinance-idUSKBN1970R1.
[28] *See* SWISS NAT'L BANK, 113TH ANNUAL REPORT SWISS NATIONAL BANK 57, 94 (2020).
[29] *Monetary Policy Statement*, EUR. CTR. BANK, https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_statement.en.html (last visited Feb. 28, 2023).
[30] *Annex: Detailed Roadmap of Climate Change-Related Actions*, EUR. CTR. BANK, https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1_annex~f84ab35968.en.pdf (last visited Feb. 28, 2023).
[31] *See Bankers Aren't Climate Scientists*, WALL ST. J. (Nov. 15, 2019, 6:50 PM), https://www.wsj.com/articles/bankers-arent-climate-scientists-11573861841; *See also* Green Envy, *The Rights and Wrongs of Central-Bank Greenery*, THE ECONOMIST (Dec. 14, 2019), https://www.economist.com/leaders/2019/12/14/the-rights-and-wrongs-of-central-bank-greenery [hereinafter: THE ECONOMIST, *The Rights and Wrongs of Central-Bank Greenery*]; Free Exchange, *The Perils of Asking Central Banks to do Too Much*, THE ECONOMIST (March 13, 2021), https://www.economist.com/finance-and-economics/2021/03/13/the-perils-of-asking-central-banks-to-do-too-much [hereinafter: THE ECONOMIST, *Perils of Asking Central Banks to do Too Much*].
[32] Daniel Gros, *The Dangerous Allure of Green Central Banking*, PROJECT SYNDICATE (Dec. 18, 2020), https://www.project-syndicate.org/commentary/european-central-bank-should-not-go-green-by-daniel-gros-2020-12; John Cochrane, Comments at the ECB Conference on Monetary Policy: Bridging Science and Practice, 1 (Oct. 20, 2020) (Topic 6), reprinted with few modifications as *Central Banks and Climate: A Case of Mission Creep*, HOOVER INSTITUTION (Nov. 13, 2020), https://www.hoover.org/research/central-banks-and-climate-case-mission-creep.
[33] Jens Weidmann, President of the Deutsche Bundesbank and Chairman of the Bd. of Dirs. of the Bank for Int'l Settlements, Welcome address at the Deutsche Bundesbank's Second Financial Market Conference (Oct. 29, 2019) (available at: https://www.bis.org/review/r191029a.pdf). According to a statement by Fed Chairman Jerome Powell in Nov. 13, 2019, "So I guess I would say climate change is an important issue but not principally for the Fed. It is really an issue that is assigned to lots of other government agencies, not so much the Fed." *See The Economic Outlook: Hearing Before the Joint Econ. Comm.*, 116th Cong. 12 (2019) (statement of Jerome Powell, Chairman of the Federal Reserve).
[34] Rhoda Verheyen, *Legal Opinion: Legal Options for Implementing Climate Criteria in the Monetary Policy of the European Central Bank*, GREENPEACE (April 2021), https://greenpeace.at/assets/uploads/pdf/ecb-legal-opinion.pdf.

example, the European NGO ClientEarth recently brought a claim against the central bank of Belgium (trying to affect the ECB indirectly) to force it to dump (or downsize) the bonds from polluting firms in its Corporate Sector Purchase Program (CSPP).[35] This lawsuit was subsequently withdrawn as the ECB updated its bond purchasing program.

All these rapid developments are a lot to process, and the picture looks confusing. Yet, climate change is a key issue that will define economic policies in the next decades, so a constructive debate is essential. To ensure that debate occurs, we must classify the arguments for and against the "greening" of central banks' mandate and tasks that are different in nature.

First, there are arguments of fit or *whether* to intervene. Here the question is whether tackling climate change can be included within the definition of a central bank's mandate and tasks in its founding legal texts. These arguments are considered in Section 2.

Second, there are arguments of opportunity or *when* to intervene. Here the question is if climate change fits within central banks' mandate, whether there is a justification to act now, or the available information is insufficient to justify action, and we should wait until more information becomes available. These arguments are considered in the following Part 2 of this article in Section 3.[36]

Third, there are arguments of suitability or *how* to intervene. Here the question is if climate change fits within central banks' mandate *and* there is a case for acting now, whether the instruments that a central bank has at its disposal are adequate for purposes like climate change mitigation or adaptation (i.e., whether central banks are suitable for climate change), or whether, by taking climate change into their mandate, they would compromise their independence, legitimacy, or credibility (i.e., whether climate change is suitable for central banks). These arguments are considered in the following Part 2 of this article in Section 4.[37]

Furthermore, it is important to differentiate what a central bank *can* do within its mandate; what a central bank *should* (or should not) do in light of scientific, economic and legal determinants; and what a central bank *must* (or must not) do because otherwise a court could find its

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[35] *Why ClientEarth is Suing the Central Bank of Belgium for Climate Failings*, CLIENTEARTH (Apr. 13, 2021), https://www.clientearth.org/latest/latest-updates/news/why-clientearth-is-suing-the-central-bank-of-belgium-for-climate-failings/. On the withdrawal of the lawsuit, see https://www.clientearth.org/latest/latest-updates/news/we-re-withdrawing-our-lawsuit-against-the-belgian-national-bank/ (last visited May 28, 2023).

[36] *See* David Ramos et al., *Climate Change and Central Banks (Part 2): Can Central Banks Intervene Now? And How? Arguments Of "Opportunity" and "Suitability"*, 6 BUS. & FIN. L. REV. 260, 262 (2023).

[37] *Id.* at 288.

actions unlawful. Very often, we find the discussion is muddled due to the confusion of these three different issues. Thus, for each section in this and the following Part 2, we analyze the arguments of "fit," "opportunity," and "suitability" that are relevant academically and practically for a central bank deciding on the issue, but also and separately address the arguments that are relevant should a court end up deciding on the issue, i.e., the *standard of review*.

The picture that emerges is complex, fascinating, and, to some extent, unexpected as the conclusions in the following Part 2 of this article show.[38] Looking at the issue with a bit of perspective, some initial objections vanish or do not pose a credible objection. In contrast, other aspects (like the discussion of "when" to intervene, the reasons for proactivity, and the explanations for passivity) reveal that the problem is more complicated than it looks and open new avenues for research. Finally, the discussion of "how" exposes climate change for what it really is: not a shift towards central bank subordination to the government, but the defining issue of a new era of tensions between central banks and governments where the affirmation of central banks' independence as 'truth-tellers' needs to be reconciled with greater transparency and accountability.

II. INTERVENING OR NOT? CLIMATE CHANGE'S "FIT" WITHIN THE MANDATE OF CENTRAL BANKS.

Central bank mandates and objectives, typically included in their founding legal texts, can encompass climate change (2.1.). Furthermore, central banks' role on climate change should be upheld by courts' review (2.2.).

2.1 Climate Change And Central Banks' Mandates. Primary And Secondary Objectives, Prudential Tasks And Transversal Provisions.

Central banks' mandates are variable across institutions and time periods, but climate change fits within the "core" idea of price stability (2.1.1.). Additionally, climate change may fit with central banks' "peripheral" mandates, although here legal texts vary (2.1.2.). Climate change also fits within a risk-based mandate for prudential supervision, although the central bank may not be the relevant authority, or the only one with this mandate (2.1.3.). Finally, climate change may enter central banks' mandate via constitutional provisions setting "transversal" goals, although this is a more limited avenue (2.1.4.).

2.1.1. Climate Change And Central Banks' "Core" Mandate: Price Stability In Context.

The initial reluctance towards central banks' venturing into uncharted territory, such as climate change and environmental protection may be based on central banks' relatively stable role, which may not be

[38] *Id.* at 317.

open to experiments. However, a narrow view of the role of a central bank is not supported by either a historical, or comparative perspective.

From a historical perspective, the oldest central banks, the Bank of England and the Swedish Riksbank, were created with the purpose of funding sovereigns (typically, their war efforts).[39] Later, central banks evolved to manage the gold standard,[40] to develop Lender-of-Last Resort (LoLR) functions,[41] to maintain specie convertibility and manage financial crises, to centralize currency issuance and facilitate financial transactions,[42] or to address asset price booms (real bills doctrine[43]). Central banks' core focus on price stability crystalized in the second half of the twentieth century.[44] Thus, an initial reply to the objection that central banks should not take an active role in the fight against climate change because it falls outside their mandate of price stability is that the price stability mandate is a relatively recent evolution, resulting from a pragmatic trial-and-error process.

From a comparative perspective, the mandates of central banks, as enshrined in their founding legal texts, are not drafted using the same terms and price stability's relevance is not framed homogeneously.[45] In some countries, price stability is treated as a consequence, addressed in the broader context of currency stability, or evaluated as purchasing power.[46] In others it is treated as a narrower goal, which serves a broader goal like economic prosperity or growth,[47] the general interest,[48] sound

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[39] *See generally* ROSA LASTRA, INTERNATIONAL FINANCIAL AND MONETARY LAW ch. 2 (Oxford University Press, 2015); Michael Bordo & Pierre L. Siklos, *Central Banks: Evolution and Innovation in Historical Perspective* 8 (NBER Working Paper No. 23847, 2017); CHARLES GOODHART, THE EVOLUTION OF CENTRAL BANKS (1988). The Riksbank succeeded the Stockholm Banco, and, although it did not initial fund the government, it did so later. *See* GUNNAR WETTERBERG & ANN-LEENA MIKIVER, RIKSBANK – A 350-YEARS IN THE MAKING (2017), https://www.riksbank.se/globalassets/media/riksbanken-350-ar/digital-skrift/sveriges-riksbank-a-350-year-jurney.pdf.

[40] Bordo & Siklos, supra note 39, at 8.

[41] WALTER BAGEHOT, LOMBARD STREET: A DESCRIPTION OF THE MONEY MARKET 21 (1873).

[42] Bordo & Siklos, supra note 39, at 2. Maintenance of specie convertibility and managing financial crises was a key objective in the banks founded towards the end of the century, e.g., the Bank of Japan (1882), the Banca d'Italia (1893), and eventually the US Federal Reserve (1913). Goals such as the centralization of currency issuance, or the facilitation of financial transactions were key in the cases of the Reichsbank (1873), and the Swiss National Bank (1907).

[43] LLOYD W. MINTS, A HISTORY OF BANKING THEORY IN GREAT BRITAIN AND THE UNITED STATES vi (1945).

[44] GOODHART, *supra* note 39, at 48–49.

[45] *See generally* DIEGO VALIENTE ET. AL., STUDY ON EXEMPTIONS FOR THIRD-COUNTRY CENTRAL BANKS AND OTHER ENTITIES UNDER THE MARKET ABUSE REGULATION AND THE MARKETS IN FINANCIAL INSTRUMENTS REGULATION (2015).

[46] Zhōngguó rénmíng yínháng fǎ [中国人民银行法] [Law on the People's Bank of China] (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 27, 2005), chp. 1 art. 3 (China); Constitución Política de los Estados Unidos Mexicanos, CP, Art. XXVIII, § 4, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 10-02-2014.

[47] Reserve Bank Act 1959, s 10(2) (Austl.); Law on the People's Bank of China (1995), art. 3.

[48] BUNDEVESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 99, para. 2 (Switz.).

development,[49] or sustainable growth.[50] In others it is placed alongside goals like "maximum employment."[51]

In the next part we consider the relevance of these diversity of approaches in the relevant legal texts for incorporating climate change among "peripheral" (i.e., non-price stability) objectives.[52] For the moment, however, one conclusion becomes clear: price stability's relevance as *the* "core" objective (leaving other objectives as peripheral) is not based on a textual analysis of central bank laws, but rather on economic theory and the mindset of most central bankers.[53] Moreover, the basis of this objective was strongly shaped by the inflationary processes of the 80s and the narrative link between price stability and central bank independence.[54] Other central banks copied, imitated, and assimilated these ideas[55] in a process that has a bit of science, and a lot of social norms.[56]

In this comparative context, though, the European System of Central Banks (ESCB) is the quintessential example of a "narrow mandate" central bank (or system of central banks).[57] Article 127 (1) of the Treaty of the Functioning of the European Union (TFEU) has three parts.[58] Here, we focus on the first part, where the provision states that, "[t]he primary objective of the European System of Central Banks (hereinafter referred to as 'the ESCB') shall be to maintain price stability."[59]

The ESCB mandate is drafted in relatively strict terms, with an exclusive focus on monetary policy understood as pursuing "price stability" (an aspect inherited from the Bundesbank). It also has a clear distinction between this "primary" objective and the "secondary" objective of supporting general economic policies, found in the second

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[49] Nipponginkō-hō [Bank of Japan Act] Law No. 89 of 1997, art. 2, *translated in* (Japanese Law Translation [JLT DS]), https://www.japaneselawtranslation.go.jp/en/laws/view/3788 (Japan); Hangug-eunhaengbeob [Bank of Korea Act], art. 1 (S. Kor.) *translated in* Korean Legislation Research Institute's online database, http://elaw.klri.re.kr /eng_service/main.do (search required).
[50] Monetary Authority of Singapore (MAS) Act, 1970 § 4.
[51] Federal Reserve Act §2A, 12 U.S.C. § 225a.
[52] *See infra* part 2.1.2.
[53] In the United States, the Federal Reserve began to consider price stability of primary importance from the 50s onwards, due to its chairman William McChesney Martin. *See* ROBERT BREMNER, CHAIRMAN OF THE FED: WILLIAM MCCHESNEY MARTIN 5 (Yale Univ. Press 2004); *see* Bordo & Siklos, *supra* note 39, at 8. This changed in later decades, in a way that, according to critics, enabled inflation, until anti-inflationary policies helped restore central banks' credibility. *See* MICHAEL D. BORDO & ATHANASIOS ORPHANIDES, THE GREAT INFLATION: THE REBIRTH OF MODERN CENTRAL BANKING 1–2 (2013).
[54] *See* PAUL A. VOLCKER, THE TRIUMPH OF CENTRAL BANKING? 14 (Esha Ray ed., 1990); *see* Bordo & Siklos, *supra* note 39, at 7, 9.
[55] Bordo & Siklos, *supra* note 39, at 8.
[56] We discuss the implications of this below. See *infra* part 3.1.3.
[57] Consolidated Version of the Treaty on the Functioning of the European Union, arts. 127(1) & (2), (C 202/102) [hereinafter: TFEU].
[58] TFEU, art. 127(1).
[59] *Id.*

paragraph of article 127 (1) TFEU.[60] Yet, for this reason, the ESCB mandate offers a good test case. In strictly textual terms (i.e., by relying simply on the language of the legal text that describes the institution's mandate) if climate change can be part of the ESCB mandate, it can be part of any central bank mandate.[61] And it is becoming increasingly clear that there are strong reasons for central banks, even central banks with a narrow mandate, like the ESCB, to take climate change more seriously.

The reason is simple and should be the basis of the discussion. The more we know and understand climate change, the more evident it becomes that climate change can drastically affect price stability,[62] including feedback loops and amplifications.[63] Even under the best circumstances, shifts in the energy mix can alter inflation expectations, and a rise of carbon prices can lead to wage-price spirals.[64] Climate change's *physical risks* can cause major shocks in supply and demand. From a supply side, bad harvests can cause rises in food prices,[65] heat stress can harm the supply of labor,[66] and cause bottlenecks in supply chains,[67] with unpredictable consequences. From a demand side, heat, floods, and changes in weather patterns may cause forced relocations and migrations, losses in property values that would be imperfectly absorbed by insurers and banks, and depress purchasing power.[68] Yet, even if the physical risks are daunting, transition risks can be even more problematic in the medium term. Transition risks (or costs associated to regulatory

[60] See *infra* part 2.1.2.
[61] As we will see, there are important arguments beyond textualism. What is included within "monetary policy" or "price stability", and what is not, also depends on the perception of risks, attitudes towards uncertainty and ambiguity, or social norms (among the general population, and for central banks themselves). See *infra* parts 3.1.2, 3.1.3.
[62] *See, e.g.*, NETWORK FOR GREENING THE FIN. SYS., ADAPTING CENTRAL BANK OPERATIONS TO A HOTTER WORLD REVIEWING SOME OPTIONS 12 (2021); Signe Krogstrup & William Oman, *Macroeconomic and Financial Policies for Climate Change Mitigation: A Review of the Literature* (Int'l Monetary Fund Working Papers, WP/19/185, 2019); Rens van Tilburg & Aleksandar Simić, *Legally Green Climate Change and the ECB Mandate* (2021) (on file with the authors).
[63] *See, e.g.*, NETWORK FOR GREENING THE FIN. SYS., ADAPTING CENTRAL BANK OPERATIONS TO A HOTTER WORLD REVIEWING SOME OPTIONS, *supra* note 62, at 13, Fig. 3.
[64] Benoît Cœuré, Member of the Executive Board of the European Central Bank, Speech at Network for Greening the Fin. Sys. Conference on "Scaling up Green Finance: The Role of Central Banks" (Nov. 8, 2018) (available at: https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181108.en.html).
[65] Miles Parker, *The Impact of Disasters on Inflation*, 2 ECON. DISASTERS & CLIMATE CHANGE 21–48 (2016).
[66] W.J.A. McKibbin, et. al., *Climate Change and Monetary Policy: Dealing with Disruption*, THE CLIMATE AND ENERGY ECON. PROJECT 20 (Climate and Energy Economics Discussion Paper, Nov. 30, 2017), https://www.brookings.edu/wp-content/uploads/2017/12/es_20171201_climatechangeandmonetarypolicy.pdf.
[67] Jonathan Woetzel, et. al., *Could Climate Become the Weak Link in Your Supply Chain?*, 6 MCKINSEY GLOBAL INSTITUTE (2020), https://www.mckinsey.com/business-functions/sustainability/our-insights/could-climate-become-the-weak-link-in-your-supply-chain. *See also* Cœuré, *supra* note 64.
[68] Sandra Batten, Rhiannon Sowerbutts, & Misa Tanaka, *Let's Talk About the Weather: The Impact of Climate Change on Central Banks* (Bank of England Staff, Working Paper No. 60, 2016).

changes) can phase out operators or entire industries,[69] and cause disruptions in both supply and demand through massive layoffs or depressed salaries. Thus, there seems to be no strong objections to integrating climate change within central banks' mandate based on a potential lack of impact on price stability.

In addition, even the skeptics of central banks are assuming a more active role in the fight against climate change.[70] Some object to integrating climate change into monetary policy because of (i) the *uncertainty* about the *kind of* effect that climate change may have on prices, or the channels through which it may operate;[71] (ii) the absence of an effect within the *time horizon of the models* used for monetary policy purposes;[72] or, the most habitual (iii) the *threat* that integrating climate change within central banks' mandate would pose to their independence, and credibility (due to the distortions caused in the economy) as a result of getting involved in political decisions, more suitable for elected bodies.[73]

However, none of these are actual arguments on *whether* climate change can be incorporated into central banks' mandates. They are mostly arguments about *when* is the right time to do so or *how* best to do so in order to ensure that basic central bank principles are respected. In subsequent sections we offer more specific arguments on *when* and *how*.[74] Yet, the objections do not look convincing. If central bank models do not capture climate change effects, the answer is not to ignore climate change so it fits the model. Rather, the solution is to improve the models to fit climate change or to account for effects taking place with different time horizons,[75] like scientific models are trying to do.[76] Furthermore, the phenomenon of climate change and its policy responses fit particularly well within the logic of central banks. If independent central banks were created to do what elected governments could not do, i.e., avoid "time inconsistency," climate change seems to fit this conceptual scheme quite well. Science has been informing us of its tragic

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[69] Isabel Schnable, Member of the Executive Board of the European Central Bank, Speech at the European Sustainable Finance Summit: When Markets Fail – The Need for Collective Action in Tackling Climate Change (Sept. 28, 2020) (available at: https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200928_1~268b0b672f.en.html).

[70] For a measuredly skeptical view, *see, e.g.*, Weidmann, *supra* note 33; THE ECONOMIST, *The Rights and Wrongs of Central-Bank Greenery*, *supra* note 31; THE ECONOMIST, *The Perils of Asking Central banks to do Too Much*, *supra* note 31. For a more clearly skeptical view, *see* Gros, *supra* note 32. For an extremely skeptical view, *see* Cochrane, *supra* note 32.

[71] Weidmann, *supra* note 33.

[72] Cochrane, *supra* note 32.

[73] THE ECONOMIST, *The Rights and Wrongs of Central-Bank Greenery*, *supra* note 31; THE ECONOMIST, *The Perils of Asking Central banks to do Too Much*, *supra* note 31; Cochrane, *supra* note 32; Gros, *supra* note 32; Weidmann, *supra* note 33.

[74] *See generally* David Ramos, et al., *supra* note 36.

[75] If the time horizon is 1.5-2 years for monetary policy, a bit more for financial stability, the models are not good enough. *See* Carney, *supra* note 8.

[76] William R. Freudenburg & Violetta Muselli, *Reexamining Climate Change Debates: Scientific Disagreement or Scientific Certainty Argumentation Methods (SCAMs)?*, 57 AM. BEHAV. SCIENTIST 777, 785–86 (2013).

consequences for decades now, but elected governments have done too little, if doing anything at all. What should matter is whether those tragic consequences may impact price stability, which seems to be the case.

Central banks have very recently learned that downplaying or neglecting certain phenomena, only to realize later that they have a decisive impact on price stability, has very high costs for society. They have realized with the benefit of hindsight that these phenomena should have been considered part of central banks' mandates. For example, before the Great Financial Crisis of 2007–2008 central banks did not tackle asset prices and asset bubbles in general.[77] This was later considered incomplete and dangerous,[78] because it minimized the role of nonlinearities, or the costs of cleaning up.[79]

Now, if we compare financial stability with the potential changes that climate change can wreak on the monetary policy transmission channel,[80] the potential financial frictions can affect the credit channel, also known as the risk-taking channel.[81] Climate change can upset *all* the elements of the channel simultaneously, including consumer goods, asset prices, or exchange rates, with unpredictable, but potentially devastating effects. As a result, central banks may not be able to understand, anticipate, or correct all these effects. However, *not even trying* to do so looks like an increasingly indefensible position, if one looks at the concept of "monetary policy" as closely linked to "price stability", in a context where time inconsistency characterizes the choices of citizens and elected officials.

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[77] *See, e.g.*, Alan Greenspan, Chairman of the U.S. Federal Reserve, Opening Remarks at the Federal Reserve Bank of Kansas City Symposium: Rethinking Stabilization Policy (Aug. 30, 2002)(available at: https://fraser.stlouisfed.org/title/statements-speeches-alan-greenspan-452/opening-remarks-a-symposium-sponsored-federal-reserve-bank-kansas-city-jackson-hole-wyoming-8767); Allan S. Blinder & Ricardo Reis, *Understanding the Greenspan Standard* 67–68 (CEPS Working Paper No. 114, 2005); Frederick S. Mishkin, *Will Monetary Policy Become More of a Science?* 22 (NBER Working Paper No. 13566, 2007).

[78] Issing calls the previous view the "Jackson Hole consensus", and argues that it was based on faulty arguments. *See* Otmar Issing, *Asset Prices and Monetary Policy*, 29 CATO J. 45, 46–48 (2009); *see also* Sushil Wadhwani, *What Mix of Monetary Policy and Regulation is Best for Stabilizing the Economy?* in THE FUTURE OF FINANCE: THE LSE REPORT 145, 145–65 (2010).

[79] See the excellent analysis in Chiara Zilioli & Michael Ioannidis, *Climate Change and the mandate of the ECB: Potential and limits of monetary contribution to European green policies*, 59 COMMON MKT. L. REV. 329 (2022). For a summary of arguments, by a former proponent of the "clean" versus "lean" approach, *see* Frederick Mishkin, *Monetary Policy Strategy: Lessons from the Crisis* (NBER Working Paper No. 16755, 2011); *see also* Frederick Mishkin, *Central Banking After the Crisis* 17, 21 (Cent. Bank of Chile, Working Paper No. 714, 2013), https://si2.bcentral.cl/public/pdf/documentos-trabajo/pdf/dtbc714.pdf.

[80] *See, e.g.*, *Transmission Mechanism of Monetary Policy*, EUR. CENT. BANK, https://www.ecb.europa.eu/mopo/intro/transmission/html/index.en.html (last visited Jan. 26, 2023).

[81] Claudio Borio & Haibin Zhu, *Capital Regulation, Risk-Taking and Monetary Policy: A Missing Link in the Transmission Mechanism?* 1, 10 (BIS Working Paper No. 268, 2008); TOBIAS ADRIAN & HYUN SONG SHIN, *Financial Intermediaries and Monetary Economics*, *in* 3 HANDBOOK OF MONETARY ECONOMICS 601, 604, 638, 645 (Benjamin M. Friedman & Michael Woodford eds., 2010).

In summary, if we adopt an evolutionary and comparative perspective, we must conclude that central bank mandates are not immutable. They are framed by open textured concepts in their founding legal texts, and they are shaped by the understanding of those mandates by central bankers themselves. A scientific and economic perspective shows that, even under the most orthodox view, climate change has an impact on price stability, the core element of central bank policies and practice. There are potential objections to central banks' going too quickly or too far in incorporating climate change into their actions (objections of "opportunity" or "suitability"), but only if we show that there is no way for central banks to act early, or to use their tools to tackle climate change could we conclude that climate change cannot be incorporated within central banks' mandate at all (objections of "fit").

2.1.2. Climate Change And Central Banks' "Peripheral" Mandates.

Climate change's relevance for price stability justifies its assimilation within central banks' "core" objective, but it is also relevant for other central bank objectives enshrined in the relevant statutory texts. Here, it is important to differentiate between those cases where a central bank's mandate is formulated broadly (i.e. where the legal text at least does not expressly prioritize price stability or places it in wider "contextual" or "horizontal" mandates) and those cases where the central bank's mandate is formulated in "instrumental" terms (i.e. where the relevant texts indicate *what* the central bank does or can do, but not *why*). In these cases, climate change should be assimilated by the central bank if it is relevant for the "other" goals, the "broader" overarching goal, or to the goals set outside the statutory text itself.

(1) In "horizontal" cases, price stability is accompanied by full employment (Australia,[82] the United States[83]), financial stability (Japan,[84] Singapore,[85] South Korea,[86] South Africa[87]), economic prosperity and welfare (Australia[88]), or economic growth (China[89]).[90] In "contextual" cases, it is treated as an immediate goal, such as "the guiding role of the State with regard to national development"

[82] *Reserve Bank Act 1959* (CTH) s 10(2) (Austl.).
[83] Federal reserve Act of 1913 § 2A, 12 U.S.C. § 225a.
[84] Nipponginkō-hō [Bank of Japan Act], Law No. 89, art. 2.
[85] Monetary Authority of Singapore, § 4 (1971) ("to foster a sound and reputable financial centre and to promote financial stability").
[86] Hangug-eunhaengbeob [Bank of Korea Act] art.1.
[87] Reserve Bank Act of 1989 § 3 (S. Afr.).
[88] *Reserve Bank Act 1959* (Cth) s 10 pt 2(c) (Austl.).
[89] Zhōngguó rénmíng yínháng fǎ (中国人民银行法)[Law of the People's Bank of China] (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 18, 1995), art 3.
[90] This does not even consider the instances where price stability is considered as part of currency stability, or purchasing power, as is the case of Asian countries with fixed, or stable exchange rates, or Mexico, despite climate change's global scope has a large potential to affect different areas in a different way, thus upsetting exchange rates.

(Mexico[91]), "sound development" (Japan,[92] or South Korea[93]) "sustainable growth" (South Africa[94] or Singapore[95]), or "the overall interest of the country" (Switzerland[96]). In some cases, the founding legal text refers to a series of functions, but does not list the objectives, e.g., the Bank of Canada Act,[97] or the Hong Kong Monetary Authority (HKMA), which derives its mandate from the accumulation of tasks stipulated in different legal texts.[98] Before 2021, the Banco Central da República do Brasil (BCRB) was defined by a set of tools, and it exercised its role by delegation by law or by the National Monetary Council, entrusted with the country's monetary and credit policy, in pursuance of the country's *economic and social progress*.[99] However, A recent reform has changed this.

For both "horizontal" or "contextual" cases, it seems obvious that climate change decisively affects employment, development, growth, prosperity, or the general interest. For "instrumental" cases, it depends on the specific delegation from the government, but the mandate is flexible. There seems to be no constitutional, nor conceptual objection for central banks of this kind to take on responsibilities for climate change, even if we sidestep the relevance of price stability.

(2) The challenge is greater for central banks where the objectives are formulated in "vertical" or "hierarchical" terms, i.e., other objectives are "secondary" and to be pursued "subject to" or "provided that" they do not conflict with price stability or other primary objectives. This happens for the Central Bank of the Republic of Turkey,[100] the Central

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[91] Constitución Política de los Estados Unidos Mexicanos, 28, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 10-02-2014.
[92] Nipponginkō-hō [Bank of Japan Act], Law No. 89 of 1997, art. 2.
[93] Hangug-eunhaengbeob [Bank of Korea Act] art.1.
[94] Reserve Bank Act of 1989 § 3 (S. Afr.).
[95] Monetary Authority of Singapore § 4 (1971) (to maintain price stability conducive to sustainable growth of the economy).
[96] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 99 (Switz.).
[97] Bank of Canada Act, para. 18 (1934) lists the BoC's activities. The closest to a list of "objectives" is in the Act's Preamble, which states that: "Whereas it is desirable to establish a central bank in Canada to regulate credit and currency in the best interests of the economic life of the nation, to control and protect the external value of the national monetary unit and to mitigate by its influence fluctuations in the general level of production, trade, prices and employment, so far as may be possible within the scope of monetary action, and generally to promote the economic and financial welfare of Canada*."* The BoC also executes transactions over foreign exchange reserves in the Exchange Fund Account, as stated separately in the Currency Act. See Currency Act, R.S.C., 1985, c. C-52, Sections 17-22 (Part II).
[98] These include the Exchange Fund Ordinance, the Banking Ordinance, the Deposit Protection Scheme Ordinance and the Clearing and Settlement Systems Ordinance. *See* European Commission, *Study on Exemptions for Third-Country Central Banks and Other Entities Under the Market Abuse Regulation and the Markets in Financial Instruments Regulation*, EUR. COMM'N 108 (2017), available at https://op.europa.eu/en/publication-detail/-/publication/f961d7bf-afc0-11e7-837e-01aa75ed71a1/language-en.
[99] *See* CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 164 §§ 1–3 (Braz.), Law No. 4595, art. 2, 9, 10, (1964).
[100] Law no. 1211 of the Central Bank of the Republic of Turkey, art. 4 (1970).

Bank of West African Countries (BCEAO[101]), the Central Bank of the Republic of Brazil,[102] the Bank of England,[103] and the European System of Central Banks (ESCB[104]).

The legal texts of these vertical central banks choose different approaches to determine these secondary goals, which in turn pose different challenges.

(i) One approach is to state the objectives directly in the law itself, which makes the process clear enough. Incidentally, those objectives can easily accommodate climate change considerations. This is the case of the Central Bank of Brazil,[105] or the BCEAO.[106]

(ii) A second approach is to identify the "support of government policies" as a secondary objective, as it happens for the Central Bank of the Republic of Turkey[107] and the BoE.[108] This approach presents an epistemological challenge, i.e., of "knowing" what those policies are. This is easier in the case of the BoE, where the matter is "proceduralized," since the Treasury may *specify* the government economic policy, to facilitate the BoE's support of it.[109] This mechanism is inserted into a more ample system, where the Treasury formulates price stability objectives,[110] the government's economic policy to be supported "subject to" monetary policy[111] and financial stability,[112] and makes recommendations to the Financial Policy Committee.[113] In

[101] Statuts de la Banque Centrale des Etats de l'Afrique de l'Ouest (Statutes of the Central Bank of West African States), art. 8, para 2 (2018).
[102] Banco Central Do Brasil Complementary Law No. 179, art. 1 (2021), states that the Central Bank of Brazil has the fundamental objective of ensuring price stability. Articles 3 and 4 of the same Law strengthen the central bank's independence. The law has survived a recent constitutional challenge, based on alleged procedural deficiencies. S.T.F.J., Ação Direta de Inconstitucionalidade No. 6696, Relator: Min. Ricardo Lewandowski, 26.08.2021, 3 (Braz.). The plaintiffs alleged that the law resulted from the original proposal of a senator (Projeto de Lei Complementar - PLP 19/2019 by Senator Plínio Valério), and not from the President of the Republic. Other legal challenges are still possible.
[103] Bank of England Act 1998, c. 11, §§ 9C and 11.
[104] Consolidated Version of the Treaty on the Functioning of the European Union, art. 127, 2012.
[105] Banco Central Do Brasil Complementary Law No. 179, art. 1 para. 1 (2021), also states that "Without prejudice to its fundamental objective, the Brazil Central Bank also has the objectives to ensure the stability and efficiency of the financial system, smooth out the fluctuations in the level of economic activity and foster full employment".
[106] Statuts de la Banque Centrale des Etats de l'Afrique de l'Ouest , art. 8 para. 2 (sound and sustainable growth).
[107] Law no. 1211 of the Central Bank of the Republic of Turkey, art. 4 (1970) (amended Apr. 25, 2001) ("growth and employment policies of the Government").
[108] Bank of England Act 1998, §§ 9C(2), 11.
[109] *See, e.g.*, Bank of England Act 1998, § 12(1)(b).
[110] Bank of England Act 1998, §12(1)(a).
[111] Bank of England Act 1998, c.11, § 12(1) (b).
[112] Bank of England Act 1998, c.11, § 9D(1).
[113] Bank of England Act 1998, c.11, § 9E(1). This is also contemplated for the prudential regulation role. *See* Bank of England Act 1998, c.11, § 30B(1).

practice, the Treasury chooses self-restraint on monetary policy,[114] and "specifies" economic policy in a not-too-specific way without a clear priority list. However, in the latest documents it is hard to miss the references to "balanced," "sustainable" growth, and net-zero economy transition.[115]

(iii) The more challenging "vertical" or "hierarchical" mandates may be that of the ESCB, where article 127 (1) para. 2nd of the TFEU reads:

> "*Without prejudice* to the objective of price stability, the ESCB *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*."[116] (emphasis added)

The provision combines a reference to "economic policies", similar to the provisions for the Bank of England or the Central Bank of the Republic of Turkey, with a reference to pre-defined (and Treaty-based) objectives, similar to the provision for the Central Bank of the Republic of Brazil or the BCEAO. This presents an epistemological challenge, of knowing or ascertaining the "general economic policies in the Union," and an interpretative challenge of determining whether there is any hierarchical order between policies or objectives.[117]

Regarding the epistemological challenge, a "specification procedure", like the Bank of England Act's, is hard to envisage for the ESCB. The "economic policies of the Union" are a shared responsibility. In the absence of an authoritative view from the Court of Justice, one may read article 127 (1) paragraph 2 of the TFEU in three ways.

First, a strict reading, in light of articles 119–120 of the TFEU would see this in terms of a primary role for Member States, and a coordination

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[114] Its communication of the price stability objective tends to be a formulaic reiteration of pre-agreed objectives, accompanied by a commitment to central bank independence. See Letter from Rishi Sunak, former Chancellor of the Exchequer, to Andrew Bailey, Governor of the Bank of England (Mar. 3, 2021) (on file with author) ("I hereby re-confirm the inflation target as 2 per cent as measured by the 12-month increase in the Consumer Prices Index (CPI). The inflation target of 2 per cent is symmetric and applies at all times. This reflects the primacy of price stability and the forward-looking inflation target in the UK monetary policy framework. The government's commitment to price stability, and the Bank of England's operational independence remains absolute").

[115] *Id.* ("I am today updating the MPC's remit to reflect the government's economic strategy for achieving strong, sustainable and balanced growth that is also environmentally sustainable and consistent with the transition to a net zero economy").

[116] Consolidated Version of the Treaty on the Functioning of the European Union art. 127, 2016 O.J. (C 202) 104–5 (emphasis added).

[117] Despite these difficulties, the provision is relevant because it entails a binding legal obligation, as acknowledged by senior officials of the ECB itself. *See* Frank Elderson, *Greening Monetary Policy*, THE ECB BLOG (Feb. 13, 2021), https://www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210213~7e26af8606.en.html.

role for EU institutions.[118] Under this reading, the policy priorities of EU institutions and Member States should coalesce into a single, identifiable source for the provision to apply. This would mean its inapplicability in practice.

Second, a more contextual reading would also identify article 121 of the TFEU, and the "soft coordination" led by the Council, which formulates "broad guidelines."[119] Climate change and environmental protection are among the goals of recent "broad guidelines," but a clear order of priority remains elusive.[120] More important, taking article 121 of the TFEU and Council's soft coordination as the sole basis may be detached of the reality of policy formulation.

Thus, a third, purposive reading would look at hard coordination mechanisms, based on provisions on budgetary stability and excessive deficits,[121] complemented by the Stability and Growth Pact,[122] and subsequent additions.[123] These resulted in closer coordination and governance which crystalized in the European Semester.[124] This in practice has granted an even more prominent role to the Commission and Council.[125]

The current Commission clearly outlined its political priorities,

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[118] TFEU arts. 119–120.
[119] TFEU art. 121. The guidelines are formulated upon a Commission recommendation, and the monitoring is done based on Commission reports.
[120] *See, e.g.*, Council Recommendation No. 2015/1184, 2015 O.J. (L 192) 27–8 ("Removing key barriers to sustainable growth and jobs at Union level").
[121] The general basis is the monitoring procedure under Article 121 TFEU, and the more specific basis is in Article 126 TFEU. TFEU art. 121; TFEU art. 126. Article 136 TFEU provides for the possibility of adopting specific provisions for the Euro area. TFEU art. 136. Protocol 12 contemplates the Excessive Deficit Procedure. Consolidated Version of the Treaty on the Functioning of the European Union Protocol 12, 2008 O.J. (C 115) 279–80.
[122] Council Resolution on the Stability and Growth Pact, 1997 O.J. (C 236) 1–2 (providing the political basis of the Stability and Growth Pact); Council Regulation No. 1466/97, 1997 O.J. (L 209) 1-5 (the preventive arm of the Stability and Growth Pact); Council Regulation No. 1467/97, 1997 O.J. (L 209) 1-4 (the corrective arm of the Stability and Growth Pact).
[123] *See Legal Basis of the Stability and Growth Pact,* EUR. COMM'N, https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact/legal-basis-stability-and-growth-pact_en (last visited Feb. 28, 2023).
[124] *See The European Semester Explained,* EUR. COMM'N, https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/european-semester-explained_en (last visited Feb. 28, 2023).
[125] The Commission releases an Annual Sustainable Growth Strategy (ASGS), the Alert Mechanism Report (AMR), and a draft Joint Employment Report and recommendations for the euro area. Press Release, Eur. Comm'n, European Semester Autumn Package: Rebounding Stronger From the Crisis and Making Europe Greener and More Digital (Nov. 24, 2021) (IP/21/6105).

including the Green Deal, a digital Europe, etc.,[126] as has the Council,[127] with a special focus on climate change and the green transition.[128] For example, a 2020 document by Council, Commission, and Parliament on policy objectives and priorities for 2020-2024 focused on ensuring a full recovery from the COVID-19 pandemic based on the green and digital transition.[129] This still puts the burden of clarity on EU institutions and Member States, and climate change is not the only priority; however, it shows that climate change is a clear and salient priority.

Even if we adopt the third, purposive reading of Article 127 (1) paragraph 2 of the TFEU, a second challenge is whether EU policy priorities can be used to justify a "hierarchy" of goals despite the clause making reference to the *"achievement of the objectives of the Union as laid down in Article 3*" of the Treaty on European Union (TEU). Article 3 includes "sustainable development" and environmental objectives, but also other goals, without any hierarchy between them.[130] Thus, how could the ESCB establish such a hierarchy?

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[126] *The European Commission's Priorities*, EUR. COMM'N, https://ec.europa.eu/info/strategy/priorities-2019-2024_en (last visited Feb. 28, 2023). *See also* Ursula von der Leyen, President of the European Commission, Opening Statement in the European Parliament Plenary Session 16: Political Guidelines for the Next European Commission 2019-2024 (July 16, 2019). They also include an economy that works for people, a stronger Europe in the world, or a European way of life based on rule of the law and justice and democracy.

[127] Each Council presidency includes some conclusions and priorities. *See generally European Council conclusions*, EUR. COUNCIL, https://www.consilium.europa.eu/en/documents-publications/public-register/euco-conclusions/ (last visited Feb. 28, 2023). However, on a more long-term basis, the Council identified a "Strategic Agenda" for 2019-2024. Press Release, Eur. Council, A New Strategic Agenda 2019-2024 (June 20, 2019) (available at: https://www.consilium.europa.eu/en/press/press-releases/2019/06/20/a-new-strategic-agenda-2019-2024/).

[128] The priorities of the Strategic Agenda 2019-2024 make reference to citizens and freedoms, developing a strong and vibrant economic base, building a climate-neutral, green, fair and social Europe, and promoting European interests and values on the global stage. Press Release, Eur. Council, A New Strategic Agenda 2019-2024 (June 20, 2019) (available at: https://www.consilium.europa.eu/en/press/press-releases/2019/06/20/a-new-strategic-agenda-2019-2024/).

[129] Joint Conclusions of the European Parliament, the Council of the European Union and the European Commission on Policy Objectives and Priorities for 2020-2024, 2021 O.J. (C 451) 4–5.

[130] For example, Article 3 (3) of the Treaty on European Union (TEU) states: "The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance. It shall combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity between generations and protection of the rights of the child. It shall promote economic, social and territorial cohesion, and solidarity among Member States. It shall respect its rich cultural and linguistic diversity, and shall ensure that Europe's cultural heritage is safeguarded and enhanced." Consolidated Version of the Treaty on European Union art. 3, 2016 O.J. (C 202) 17. Yet, Article 3 (5) states that: "In its relations with the wider world, the Union shall uphold and promote its values and interests and contribute to the protection of its citizens. It shall contribute to peace, security, the sustainable development of the Earth, solidarity and mutual respect among peoples, free and fair trade, eradication of poverty and the protection of human rights, in particular the rights of the child, as well as to the strict observance and the development of international law, including respect for the principles of the United Nations Charter." TFEU art. 3.

The question is formulated deceptively on purpose. The ESCB does not decide any hierarchy, because this is part of its "support" obligation, and "hierarchy" is the wrong term to define it. Article 127 (1) paragraph 2 of the TFEU states that the ESCB shall support the economic policies *"*with a view to" achieve these objectives.[131] Thus, even if the objectives are not hierarchically organized, certain policies can be prioritized at different points in time, i.e., the duty of support is not static, but dynamic, and evolves with those policies.

(iv) In spite of the previous conclusions, the ESCB's legal obligation of support is admittedly weak. It is an obligation of "support" and as a result other Union institutions and Member States have the primary responsibility to formulate the policies clearly, to make them ascertainable, and to execute those policies. Second, the obligation does not specify what kind of support is required. This support can range from moral support to operational support depending on whether the ESCB activities render themselves to that.[132] Third, and most crucially, the obligation of support is *subject to* the primary objective of price stability. The ESCB must refuse support if, in its view, that endangers price stability.

The above analysis suggests that "peripheral" mandates are not ideal to address climate change. There are different formulations for central banks' mandates in their founding legal texts. Although price stability is made express in central bank mandates (or can be implicitly deduced from them), peripheral mandates are much more variable in substance and intensity, which means that dialogue and cooperation between central banks would lack a common "constitutional" basis. Furthermore, for vertical central banks this would mean subjecting a goal that requires clarity and focus to a process characterized by "time inconsistency." Third, and most important, the point here is not that central banks should incorporate climate change into their models and tools *provided that* it does not impact price stability, but rather *because* it already does. Considering climate change as part of peripheral mandates would trivialize its importance for price and macroeconomic stability, and would relax the importance, and the urgency, of its incorporation.

2.1.3. Climate Change And Central Banks' Regulatory And Supervisory Goals.

Any discussion about the assimilation of climate change within central banks' financial regulation and supervision mandates needs to address a conceptual and an institutional challenge. The conceptual challenge is that, as a matter of "fit," climate risk needs to be characterized as financial risk. Oddly, this is the easier part. From an

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[131] TFEU art. 127.

[132] The fact that there is no formal specification procedure, like the Bank of England's, does not eliminate its the logic. Union institutions need to *commit* to clear, predefined policies for the legal obligation to fasten. *See* Zilioli & Ioannidis, *supra* note 79.

initially timid position in the G-20, the consensus gradually moved to treat climate risk as financial risk, at a political level and a technical level.[133] This idea was supported by the Financial Stability Board (FSB), the Network for the Greening of the Financial System, and the Banking Supervision Division of the ECB.[134] The debate is no longer about *whether* financial supervision should tackle climate change, but *how* to do so.[135]

The institutional challenge, however, is more difficult, because it tries to answer whether central banks should have the leading competence. This, in turn, depends on how the mandates on financial stability, regulation, and supervision are allocated, which varies across jurisdictions and time periods. The debate over the concentration of monetary policy *and* regulation and supervision in a single institution (the central bank) or their dispersion across different institutions has evolved. In the 90s there was a slight preference for dispersion for developed countries (which tended to separate roles) and for concentration in developing countries.[136] Among the authorities that had, and have retained, [137] a broad mandate are the People's Bank of China

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[133] After G20 Finance Ministers established the Climate Finance Study Group (CFSG) in April 2012, leadership committed *"*to consider[ing] ways to effectively mobilize resources taking into account the objectives, provisions and principles of the UNFCCC*"*, Leaders Declaration*: Promoting Longer-Term Prosperity Through Inclusive Green Growth*, Group of Twenty [G20] ¶ 71 (June 19, 2012), http://g20.org/images/stories/docs/g20/conclu/G20_Leaders_Declaration_2012_1.pdf; *Communiqué*, Group of Twenty [G20], G20 Finance Ministers and Central Bank Governors Meeting ¶ 30 (Nov. 5, 2012) https://www.afi-global.org/wp-content/uploads/publications/communique-meeting-nov-5.pdf ("[T]aking into account the objectives, provisions and principles of the UNFCCC"). This stance was reiterated in the G20 Leaders' Declaration at the following summit. *Leaders Declaration: Pursuing the Fight Against Climate Change*, Group of Twenty [G20] para. 101 (Sept. 6, 2013), http://www.g20.utoronto.ca/2013/Saint_Petersburg_Declaration_ENG.pdf; Communiqué*: Issues for Further Action,* Group of Twenty [G20], G20 Finance Ministers and Central Bank Governors Meeting, 5 (Apr. 17, 2015), https://www.g20.org/content/dam/gtwenty/about_g20/previous_summit_documents/2015/Communique-G20-Finance-Ministers-*and*-Central-Bank-Governors-Meeting-Washington-DC.pdf.

[134] *See, e.g.*, Task Force on CLIMATE-RELATED FINANCIAL DISCLOSURES [TCFD], https://www.fsb-tcfd.org (last visited Feb. 21, 2022); NETWORK FOR THE GREENING OF THE FIN. SYS., Guide for Supervisors Integrating CLIMATE-RELATED and ENVIRONMENTAL RISKS into PRUDENTIAL SUPERVISION (2020), https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf; EUR. CENT. BANK – BANKING SUPERVISION, REPORT ON INSTITUTIONS' CLIMATE-RELATED AND ENVIRONMENTAL RISK DISCLOSURES (2020), https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.ecbreportinstitutionsclimaterelatedenvironmentalriskdisclosures202011; EUROPEAN CENTRAL BANK – BANKING SUPERVISION, GUIDE ON CLIMATE-RELATED AND ENVIRONMENTAL RISKS (2020), https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks.

[135] *See* Charles A. E. Goodhart, *The Organisational Structure of Banking Supervision*, FIN. STABILITY INST. (FSI) OCCASIONAL PAPERS 1, 4 (2000).

[136] For a summary that favors separation of roles in developed countries and concentration of roles in developing countries, *see id.* at 1.

[137] *See generally* DIEGO VALIANTE ET AL., EUR. COMM'N, STUDY ON EXEMPTIONS FOR THIRD-COUNTRY CENTRAL BANKS AND OTHER ENTITIES UNDER THE MARKET ABUSE REGULATION AND THE MARKETS IN FINANCIAL INSTRUMENTS REGULATION (2015).

(PBoC),[138] the Hong Kong Monetary Authority (HKMA),[139] or the Monetary Authority of Singapore (MAS).[140] These institutions have an easier task assimilating climate change considerations within their mandate in an integrated fashion.

Conversely, some jurisdictions had, and have maintained, a dispersion of tasks, such as Canada,[141] Australia,[142] or Japan, where the Financial Services Agency (FSA) is the main supervisory authority.[143] Yet, the central bank keeps an important role in guaranteeing financial stability in Australia.[144] In Japan, as part of the bank's role, it can audit banks through contract agreements.[145] This puts both banks closer to a "mixed" system.

After the Great Financial Crisis (2007-2008), Western jurisdictions pivoted towards concentration. In the United Kingdom, the concentration of tasks in the Bank of England (BoE)[146] was accompanied by the expansion of the BoE's mandate to expressly encompass "financial stability."[147] This should make the assimilation of climate change considerations significantly easier, and in fact the BoE shows a coordinated strategy between the monetary, prudential, and financial

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[138] Zhōngguó rénmíng yínháng fǎ (中国人民银行法)[Law of the People's Bank of China] (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 18, 1995), art 3.

[139] Exchange Fund Ordinance, (2019) Cap. 66, arts. 1–3 (H.K.). The Hong Kong Monetary Authority (HKMA) is the government authority responsible for maintaining monetary and banking stability in Hong Kong, and has stability and supervisory functions after it was established in April 1993 by merging the Office of the Exchange Fund and the Office of the Commissioner of Banking.

[140] Monetary Authority of Singapore (MAS) Act (1970).

[141] The Bank of Canada (regulated in the Bank of Canada Act, R.S.C. 1985, c. B-2) is responsible for monetary policy, while the Office of the Superintendent of Financial Institutions (OSFI) regulated in its own Act (Office of the Superintendent of Financial Institutions Act, R.S.C. 1985, c. 18).

[142] The Australian Prudential Regulation Authority Act 1998 pt 2 div 8 established the Australian Prudential Regulation Authority (APRA) by attributing it competences in prudential regulation and supervision from the Reserve Bank of Australia (RBA).

[143] Kin'yū-chō-hō no seiritsu [The Establishment of the Financial Services Agency (FSA) Act] Law No. 130 of 1998, ch. 1 art. 2 § 2, *translated in* (Japanese Law Translation [JLT DS]), https://www.japaneselawtranslation.go.jp/en/laws/ (search required) (Japan) The FSA exercises these tasks by delegation from the Ministry of Finance.

[144] *Role of the Reserve Bank in Maintaining Financial Stability*, RSRV. BANK OF AUSTRALIA, https://www.rba.gov.au/fin-stability/reg-framework/role-of-the-reserve-bank-in-maintaining-financial-stability.html (last visited Feb. 21, 2022).

[145] Although the BoJ cannot exercise supervisory functions by government delegation because it is not a government agency, in its capacity as Lender of Last Resort (LoLR) it can conclude agreements to audit the banks that have current accounts with it. Nipponginkō-hō [Bank of Japan Act], Law No. 89, art. 44; *see* Kazuo Ueda, *The Structure of Japan's Financial Regulation and Supervision and the Role Played by the Bank of Japan*, CENT. FOR INT'L RSCH. ON JAPANESE ECON., CIRJE-F-703, at 3 (2009).

[146] The tasks of financial supervision, formerly in the hands of the Financial Services Authority (FSA), the main pre-crisis example of a single financial regulator, were split between the Financial Conduct Authority (FCA) and (more relevant for our purposes) the Prudential Regulation Authority (PRA), which, in turn, was placed within the institutional structure of the Bank of England. See Financial Services Act 2012, c.21, § 1(A)(1), § 2(A)(1)-(5).

[147] See Financial Services Act 2012, c 21, Part 1, § 2(1) ("The Bank's financial stability objective", adding a new §2A to the Bank of England Act).

stability side.[148]

In the United States, the Board of Governors of the Federal Reserve increased its competences in consolidated financial supervision,[149] but the Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC) kept (or expanded) supervisory competences.[150] Additionally, the Financial Stability and Oversight Council (FSOC) was set up for purposes of financial stability.[151] This horizontal distribution of competences means that cross-cutting issues of prudential regulation require interagency coordination.[152] The assimilation of climate change through this process can be tricky if climate change continues to be a politically divisive issue in the United States. This can be seen in the recent FSOC Report on Climate-Related Financial Risk.[153] The Report is a technical document, but whereas Treasury Secretary Janet Yellen (appointed by President Biden) took a clear affirmative position,[154] FDIC Chair Jelena McWilliams (appointed by President Trump) abstained.[155] This shows the complications that may arise in coordinating action between agencies.

In the EU, the issue is even more complex, institutionally speaking. After the Great Financial Crisis, the creation of the Banking Union and the Single Supervisory Mechanism (SSM) resulted in the transfer of

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[148] The Bank of England site dedicated to climate change shows a battery of projects and measures, comprising corporate bond purchases, as well as stress testing, prudential treatment, etc. *See Climate Change*, BANK OF ENG., https://www.bankofengland.co.uk/climate-change (last visited Feb. 13, 2022).

[149] The Board of Governors exercised consolidated supervision over some financial conglomerates, while others were under the oversight of the Office of Thrift Supervision (OTS), or, briefly, the Securities and Exchange Commission (SEC). This was considered far from optimal, and after the crisis the OTS was eliminated, and the competences on bank supervision went to the Board of Governors of the Federal Reserve and the Office of the Comptroller of the Currency. *See* 12 U.S.C. § 5412(b)(1)(A).

[150] For relevant OCC and FDCI laws, see *Laws & Regulations*, OFF. OF THE COMPTROLLER OF THE CURRENCY, https://www.occ.treas.gov/topics/laws-and-regulations/legislation-of-interest/index-legislation-of-interest.html (last visited Feb. 13, 2022); *and Laws & Regulations*, FED. DEPOSIT INS. CORP. https://www.fdic.gov/regulations/laws/rules/ (last visited Feb. 13, 2022).

[151] *Financial Stability Oversight Council*, U.S. DEP'T of TREAS., https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/fsoc (last visited Feb. 13, 2022). Coordination would still be needed mainly with the OCC and the FDIC, and with state insurance supervisors (since insurance supervision remains a state competence).

[152] This has happened, e.g., with the implementation Basel III rules, where the rules are promulgated by the OCC and the Federal Reserve, and the FDIC, when the rules also fell within its mandate. *See* Regulatory Capital Rules, 78 Fed. Reg. 62018 (2013); 84 Fed. Reg. 13814 (2019).

[153] FINANCIAL STABILITY OVERSIGHT COUNCIL, REPORT ON CLIMATE-RELATED FINANCIAL RISK (2021).

[154] Janet L. Yellen, U.S. Sec'y of Treasury, Remarks by Secretary Janet L. Yellen at the Open Session of the Meeting of the Financial Stability Oversight Council (Oct. 21, 2021) (transcript available on the U.S Dep't of Treasury website).

[155] Yizhu Wang, *FDIC Abstained From Climate Change Report Over Lack of 'Nuanced Analysis'*, S&P GLOB. MKT. INTEL. (Oct. 26, 2021), https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/fdic-abstained-from-climate-change-report-over-lack-of-nuanced-analysis-67252451.

many competences to the ECB Supervisory Board.[156] The founding SSM regulation refers to the "safety and soundness" of credit institutions, the "stability of the financial system," and the "integrity of the internal market" as goals to be pursued within the SSM.[157] This is the good news.

However, there is some bad news. First, constitutionally speaking, the transfer of competences was done without modifying the Treaties, which raises the question of whether the ECB's mandate now comprises financial stability.[158] Second, on a horizontal level, the Banking Union has also created the Single Resolution Mechanism (SRM) and its Board (SRB), which fulfills an FDIC-like crisis management role. Third, on a vertical level, whereas many supervisory competences have been transferred to the ECB, others remain with national authorities. This is a consequence of the fact that the Treaty basis used to transfer powers to the ECB was article 127 (6) of the TFEU, which states that the Council may "confer specific tasks . . . concerning policies relating to the prudential supervision of credit institutions and other financial institutions." This means, for example, that national authorities have supervisory competences over less significant institutions (LSI),[159] which has prompted a flow of litigation at EU Courts and national courts on the proper exercise of competences.[160] More important,

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[156] Council Regulation No. 1024/2013, 2013 O.J. (L 287) 63 (conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions) (hereinafter: SSM Regulation or SSMR).

[157] SSM Regulation or SSMR, Council Regulation No. 1024/2013, 2013 O.J. (L 287) 63 (stating, "This Regulation confers on the ECB specific tasks concerning policies relating to the prudential supervision of credit institutions, with a view to contributing to the safety and soundness of credit institutions and the stability of the financial system within the Union and each Member State, with full regard and duty of care for the unity and integrity of the internal market based on equal treatment of credit institutions with a view to preventing regulatory arbitrage").

[158] See ROSA M. LASTRA, CENTRAL BANK INDEPENDENCE AND FINANCIAL STABILITY, BANCO DE ESPANA (2010), https://www.bde.es/f/webbde/Secciones/Publicaciones/InformesBoletinesRevistas/RevistaEstabilidadFinanciera/10/May/Fic/ref0318.pdf (arguing that, following a finalistic logic, the ECB has incorporated objectives of financial stability in its mandate.). *But see* EUR. CENT. BANK, *The Role of Financial Stability Considerations in Monetary Policy and the Interaction With Macroprudential Policy in the Euro Area*, OCCASIONAL PAPER SERIES NO. 272 (Sept. 2021), https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op272~dd8168a8cc.en.pdf (defending defend that the ECB's tasks are *all* oriented towards price stability, with financial stability playing an instrumental role in that broader, overarching objective). *See also* Charles Goodhart & Dirk Schoenmaker, *The ECB as Lender of Last Resort?*, VOXEU (Oct. 23, 2014), https://cepr.ORG/voxeu/columns/ecb-lender-last-resort; Charles Wyplosz, *An Open Letter to Dr Jens Weidmann*, VOXEU (Nov. 18, 2011), https://cepr.ORG/voxeu/columns/open-letter-dr-jens-weidmann; Paul De Grauwe, *The ECB as a Lender of Last Resort*, VOXEU (Aug. 18, 2011), https://cepr.org/voxeu/columns/European-central-bank-lender-last-resort; Paul De Grauwe, *Why the ECB Refuses to Be a Lender of Last Resort*, VOXEU (Nov. 28, 2011), https://cepr.ORG/voxeu/columns/why-ecb-refuses-be-lender-last-resort (arguing that the ECB should assume Lender of Last Resort (LoLR) functions despite the ECB being reluctant to assume new objectives that could, in turn, entail new responsibilities thus keeping the responsibility in the hands of National Central Banks).

[159] SSM Regulation, Council Regulation No. 1024/2013, 2013 O.J. (L 287) 63, 75, 76, 77.

[160] See René Smits & Federico della Negra, *The Banking Union and Union Courts: Overview of Cases as of 30 December 2022*, EUR. BANKING INST. (last updated Dec.

macroprudential policies and tools were not considered to fit within the concept of "*policies relating to the prudential supervision of credit institutions*" (Article 127 (6) of the TFEU), nor were they included in what might have been the alternative Treaty basis (Article 127 (5) of the TFEU) since it only makes an indirect reference to financial stability.[161] The odd result is that national authorities retain the main competences over macroprudential tools and policies,[162] even though the ECB is better placed to have a macro vision. On this, the ESCB can play a role directly, and through its involvement within the European Systemic Risk Board (ESRB),[163] but it is limited to a coordinating role.

2.1.4. Central Banks And "Transversal" Constitutional Environmental Objectives: Climate Change's Integration Through A Side Door?

Climate change's relevance for central banks' mandate can be analyzed using an "inside out" approach, i.e., reasoning from the central bank mandate "outwards" to new ideas. However, analysis can also apply an "outside in" perspective, beginning with provisions having general, transversal application, typically found in some constitutional texts, and then proceeding "inwards" to see if they apply to the central bank's mandate.

In general, transversal constitutional goals seem less relevant for "statutory" central banks (i.e., central banks not referred to in the constitution) which are one level removed from constitutional objectives. They are more relevant for "constitutional" central banks, like those in Brazil,[164] Mexico,[165] Switzerland,[166] and especially the ESCB.[167] An explicit mention of the central bank in a constitutional text strengthens basic central bank principles, such as its independence, but may also bring responsibilities.

2022), https://ebi-europa.eu/publications/eu-cases-or-jurisprudence (clear examples are case T-122/15 *Landeskreditbank Baden-Würtemberg v. ECB*, Judgment of 16 May 2017, ECLI:EU:T:2017:337, or case T-712/15, *Crédit Mutuel Arkea*, 13 December 2017, ECLI:EU:T:2017:900, to cite two, among many.)

[161] See Consolidated Version of the Treaty on the Functioning of the European Union art. 3, 2016 O.J. (C 202) 231 ("The ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system"). *See also* TFEU art. 127 (referring to the "stability of the financial system", despite article 3 stating that the ESCB "shall contribute" to the conduct of the policies "by the competent authorities", which seems to assume that these are national authorities).

[162] Council Regulation No. 1024/2013, 2013 O.J. (L 287) 75.

[163] Commission Regulation No. 1092/2010, 2010 O.J. (L 331) 6, 9 (on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board).

[164] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] arts. 164, 192 (Braz.).

[165] CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS, CP, art. 28, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 10-02-2014.

[166] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 99 (Switz.).

[167] Consolidated Version of the Treaty on the Functioning of the European Union arts. 13, 48, 2016 O.J. (C 326) 22, 42, arts. 127–33, 2016 O.J. (C 202) 102–105.

In the absence of case law on this matter, any conclusion based on textual analysis of constitutional norms is bound to be provisional, but it may provide some useful clues. The key lies in the link between the general objectives and the specific central bank role. This depends on a series of interpretative steps, which can be summarized by the following questions, and, depending on the answer, the legal effect.

Question	**Effect**
1. Are there general constitutional objectives?	Legal basis
2. Are the objectives linked to fundamental rights?	Legal basis for *positive* duties
3. How explicit is the language?	Makes the duties' content *concrete*
4. How specific is the obligation?	Makes the duties applicable to the central bank
5. How broad is the central bank's mandate?	Links the central bank to general objectives
6. What relationship (hierarchy, specialty, instrumentality) between the duty and other central bank duties?	Calibrates the intensity of the duty

One can apply the above questions to concrete cases. For example, in Mexico the Constitution enshrines the right to a healthy environment, and "the State" obligation to guarantee it (steps 1-2),[168] and the central bank has a relatively broad mandate (step 5).[169] However, the language is not explicit on what are the duties that must be enforced (step 3), nor specifies what institutions ("the State") are subject to them (step 4). In Brazil the Constitution links the right to an ecologically balanced environment to the "Social Order"[170] (step 1), and environmental goals are guiding principles for the economic and financial order and the national financial system (step 3),[171] although these provisions are in different Titles.[172] More importantly, the duties are not specific enough to be allocated to the central bank,[173] which is not a "central"

[168] CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS, CP, art. 4, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 10-02-2014.
[169] CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS, CP, art. 28, Diario Oficial de la Federación [DOF] 05-02-1917, últimas reformas DOF 10-02-2014.
[170] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 225 (Braz.).
[171] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 170 (Braz.). Chapter IV of Title VII (Economic and Financial Order) includes art. 170 VI, which sets the guiding principles. In the same chapter, article 192 includes "balanced development" as a principle of the national financial system.
[172] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 225 (Braz.). It is unclear whether this weakens the link between objectives and "rights" (step 2).
[173] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 225 (Braz.). The Government ("Poder Publico") and the community have a duty to preserve right to a balanced environment for present and future generations. See art. 225 (1) of the CONSTITUTION OF THE FEDERATIVE REPUBLIC OF BRAZIL. CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 225 (Braz.).[However, in other parts the Constitution is more specific in allocating responsibilities to governmental actors. Protecting the environment is expressly treated

constitutional actor (step 4).[174] Thus, its role depends less on the constitution than on statutory law, which has recently narrowed down the central bank's mandate (step 5).[175] Absent a clearer acknowledgement in that law, environmental protection goals look too general to establish a direct obligation (step 6).[176]

Likewise, the Swiss Constitution includes mentions to the environment and sustainable development (step 1),[177] but it is only explicit on both the power to *legislate* (step 3)[178] and on specific policies (step 4), such as energy policy,[179] agriculture,[180] food security,[181] or corporate governance legislation.[182] Although the central bank's mandate could be interpreted broadly (step 5), there is no strong link between the mandate and environmental protection.

In the EU, environmental protection and sustainable development are general Union objectives under Article 3 TEU (step 1)[183] linked to fundamental rights (step 2).[184] Crucially, Article 11 of the TFEU expressly provides that "[e]nvironmental 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."[185] (steps 3-4) The ESCB-ECB have a constitutional relevance unparalleled in other systems, which makes them directly

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as a shared responsibility of the Union, the States, the Federal District and the Municipalities (article 23 VI) which have the competence to *legislate* on it (Article 24 VI and VIII). The Constitution also includes an explicit mention of environmental responsibilities in relation to the State's function as a normative and regulatory agent (article 174) the national health system (Article 200 VIII) the federal laws that regulate media (Article 220 § 3, no. II).

[174] Although the central bank is included in the broader reference to "Government" (or "*Poder Publico*") under article 225, the central bank itself is referred to indirectly, e.g., CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 164 (Braz.) (currency). *See* CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] arts. 164, 192, 225 (Braz.).

[175] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] arts. 164, 225 (Braz.); Michael Pooler & Bryan Harris, *Brazil Passes Law Giving Autonomy to Central Bank*, THE FIN. TIMES (Feb. 10, 2021) https://www.ft.com/content/d10ba61b-78b6-480c-9652-0cc7b06c1bbd.

[176] CONSTITUIÇÃO FEDERAL [C.F.] [Constitution] art. 170 (Braz.).

[177] "The Confederation and the Cantons shall endeavour to achieve a balanced and sustainable relationship between nature and its capacity to renew itself and the demands placed on it by the population." BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 73 (Switz.) (Sustainable Development).

[178] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 74 (Switz.) (Protection of the Environment) provides that "[t]he Confederation shall legislate on the protection of the population and its natural environment against damage or nuisance."

[179] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, arts. 89, 73 (Switz.).

[180] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, arts. 104(1), 104(3)(c) (Switz.).

[181] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 104a(d) (Switz.).

[182] BUNDESVERFASSUNG [BV] [CONSTITUTION] Apr. 18, 1999, SR 101, art. 95(3) (Switz.).

[183] Consolidated Version of the Treaty on European Union art. 3, 2012 O.J. (C 326) 17.

[184] *See* Charter of Fundamental Rights of the European Union art. 37, 2000 O.J. (C 364).

[185] TFEU art. 11. *See also* Charter of Fundamental Rights of the European Union art. 37, 2000 O.J. (C 364) 17 (*"*A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development").

bound to these general principles,[186] but they also have a narrow mandate (step 5). Thus, it all hinges on how to structure the relationship between both.

One structural option is "hierarchy". Article 127 (1), paragraph 2 of the TFEU says that the ESCB shall support Union policies with a view to achieve Union objectives under Article 3 of the TEU,[187] "without prejudice" to price stability.[188] Yet, this ignores that Article 11 of the TFEU is a different provision from Article 3 of the TEU, with different content.[189] The ESCB may have a secondary goal to support Union policies (as the vehicle for achieving goals) but it has a *direct* duty to integrate environmental protection into its own policies and activities.[190]

The second structural option of "specialty" or *lex specialis* is not useful either, because it depends on how we frame the problem. Environmental protection is a general provision and price stability a specific objective.[191] However, we can also see price stability as the ECB's general objective, and environmental as a criterion that informs more specific decisions, e.g., on asset purchases, collateral frameworks, etc.[192]

Indeed, "hierarchy" and "specialty" are premised on a *conflict* between objectives, which goes against the principle of "consistency" between policies and activities required by TFEU Title II, where article 11 of the TFEU is inserted.[193] Thus, the preferred interpretation is an "instrumental" or "procedural" one: environmental considerations must be integrated into the ESCB mandate as a means to fulfill its price stability objective.

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[186] Charter of Fundamental Rights of the European Union art. 37, 2000 O.J. (C 364) 21.
[187] TFEU art. 127.
[188] This could be one reading of the position in Monetary policy and climate change. *See* Benoît Cœuré, Member of the Executive Board of the European Central Bank, Address at the Conference on Scaling Up Green Finance: The Role of Central Banks (Nov. 8, 2018).
[189] Case law on Article 11 treats it as a "principle of integration" in EU policies, one that applies "cross-sectionally" and is a source of legal obligations. *See* Solana, *supra* note 6 at 557.
[190] *See id.* at 548. Author convincingly argues that, whereas article 3 of the TEU has a "substantive" dimension (and TFEU art. 7 127(1) para. 2 would provide a procedural dimension based on hierarchy), article 11 TFEU has both a substantive and procedural dimension. *See also* BEATE SJÅFJELL, THE LEGAL SIGNIFICANCE OF ART. 11 TFEU FOR EU INSTITUTIONS AND MEMBER STATES 60–61 (Beate Sjåfjell & Anja Wiesbrock eds., 2015) [hereinafter: SJÅFJELL, LEGAL SIGNIFICANCE OF ARTICLE 11 TFEU]; Beate Sjåfjell, *The Environmental Integration Principle: A Necessary Step Towards Policy Coherence for Sustainability*, *in* THE EU AND THE PROLIFERATION OF INTEGRATION PRINCIPLES UNDER THE LISBON TREATY (Francesca Ippolito, Maria Eugenia Bartolino, et al. eds., 2019) [hereinafter: Sjåfjell, *The Environmental Integration Principle*].
[191] Rens van Tilburg & Aleksandar Simić, *Legally Green Climate Change and the ECB Mandate*, SUSTAINABLE FINANCE LAB (13, 2022), https://sustainablefinancelab.nl/en/every-avenue-available-lessons-from-monetary-history-for-tackling-climate-change/.
[192] *See infra* Section 4.1.1.
[193] Article 7, the first provision under that Title, reads: "The Union shall ensure consistency between its policies and activities, taking all of its objectives into account and in accordance with the principle of conferral of powers." TFEU art. 7.

A final challenge is to determine the relevance of environmental protection *vis-à-vis* other objectives. Initially, environmental protection had unique relevance,[194] but the Lisbon Treaty accompanied the environmental integration principle,[195] with multiple integration principles.[196] This may "demote" environmental protection from its special status.[197] At the same time, the language of the provisions is more vague in regard to other goals,[198] but is more precise and procedural for environmental protection.[199] This "special" role is backed by case law.[200] Furthermore, environmental protection and sustainable development entail a *legal* commitment to scientific evidence.[201] If scientific evidence suggests that climate change will have an impact on certain goals, there is a legal commitment to consider this evidence in the definition and implementation of the policies that pursue those goals. This reinforces our previous view: climate change must be integrated into price stability because scientific evidence suggests that it will have an impact on price stability, and, conversely, non-carbon-sensitive EU policies will exacerbate climate change and its effects.

2.2. Arguments Of "Fit" ("Whether") And The Courts: Standards Of Review.

As argued above, climate change "fits" within central banks' mandates: broad or narrow, horizontal or vertical, monetary, prudential

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[194] *See generally* Sjåfjell *The Environmental Integration Principle*, *supra* note 190, at 9. This (i) enabled the exercise of competencies by the EU in other areas, as an exception to the "specific powers" doctrine. *See generally* Case C-240/83, Procureur de la République v. Assoc. De Défense des Brûleurs d'huiles Usagés, 1985 E.C.R. 538 (case decided before the principle was included in EU Treaties). It (ii) justified limitations to other EU principles and objectives. *See* Case C-176/03, Comm'n v. Council, 2005 E.C.R. I-7907] (criminal law provisions); Case C-379/98 PreussenElektra, 2001 E.C.R. I-2099 (a principle justifying discriminatory treatment). And it (iii) had to be integrated in other policies and activities. *See* Case C-513/99, Concordia Bus Finland, 2002 E.C.R. I-7213 (on public procurement). This status as an overarching principle was confirmed by its elevation by article 6 of the EC.

[195] TFEU art. 11.

[196] TFEU arts. 8–10. These comprise inequality, high employment, social policy, and consumer protection.

[197] Hans Vedder, *The Treaty of Lisbon and European Environmental Law and Policy*, J. OF ENV. L. 222, 289 (2010); Jan H. Hans, *Stop the Integration Principle?*, 33 FORDHAM INT'L L.J. 285, 289 (2011).

[198] Whereas under articles 8-10 and 12 "the Union shall *aim*" to eliminate inequalities (TFEU art. 8) (emphasis added); "shall *take into account*" the need for a high level of employment, etc. (TFEU art. 9) (emphasis added); "shall *aim*" to combat discrimination, etc. (TFEU art. 10) (emphasis added), and consumer protection "shall be *taken into account*" in "other Union policies" (TFEU art. 12) (emphasis added).

[199] Environmental protection "must be integrated into the definition and implementation of the Union's policies and activities." TFEU art. 11 (emphasis added). The language is precise ("integrated"), comprehensive ("Union's policies and activities"), and formal, and procedural ("into the definition and implementation").

[200] The Court of Justice has highlighted its essential and transversal importance (Case C-176/03, Comm'n v. Council, 2005 E.C.R. I-7907) and its formal integration among the objectives of other policies (Case C-440/05, Comm'n v. Council, 2007 E.C.R. I-9128) (with reference to transport policy); Case C-320/03, Comm'n v. Austria, 2005 E.C.R. I-9907 (internal market)).

[201] *See generally* Sjåfjell, *The Environmental Integration Principle*, *supra* note 190.

or stability based, statutory or constitutional. Thus, central banks should incorporate climate change. At the same time, they have broad discretion. How are these factors to be reconciled when a complaint is brought against a central bank who does too little or too much, and a court must decide on the issue? This depends on the justiciability of climate change policies (2.2.1.), the justiciability (and standard of review) of central banks' acts on monetary policy (2.2.2.), and the specialties for other acts and objectives (2.2.3.)

2.2.1. Justiciability Of Climate Change Policies.

Climate change litigation against government actors has exploded in the past years,[202] but some trends are observable. An initial observation is that early landmark cases in the United States, like *Massachusetts v. EPA*, were more procedural.[203] First, the Supreme Court had to justify that the problem was justiciable (i.e., a "case or controversy" to be decided by courts[204] that did not belong in the political branches of government), and that plaintiffs had standing to sue the government/agency. Second, the Supreme Court had to focus on whether to regulate carbon emissions under a Clean Air Act mandate to regulate "pollutants",[205] and whether the EPA had a duty to take the causal link between carbon emissions and climate change into consideration, or had discretion to ignore it.[206] However, subsequent US case law has meant a step back along the same procedural lines.

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[202] The issue is in constant evolution, but it is possible to keep track of it thanks to some excellent initiatives, such as the Sabin Center for Climate Change Law, which maintains an updated database with the latest litigation. *See Climate Change Litigation Databases*, SABIN CENT. FOR CLIMATE CHANGE LAW, http://climatecasechart.com/. The cases referred to here have been consulted in its publicly available database. We leave out issues like litigation affecting private parties, or litigation associated with licenses, planning and building permits, or impact assessments, etc., which, although very important, offer less useful lessons for central banks.

[203] *See generally* Massachusetts v. EPA, 549 U.S. 497 (2007).

[204] *See* Luther *v.* Borden, 48 U.S. 1 (1849). *"*While it may be true that regulating motor-vehicle emissions will not by itself reverse *global warming, it by no means follows that we lack jurisdiction to decide whether EPA has a duty to take steps to* slow *or* reduce *it*." In the Court's view, due to the enormity of climate change's consequences *"*a reduction in domestic emissions would slow the pace of global emissions increases, no matter what happens elsewhere*"* Massachusetts v. EPA, 549 U.S. at 525, 526.

[205] "The Clean Air Act's sweeping definition of "air pollutant" includes "*any* air pollution agent or combination of such agents, including *any* physical, chemical . . . substance or matter which is emitted into or otherwise enters the ambient air." On its face, the definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word 'any.'" Massachusetts v. EPA, 549 U.S. at 528–29 (internal citations omitted).

[206] The key was whether the EPA could choose not to do something because it considered that carbon emissions were not pollutants once the EPA had formed a "judgment" about the link between carbon emissions and climate change. As stated by the Court, the "EPA does not dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming. At a minimum, therefore, EPA's refusal to regulate such emissions 'contributes' to Massachusetts' injuries." Secondly, whether the state's complaint should fail because climate change was a global problem. According to the Court, the "EPA overstates its case. Its argument rests on the erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum. Yet accepting that premise would doom most challenges to regulatory action." Massachusetts v. EPA, 549 U.S. at 523.

Thus, as a second observation, the procedural approach has not (so far) taken hold among courts globally. Instead, an alternative, *substantive* approach has become accepted, based on fundamental rights. The clearest example is the *Urgenda* case from the Netherlands. In this case, Dutch courts held all the way up to their Supreme Court,[207] that the Dutch government's carbon emission targets were unlawful, contrary to Treaty-based commitments (Paris Agreement), *and* contrary to basic fundamental rights, such as the right to family and private life.[208] The Court (i) interpreted fundamental rights as resulting in positive obligations for the State (and not just negative, abstention duties), which were sufficiently precise as to provide a stricter standard of review for otherwise "political" decisions, *and* (ii) used those fundamental rights as "trumps" over considerations of policy,[209] which helped to change the narrative from "discretion," "separation of powers," or "procedure" to substantive ones like "rights." The courts nonetheless respected the government's discretion to design new plans that were respectful of international commitments.

This substantive approach has (so far) given other courts arguments to sidestep justiciability and procedural objections, as seen in *VZW Klimaatzaak v. Belgium,*[210] *Andrés Mauricio Salamanca et al. c. Government of Colombia*,[211] *Oxfam France, Notre Affaire à Tous et al.*[212] or *Padam Bahadur Shrestha v. The Office of the Prime Minister* by the

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[207] HR 20 december 2019, NJ 2020, ECLI:NL:HR:2019:2007 (State of the Netherlands/Urgenda Foundation) (Neth.).

[208] *Urgenda* was not the first case to make the connection between carbon emissions (or fossil fuels) and fundamental rights. In Gbemre v. Shell Petroleum Development Company of Nigeria [2005] FHC/B/CS/53/05, the Federal Court of Nigeria held that the practice of gas flaring by oil companies violated the fundamental rights of life and dignity provided in the Constitution of Federal Republic of Nigeria and the African Charter on Human and Peoples Rights. However, there was not such an immediate link between climate change and fundamental rights.

[209] RONALD DWORKIN, RIGHTS AS TRUMPS, *in THEORIES OF* RIGHTS 153, 164 (Jeremy Waldron ed., 1984).

[210] Tribunal de prémiere instance francophone de Bruxelles [Civ.] [French-speaking Tribunal of First Instance] Brussels (4th ch.), June 17, 2021, 2015/4585/A. The court of First Instance in Brussels declared that the Belgian government had breached its obligations but refused to set any targets for the government *and* to issue an injunction against the government to set such targets on the grounds of separation of powers (the decision was appealed).

[211] Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ. abril 5, 2018, M.P: Luis Armando Tolosa Villabona, 11001-22-03-000-2018-00319-01 (Colom.). The Supreme Court reversed a previous decision by the Superior Court of Bogotá and held that fundamental rights of life, health minimum subsistence, freedom, and human dignity were linked to and determined by, the environment and ecosystem, and the government's failure to protect the Colombian Amazon and the Atrato River endangered those rights, and thus required the government to present plans to address deforestation in the Amazon.

[212] Tribunal Administratif De Paris [TA] [administrative court], 1e ch., Oct. 14, 2021, 1904967, 1904968, 1904972, 1904976/4-1. The Paris Administrative Court has, on two separate occasions, declared unlawful the French government's inaction to tackle climate change, and in one of the cases, it ordered the French government to take immediate and concrete actions to comply with its carbon emissions commitments and repair damages by its previous inaction by December 31, 2022.

Supreme Court of Nepal.[213] The German Federal Constitutional Court in *Neubauer v Germany*, annulled parts of the Federal Climate Protection Act (KSG) as unconstitutional[214] because, while dismissing challenges based on human dignity, or right to life and physical integrity, it held that article 20a of the German Constitution (which protects the natural foundations of life in responsibility for future generations) was justiciable, and that the law failed to distribute the burden of reducing carbon emissions among different generations proportionally.[215]

However, this approach has also been rejected in other cases. For example, in *Verein KlimaSeniorinnen Schweiz*,[216] the Swiss courts held that the plaintiffs lacked standing (not being the only people affected by climate change) and jurisdiction, since this was a political issue; in *Armando Carvalho et al.*,[217] the EU Courts held that the plaintiffs lacked standing; and in *Plan B Earth v. Secretary of State*, the United Kingdom courts dismissed the request for judicial review of the Climate Act 2008 on the very narrow grounds allowed for such judicial review.[218] Other cases offer mixed lessons.[219] In *Friends of the Earth v. Canada*,[220] courts in Canada held that they lacked jurisdiction to decide on Canada's

[213] [Supreme Court], Order 074-WO-0283, 10th Day of Month of Poush of the Year 2075 BS (2018). The Court ordered the government of Nepal to enact a new climate change law on the grounds that the previous policy stance breached Nepal's commitments under the UNFCCC and the Paris Agreement and violated the rights to a dignified life and a healthy environment guaranteed in the Constitution of Nepal.

[214] Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court] 1 BvR 2656/18, 1 BvR 78/20, 1 BvR 96/20, 1 BvR 288/20, Mar. 24, 2021, https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2021/03/rs20210324_1bvr265618en.html;jsessionid=029987D83A782989F4E0F7A2418DC4C4.1_cid344.

[215] *Id.* Since the legislature had to follow a carbon budget approach to limit warming to below 2º C and, if possible, 1.5º C, the distribution of the budget between current and future generations was not in accordance with the principle of proportionality because one generation is not entitled to consume large parts of the CO2 budget, if that imposes a radical burden of reduction on future generations, exposing those generations to a loss of freedom.

[216] Bundesverwaltungsgericht [BVGE] [Federal Administrative Court] Nov. 27, 2018, A-2992/2017; and Bundesgericht [BGer] [Federal Supreme Court] May 5, 2020, 1C_37/2019. According to the plaintiffs, by failing to set an emissions target consistent with the goal of keeping global temperatures below 2º above pre-industrial levels and allegedly violating fundamental principles of the Swiss Constitution, such as the right to life (Article 10), the sustainability principle (Article 73) and the precautionary principle (Article 74), and of the ECHR, such as the rights to life (Article 2), and to a private and family life (Article 8).

[217] *See* Case C-565/19, P Armando Carvalho and Others v European Parliament and Council of the European Union, 2021 ECLI-252 (the Court of First Instance and the Court of Justice finding that the plaintiffs were not "directly and individually concerned" by the decision).

[218] *See* Plan B Earth v. Sec'y of State for Bus., Energy and Indus. Strategy [2018] EWHC 1892 (Admin) (holding that although climate change affects human rights in general, this was not relevant, since officials exercised proper discretion, and there had been no error in law, nor had the competent Secretary of State (for Business, Energy and Industrial Strategy) misunderstood the Paris Agreement). In a different case with the same parties, the Supreme Court overturned a decision by the Court of Appeal to allow a third runway at Heathrow Airport. See Plan B Earth v. Sec'y of State for Bus., Energy and Indus. Strategy [2020] UKSC 52.

[219] In Opinion Consultiva, OC-23/17 [2017], the Inter-American Human Rights Court, at the behest of the Republic of Colombia, held that the right to a healthy environment is a human right, but it is unclear what the remedy may be.

[220] *See* Friends of the Earth v. Canada, [2008] F.C. 1183 [2009] 3 F.C.R. 201.

compliance with Kyoto commitments, but in *Environnement Jeunesse c. Procureur Général du Canada*,[221] the Superior Court of Quebec held that climate change targets and their impact on fundamental rights was a justiciable issue, but refused to authorize citizens 35 and under as a "class", as arbitrarily determined. In *Nature and Youth Norway, Greenpeace Nordic v. Ministry of Petroleum and Energy*, Norwegian courts found that the "right to the environment" provision in the Norwegian Constitution was a "rights" provision and justiciable, but that deference should be granted to the political branches of government, especially since Parliament was involved.[222] In France, the Constitutional Council rejected a petition by parliamentarians to declare the Climate Resilience Bill unconstitutional on procedural grounds.[223]

As a third observation, there is little evidence of courts scrutinizing government decisions for going too far. In *Neuzelle Agricultural Cooperative*,[224] the Court of Justice of the European Union rejected the notion that changes in a Council Regulation that provided for economic support to farmers could be contrary to the farmers' legitimate expectations (a "property-like" right) or the principle of non-discrimination.[225] The court ruled that farmers had not received precise assurance from authorities,[226] "a prudent and alert economic operator"

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[221] *See* Environnement Jeunesse c. Procureur général du Canada, [2019] F.C. 500-06-000955-183 (Can. Que.).

[222] The plaintiffs challenged permits for deep-sea extraction of oil in the Barents Sea. The Oslo court found that the "right to the environment" provision in the Constitution was a "rights" provision (and not just a guiding policy) but also held that (i) carbon emissions resulting from oil exports were not relevant when considering a breach of that right, and that (ii) the fact that the parliament (Storting) had made the decision to open the Barents Sea to extraction after it considered other alternatives, and analyzed the alignment of this decision with the objectives in the Paris agreement was enough to make it valid. *See* Föreningen Greenpeace Norden *et al. v.* The Gov't of Norway through the Ministry of Petroleum and Energy, 2018-1-4, Case no. 16-166674TVI-OTIR/06 (Nor.). The Borgarting Court of Appeal upheld the decision. *See* Föreningen Greenpeace Norden *et al.* v. The Gov't of Norway through the Ministry of Petroleum and Energy, 2020-1-23, Case no. 18-060499ASD-BORG/03 (Nor.). Although (in contrast with the Oslo court) it held that emissions resulting from oil exports were also relevant when determining a breach of the right to the environment, it also held that the threshold to determine a breach was high, and that deference should be granted to the political branches of government. *Id.* Finally, the Supreme Court held that the carbon emissions resulting from exported oil were too uncertain to justify an annulment of the licenses. *See* Nature and Youth Norway et al., v. The Gov't of Norway through the Ministry of Petroleum and Energy, 2020-12-22, Case no. 20-051052SIV-HRET (Nor.).

[223] *See Conseil constitutionelle* Décision n° 2021-825 DC (2021) (Loi portant lutte contre le dérèglement climatique et renforcement de la résilience face à ses effets). The challenge alleged that, due to its weakly defined 2050 carbon neutrality goals, the Bill deprived French citizens of their right to live in a healthy and ecologically balanced environment. The Council rejected the complaint it challenged the whole Bill and, in the Council's view, it did not have jurisdiction to hear challenges to the totality.

[224] *See* Case C-545/11, Agrargenossenschaft Neuzelle eG v Landrat des Landkreises OderSpree 2013 ECLI-169.

[225] The Council Regulations, adopted in 2009 provided direct support to farmers, but it was subsequently amended to establish that payments beyond certain amounts would be gradually reduced every year, and the savings from such reductions would be used to fund measures to face new challenges, including climate change and bio-energy (also water management, or protection of biodiversity). *Id.*

[226] The test applied by the Court was that "information which is precise, unconditional and consistent and comes from authorised and reliable sources constitutes assurances

who can foresee changes cannot plead the "protection of legitimate expectations if the measure is adopted",[227] and that the measures were objectively justified (reductions affected larger beneficiaries) and not "manifestly inappropriate." Thus, the regulation was non-discriminatory.[228]

The United States now stands out as a counterexample, where courts do not consider arguments based on fundamental rights.[229] Rather, courts only consider only procedural arguments, and government agencies can be challenged for doing too much just the same as (if not more than) for doing too little, as shown by cases such as *Utility Air Regulation v EPA*, for an excessive interpretation of its mandate,[230] or in *Michigan v EPA*, for "straying beyond the bounds of reasonable interpretation" by failing to run a cost-benefit analysis (CBA) with emphasis on "costs".[231] In *Juliana v United States* the Ninth Circuit, after a long and tortuous procedural meandering, dismissed a complaint for lack of standing filed by 21 youth represented by an NGO against the United States and several officials.[232]

2.2.2. Justiciability Of Central Bank Monetary Policy Decisions And Standard Of Review (Ultra-Deferential, Proportional, Strict).

From a pure "fit" perspective, climate change threatens price and macroeconomic stability, and is compounded with a problem of time inconsistency,[233] which fits well within central bank mandates. However, a skeptic could still formulate his argument of "fit" differently: even if the economic *concepts* of price stability, monetary policy, or financial regulation are not static and can evolve with scientific and economic models, the mandate of central banks is enshrined in legal texts, which embody their *conception* when the texts were adopted. This means that either the legal texts are reformed or climate change cannot be incorporated into central banks' mandates. This "originalist" or

capable of giving rise to such hopes." Case C-545/11, Agrargenossenschaft Neuzelle eG v Landrat des Landkreises OderSpree 2013 ECLI-169 at 25.

[227] *Id.* at 26

[228] *Id.* at 45–47.

[229] There are reasons for this since US courts tend to espouse a view of fundamental rights as "negative rights" or rights against interference, rather than as "positive obligations" of the government. *See* David P. Currie, *Positive and Negative Constitutional Rights*, 53 U. CHI. L. REV. 864, 864 (1986).

[230] Utility Air Regulatory Group v. Environmental Protection Agency, 573 U.S. 302 (2014). The Supreme Court held that, although according to the Clean Air Act, the EPA could regulate large stationary sources of pollution, like power plants, and, once these sources were regulated for conventional pollutants, they could also be regulated for greenhouse emissions, but the EPA could not use the same regulations on smaller stationary sources, like shopping centers, apartment buildings and schools.

[231] *See generally* Michigan v. Environmental Protection Agency, 576 U.S. 743 (2015). although acknowledging the need to grant deference to the decisions of administrative agencies, declared an EPA's finding that regulating coal and oil-fired plants as "appropriate and necessary" without considering the costs (i.e., running a complete Cost-Benefit Analysis (CBA)) "strayed beyond the bounds of reasonable interpretation".

[232] *See* Juliana v. United States, 947 F.3d 1159, 1170, 1175 (9th Cir. 2020).

[233] *See* discussion *supra* Section 2.1.1.

"essentialist" approach,[234] however, does not seem to fit the way courts have adjudicated on central bank decisions, which have rather focused on the proper degree of deference to be granted to central bank decisions.

(1) First, there is the ultra-deferential approach, typical of US courts. In the 1929 case of *Raichle v. Federal Reserve Bank of New York*,[235] a plaintiff alleged that the Fed's monetary policy had caused him a property deprivation without due process by 'spreading propaganda' about a shortage of money which caused stock and bond prices to fall. The Second Circuit Court of Appeals held that it was "almost grotesque" to subject central bank operations to judicial review.[236] This old (Great Depression) case still shows how US courts approach the issue. In subsequent cases, courts have dismissed complaints without even examining their merits, by sometimes finding that plaintiffs lack standing to sue[237] or that the Federal Reserve Board enjoys immunity.[238]

Canada offers another example of courts' self-restraint. In *Committee on Monetary and Economic Reform (COMER) v Canada*, COMER brought a lawsuit against Canada alleging that, under the original reading of the Bank of Canada Act, the Bank was obliged to provide interest-free funding for public projects undertaken by local, provincial or federal governments. It had previously done so until 1974, but it stopped in 1974 when it joined the Bank for International Settlements.[239] The case did not survive a motion to strike in first instance,[240] before the Federal Court,[241] and the Federal Court of

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[234] The objection based on an "Originalist" reading of the legal texts is driven by the debate on the proper interpretation of the US Constitution. See e.g., Daniel A. Farber, *The Originalism Debate: A Guide for the Perplexed*, 49 OHIO STATE L. J. 1085, 1085 (1989); GREGORY BASSHAM, ORIGINAL INTENT AND THE CONSTITUTION (Lanham, MD: Rowman & Littlefield eds., 1992), p. 1–15. There seems to be little evidence that it has affected the interpretation of central bank mandates.

[235] Raichle v. Fed. Rsrv. Bank of New York, 34 F.2d 910, 911 (2d Cir. 1929).

[236] *Id.* at 915 ("It would be an unthinkable burden upon any banking system if its open market sales and discount rates were to be subject to judicial review. Indeed, the correction of discount rates by judicial decree seems almost grotesque, when we remember that conditions in the money market often change from hour to hour, and the disease would ordinarily be over long before a judicial diagnosis could be made. [...] We can see no basis for the contention that it is a tort for a Federal Reserve Bank to sell its securities in the open market, to fix discount rates which are unreasonably high, or to refuse to discount eligible paper, even though its policy may be mistaken and its judgment bad. The remedy sought would make the courts, rather than the Federal Reserve Board, the supervisors of the Federal Reserve System, and would involve a cure worse than the malady").

[237] Bryan v. Fed. Open Mkt. Comm., 235 F. Supp. 877, 882 (D. Mont. 1964); Comm. for Monetary Reform v. Bd. of Governors of Fed. Rsrv. Sys., 766 F.2d 538, 541 (D.C. Cir. 1985). *Contra* Riegle v. Fed. Open Mkt. Comm., 656 F.2d 873, 879 (D.C. Cir. 1981); Melcher v. Fed. Open Mkt. Comm., 836 F.2d 561, 562 (D.C. Cir. 1987).

[238] Rsch. Triangle Inst. v. Bd. of Governors of Fed. Rsrv. Sys., 132 F.3d 985, 987 (4th Cir. 1997).

[239] The plaintiffs alleged, was giving up control of monetary policy to foreign bodies, in a way contrary to the Act, the Constitution, the Charter of Fundamental Rights, and unwritten constitutional principles. *See, e.g.* Committee for Monetary and Economic Reform ("COMER") v. Canada, 2013 F.C. 855 (Can.).

[240] *Id*.

[241] Committee for Monetary and Economic Reform ("COMER") v. Canada, [2014] F.C. 380 (Can.).

Appeal.[242] The amended statement of claim was not any luckier before the Federal Court,[243] the Federal Court of Appeal,[244] or the Supreme Court of Canada.[245] In the courts' view, the complaint raised economic arguments, but failed to raise a cause of action by failing to identify any reasons why the authorities had abdicated their responsibilities. Even under a generous reading of the requisite of "standing" to sue (in the public interest) the matter was "policy-laden" and not justiciable.[246]

(2) An intermediate position would be that of the English courts and EU courts. In *SRM Global Master Fund*, which concerned the nationalization of Northern Rock (a bank), the decision to *not* compensate its shareholders after the independent valuer was instructed to assume that the Lender of Last Resort (LoLR) support would be discontinued, was reviewed by the English High Court and the Court of Appeal.[247] The decision was considered justiciable, and the courts followed the precedents of the European Court of Human Rights (ECtHR) on the protection of possessions.[248] They did so based on striking a fair balance between public interest and private right and the principle of proportionality,[249] *but also* on a margin of appreciation, assimilated, at the municipal level, through doctrines of deference and margin of discretion.[250]

EU courts have possibly issued the more momentous decisions on the judicial review of central bank actions. In *Gauweiler*, the Court of Justice decided a preliminary reference made by the German Federal Constitutional Court (FCC) finding that an ECB program to purchase sovereign debt from troubled EU-area sovereigns was lawful.[251] To justify the validity of Outright Monetary Transactions program (OMT),

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[242] Committee for Monetary and Economic Reform ("COMER") v. The Queen, [2015] F.C.A. 20 (Can.).
[243] *Id.*
[244] Committee for Monetary and Economic Reform ("COMER") v. The Queen, [2016] F.C.A. 312 (Can.).
[245] Committee for Monetary and Economic Reform ("COMER") v. The Queen, [2017] S.C.R. (Can.).
[246] The courts relied on Friends of the Earth v. Canada, [2008] F.C. 1183 (Can.). (*See supra* 2.2.1 on justiciability of climate change).
[247] SRM Global Master Fund LP v. R. [2009] EWHC 227 (Admin); SRM Global Master Fund LP v. R. [2009] EWCA Civ 788 (SRM Appeal).
[248] Convention for the Protection of Human Rights and Fundamental Freedoms art. 1, Nov. 4, 1950; *see* e.g., Jahn and Others v. Germany, App. Nos. 46720/99, 72203/01 and 72552/01, 43 Eur. Ct. H.R. (2005); James v. United Kingdom, App. No. 8793/79, 2 Eur. Ct. H.R. (1986).
[249] SRM Global Master Fund LP v. R. [2009] EWCA Civ 788, at 55–56.
[250] *Id.* at 57–59.
[251] Case C-62/14, Gauweiler v. Deutscher Bundestag, 2015 ECLI-400, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62014CJ0062&print=true [hereinafter: *Gauweiler*]. In 2012, amid the sovereign debt crisis of the Eurozone, Mario Draghi, the ECB's President, announced that "within its mandate" the ECB was "ready to do whatever it takes to save the Euro." The Outright Monetary Transactions (OMT) program was conceived of to buy the debt of troubled Eurozone-area countries for this purpose. Despite the fact that the program was never implemented, it was challenged before the German FCC, which made a preliminary reference to the Court of Justice. It indicated that in its view, the ECB had acted *ultra vires* which could have lead the GFCC to order German authorities not to cooperate with it, but nonetheless asked the Court of Justice for its view on the issue.

the Court held that (1) to be effective, monetary policy impulses must be properly channeled; (2) if the channel is disrupted, monetary policy is ineffective; and (3) restoring the channel to render impulses effective is part of the ESCB's core mandate under Article 127 (1).[252]

This message was reinforced in *Weiss*, a subsequent case, again coming from a preliminary reference by the German FCC, where the plaintiffs challenged the ECB's Public Sector Purchase Program (PSPP) to buy the debt of all Euro area countries. Building on the reasoning of *Gauweiler*, the Court held that monetary policy takes place by operating over *economic* and *financing* conditions (including *inter alia*, the credit channel). Additionally it held that, if the ability to influence economic variables with the ultimate end of influencing price stability were out-of-bounds for central banks because those effects are "economic" in nature, it would be tantamount to rendering monetary policy completely ineffective.[253] ECB members have heeded these messages, and assimilated them into their public statements.[254] Furthermore, in a decentralized system like the ESCB, safeguarding the *singleness* of EU monetary policy was also a goal within its mandate.[255]

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[252] *Id.* at ¶ 50 ("The ability of the ESCB to influence price developments by means of its monetary policy decisions in fact depends, to a great extent, on the transmission of the 'impulses' which the ESCB sends out across the money market to the various sectors of the economy. Consequently, if the monetary policy transmission mechanism is disrupted, that is likely to render the ESCB's decisions ineffective in a part of the euro area and, accordingly, to undermine the singleness of monetary policy. Moreover, since disruption of the transmission mechanism undermines the effectiveness of the measures adopted by the ESCB, that necessarily affects the ESCB's ability to guarantee price stability. Accordingly, measures that are intended to preserve that transmission mechanism may be regarded as pertaining to the primary objective laid down in Article 127(1) TFEU").

[253] "[T]he transmission of the ESCB's monetary policy measures to price trends takes place via, inter alia, facilitation of the supply of credit to the economy and modification of the behaviour of businesses and individuals with regard to investment, consumption and saving. Consequently, in order to exert an influence on inflation rates, the ESCB necessarily has to adopt measures that have certain effects on the real economy, which might also be sought — to different ends — in the context of economic policy. In particular, when the maintenance of price stability requires the ESCB to seek to raise inflation, the measures that it must adopt to ease monetary and financial conditions in the euro area for that purpose may entail an impact on the interest rates of government bonds because, inter alia, those interest rates play a decisive role in the setting of the interest rates applicable to the various economic actors (see, to that effect, judgment of 16 June 2015, Gauweiler and Others, C-62/14, EU:C:2015:400, ¶¶ 78, 108. That being so, if the ESCB were precluded altogether from adopting such measures when their effects are foreseeable and knowingly accepted, that would, in practice, prevent it from using the means made available to it by the Treaties for the purpose of achieving monetary policy objectives and might — in particular in the context of an economic crisis entailing a risk of deflation — represent an insurmountable obstacle to its accomplishing the task assigned to it by primary law." Case C-493/17, Heinrich Weiss and Others, ECLI:EU:C:2018:1000, ¶¶ 65–67 (Dec. 11, 2018), https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:62017CJ0493 [hereinafter: *Weiss*].

[254] "The Court of Justice of the European Union has confirmed that catering for the preconditions required for the pursuit of our primary objective falls within our mandate to maintain price stability." Elderson, *supra* note 117.

[255] This message was specifically stressed in *Gauweiler*, where the OMT program was conceived to effect purchases only of troubled Euro area countries. According to the Court, even actions that could have a differentiated impact in (or targeted to specific Member States) could fit within the mandate of the central bank. *Gauweiler*, *supra* note 251, at ¶¶ 50, 62

Thus, if certain factors could upset the monetary policy transmission channel, such as impairing the transmission of signals, the central bank could operate over these factors within its (strict) mandate of monetary policy and price stability provided the actions were *proportionate*.[256] This was key, because the ECB had alleged that price stability was the ultimate *end*, and the bond purchases were the *means*, or instrument used to restore the transmission mechanism.[257] Thus, even though the Court was deferential to the ECB's explanation and did not directly weigh evidence over the programs' economic effects, it did weigh the ECB's arguments to determine whether they convincingly justified that the measures did not manifestly go beyond what was necessary to achieve their goal,[258] including measures to mitigate side effects.[259]

If we extrapolate to the case of climate change, the EU Courts would likely scrutinize whether the ECB can establish a convincing link between the use of its instruments and price stability rather than fixating on a specific conception of monetary policy. They would likely accept evidence based on the transmission mechanism, and would then assess the necessity and proportionality (minimization of harmful side effects) of the measures. It is not a matter of *whether*, but rather *when* and *how*.[260]

(3) The only court stricter than the Court of Justice (and more mistrustful) was the German FCC, the referring national court in *Gauweiler* and *Weiss*. In its preliminary reference in *Gauweiler*,[261] rather than simply asking the question of whether OMT was lawful, the court stated that, in its view, OMT was an unlawful *ultra vires* act because it resulted in financial assistance to aid budgetary policy, which placed it squarely within economic policy rather than monetary policy.[262] Additionally, they held that the OMT program was against the prohibition of monetary financing,[263] and asked the Court of Justice to confirm. The FCC considered that preserving the singleness of monetary policy was outside the ECB's mandate,[264] dismissed the ECB's economic justification (preferring instead the Bundesbank's economic arguments),[265] and rejected the argument about the disruption of the

[256] *Id.* at ¶¶ 66-92; *Weiss, supra* note 253, at ¶¶ 71–100.
[257] *Gauweiler, supra* note 251, at ¶¶ 72-79; *Weiss supra* note 253, at ¶¶ 75–78.
[258] *Gauweiler, supra* note 251, at ¶¶ 82–92; *Weiss, supra* note 253, at ¶¶ 80–92.
[259] *Weiss, supra* note 253, at ¶¶ 93–99.
[260] Infra sections 3 and 4.
[261] Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court] 2 BvR 2728/13, Jan. 14, 2014 https://www.bundesverfassungsgericht.de/entscheidungen/rs20140114_2bvr272813en.html.
[262] *Id.* at ¶¶ 65–67. This was strengthened by the fact that the ECB would make bond purchases *conditional* upon the adherence by the Member States involved to an adjustment program with the European Financial Stability Facility (EFSF) or the European Stability Mechanism (ESM), which were instruments for budget stability.
[263] *Id.* at ¶¶ 85–94.
[264] *Id.* at ¶ 72.
[265] The FCC rejected the ECB's rationale that, by reducing interest rate spreads caused by "irrational" fears over the reversibility of the euro, it was influencing price stability,

monetary policy transmission mechanism, holding that OMT had an "economic" goal and "monetary" means (opposite what was argued by the ECB[266]).

After *Gauweiler*, the FCC issued its final decision.[267] It took on board the Court of Justice's ruling in its own peculiar way; namely, criticizing the Court of Justice's deference[268] and failure to address its concern about democratic legitimacy,[269] but accepting that the OMT program did not "manifestly" exceed the ECB's competences (the *ultra vires* test[270]) because the program was subject to judicial review, based on the duty to state reasons, and the principle of proportionality.[271]

After *Weiss*, the German FCC went even further, ruling that both the ECB *and* the Court of Justice, had acted *ultra vires*.[272] This was odd, since the Court of Justice used the same approach as was used in *Gauweiler*,[273] with a more detailed proportionality analysis.[274] This was to no avail. The German FCC declared that the Court's proportionality test granted too much leeway to the ECB, and provided insufficient judicial review for a non-democratic independent central bank.[275] Moreover, the court ruled that there was no evidence that the ECB had weighed the economic side effects of its decisions (in banks' balance sheets, real estate bubbles, sovereign finances, etc.[276]). The FCC decision was, factually and technically troublesome,[277] but its concern can be

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preferring the Bundesbank's argument that spreads only reflected market skepticism about Member States' budgetary discipline. *Id.* at ¶ 71. It did not indicate what led to this preference.

[266] *Id.* at ¶¶ 95–98.

[267] Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court] 2 BvR 2728/13, 2 BvR 2729/13, 2 BvR 2730/13, 2 BvR 2731/13, 2 BvE 13/13 June 12, 2016, https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2016/06/rs20160621_2bvr272813en.html.

[268] The FCC criticized the Court of Justice for failing to question the ECB's factual assessment relying on the ECB's statement of objectives. *Id.* at ¶¶ 182–83.

[269] *Id.* at ¶ 187. This, in the FCC's view, is what required a restrictive interpretation in the first place.

[270] *Id.* at ¶ 190.

[271] *Id.* at ¶¶ 191–95. As long as these principles applied, the measures did not manifestly exceed the monetary mandate. Although the FCC took issue with the Court of Justice's mainly "procedural" approach to judicial review, the fact that the purchases (according to the FCC) had to be limited, and that the states involved had to be subject to macroeconomic adjustment programs, justified the "monetary" character of the OMT. *Id.* at para. 196, http://www.bverfg.de/e/rs20160621_2bvr272813en.html.

[272] Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court] BVerfG, 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, May 5, 2020, ¶ 127, http://www.bverfg.de/e/rs20200505_2bvr085915en.html.

[273] *Weiss*, supra note 253, at ¶¶ 139, 141, 159–63.

[274] *Id.* at ¶¶ 164–168.

[275] BVerfG, 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, May 5, 2020, ¶¶ 123, 127, 133, http://www.bverfg.de/e/rs20200505_2bvr085915en.html.

[276] *Id.* at ¶¶ 172–74, 133.

[277] For starters, the assertion that there was no analysis of the necessity and proportionality of the measure, based on an assessment of its economic side effects is flatly contradicted by the facts. *See* Marco Lamandini & David Ramos Muñoz, *Monetary Policy Judicial Review by"Hysteron Proteron"? In Praise of A Judicial Methodology Grounded on Facts and on A Sober and Neutral Appraisal of (ex ante) Macro-Economic Assessments*, EU LAW LIVE (2020); Marco Lamandini, David Ramos

shared more widely: how far can a central bank go in executing its monetary mandate, when its actions have an economic impact?

Yet, even under the FCC's standard, a central bank's climate-oriented actions should not be classified as unlawful. The FCC itself evolved from dismissing the arguments about the monetary policy transmission channel,[278] to accepting that monetary policy can *only work* by influencing economic variables and focusing on the need to weigh and balance unwanted economic side effects.[279] Thus, the FCC's view was not that different from the Court of Justice: it was based on proportionality and differed on its assessment of the facts (or its overlooking of some facts). Thus, even by the standards of the more mistrustful courts, climate change "fits" within a central bank's mandate *provided that* the bank properly justifies the effects sought and weighs the unintended consequences (i.e., a matter of *when* and *how*). In fact, the FCC's own case law provides some additional ground by considering the rights of future generations as a justiciable principle.[280] This principle gives additional strength to the need to consider future generations in the proportionality analysis. Yet again, the FCC is anything but predictable.

2.2.3. Justiciability Of Central Bank Decisions Under Peripheral Mandates And Regulatory/Supervisory Mandates.

Regular central bank decisions are reviewed by the courts using a deferential or extremely deferential standard of review, if they are even considered justiciable (they are often not in the US or Canada). In those cases where courts review the decisions, they do not directly weigh the economic arguments, but rather analyze if the central bank properly justifies the suitability and necessity of its actions and weighs any potential, harmful side effects.[281]

Extrapolating this to decisions under "peripheral" mandates, central banks with broad mandates, banks formed by several objectives organized "horizontally", or banks where price stability is placed in the context of broader goals (like "sound development") have an easy task justifying the assimilation of climate change considerations. A reviewing court would have a hard job scrutinizing the central bank decisions, because it would lack a clear basis for finding that a different balance between objectives is legally required. The trade-off between objectives seems more a "political" than a "legal" decision, and in the US, a legal challenge would probably be dismissed under the "political question"

Muñoz & Violeta Ruiz Almendral, *The EMU and Its Multi-Level Constitutional Structure: The Need for More Imaginative "Dialogue" Among and Across EU and National Institutions*, 47 LEGAL ISSUES OF ECON. INTEGRATION, 311, 311–336 (2020).

[278] BVerfG, 2 BvR 2728/13, 2 BvR 2729/13, 2 BvR 2730/13, 2 BvR 2731/13, 2 BvE 13/13, June 21, 2016, ¶¶ 95–98, http://www.bverfg.de/e/rs20160621_2bvr272813en.html.

[279] BVerfG, 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, May 5, 2020, ¶¶ 164–178, http://www.bverfg.de/e/rs20200505_2bvr085915en.html.

[280] *See* BVerfG. 1 BvR 2656/18, 1 BvR 78/20, 1 BvR 96/20, 1 BvR 288/20, Mar. 24, 2021, http://www.bverfg.de/e/rs20210324_1bvr265618en.html.

[281] *Supra* 2.2.2.

doctrine.[282]

The issue is different for central banks with "narrow" mandates or for central banks with objectives organized "vertically", but this also varies depending on the reviewing courts' approach. In the UK, where monetary policy and financial stability are superior and support of government policies secondary, it is unlikely that courts would conduct a strict review on whether this priority is actually being respected, [283] absent clear evidence of the Bank of England compromising its main objectives.

For EU Courts the "political question" is a weak exception to justiciability,[284] judicial review is more important,[285] and complaints could find their way to the courts more easily.[286] Even so, the ESCB is a "narrow," "vertical" and independent central bank, and its duty to "support Union policies" is a weak legal basis. If the ESCB adopted an active role in climate change based *only* on this legal ground, the Court of Justice would have to analyze if "support" measures could endanger the primary objective of price stability[287] or threaten ESCB's independence.[288] Conversely, if the ESCB adopted a reluctant position towards climate change and were accused of "not supporting" EU

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[282] *See, e.g.,* Doe v. Braden, 57 U.S. 635, 657 (1853).

[283] SRM Global Master Fund Lp & Ors, R. (On the Applications of) v The Commissioners of Her Majesty's Treasury [2009] EWHC-227 (Admin) (the courts reviewed the acts because they involved crisis management measures over a specific credit institution, and even then they exercised self-restraint on the more policy-laden aspects of the decision, e.g., the instruction to the independent valuer to assume that the financial assistance under LoLR function would be discontinued).

[284] EU Courts do not generally decline jurisdiction over "political" issues (but see, e.g., Case C-93/78, Mattheus v. Doego, 1978, E.C.R -02203) and have not formulated an explicit "political question" doctrine. See Graham Butler, *In Search of the Political Question Doctrine in EU Law*, 45 LEGAL ISSUES OF ECON. INTEGRATION 329 (2018).

[285] In Case C-294/83, *Les Verts* v European Parliament, 1986 E.C.R. I-1357, the Court held at ¶ 23 that *"*The European Economic Community is a Community based on the rule of law, inasmuch as neither its Member States nor its institutions can avoid a review of the question whether the measures adopted by them are in conformity with the basic constitutional charter, the Treaty." The Treaty established a complete system of legal remedies and procedures designed to permit the Court of Justice to review the legality of measures adopted by the institutions". Even though the European Parliament was not expressly listed among the institutions subject to the Court's jurisdiction in the annulment procedure this could not be an obstacle to judicial review. Case C-294/83, Les Verts v European Parliament, 1986 E.C.R. I-1357 at ¶ 25.

[286] Individual plaintiffs would lack standing to directly challenge monetary policy decisions, as these would not be of "direct and individual concern" to them. TFEU art. 263. *See* Case 25-62, Plaumann & Co. v. Comm'n of the Eur. Econ. Cmty., 1963 ECLI-17. However, "privileged plaintiffs" could, under TFEU art. 263 para. 2., or, alternatively, citizens' complaints before national courts could find their way to the Court of Justice via preliminary references under TFEU art. 267.

[287] The Court of Justice, after considering the text of article 127 (1) TFEU (both paras.) held that: "The Protocol on the ESCB and the ECB is thus characterized by a clear mandate, which is directed primarily at the objective of ensuring price stability. The tightly drawn nature of that mandate is further reinforced by the procedures for amending certain parts of the Statute of the ESCB and of the ECB." *Gauweiler* at ¶ 44.

[288] In our view, the lack of discussion of the principle of independence by the Court of Justice is one of the few weak points of its reasoning in *Gauweiler* (BVerfG, 2 BvR 2728/13, 2 BvR 2729/13, 2 BvR 2730/13, 2 BvR 2731/13, 2 BvE 13/13 June 12, 2016) or *Weiss* (BVerfG, 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, May 5, 2020). See *infra* 4.3.

policies, it would be easy to justify its position on the need to pursue price stability[289] or preserve independence.[290] The secondary objective, on the other hand, would be a good complementary basis to justify an active role on climate change provided there is also a justification based on price stability.[291]

In the parallel cases by the German FCC, the key is whether the FCC chose to classify the ECB's acts as "monetary", in which case the scrutiny should be deferential, or "economic", in which case the scrutiny would be strict because the FCC distrusts the ECB's motives. In that second stricter scrutiny scenario, the FCC could find an ECB act unlawful *partly* for breaching its duty to "support" Union policies by pursuing its own economic agenda[292] or steering economic policies,[293] *if* climate change were to be considered important enough to inform its scrutiny.[294] Conversely, it would be difficult for the FCC to find an act that it has not considered "monetary policy" lawful as a "support" act.[295] In other words, for the FCC the secondary objective of support is useful

[289] In *Gauweiler* the Court of Justice analyzed the legality of the ESCB's bond-buying program (OMT) in light of the prohibition of monetary financing *and* the duty of the ESCB to support Union policies (in this case the goal of a "sound budgetary policy"). It held that "a programme such as that announced in the press release would circumvent the objective of Article 123(1) TFEU, recalled in paragraph 100 of this judgment, if that programme were such as to lessen the impetus of the Member States concerned to follow a sound budgetary policy. In fact, since it follows from Articles 119(2) TFUE, 127(1) TFEU and 282(2) TFEU that, without prejudice to the objective of price stability, the ESCB is to support the general economic policies in the Union, the action taken by the ESCB on the basis of Article 123 TFEU cannot be such as to contravene the effectiveness of those polices by lessening the impetus of the Member States concerned to follow a sound budgetary policy." *Gauweiler*, 2 BvR 2728/13, 2 BvR 2729/13, 2 BvR 2730/13, 2 BvR 2731/13, 2 BvE 13/13, at 109. *See also*, Case C-62/14, Gauweiler v. Deutscher Bundestag, 2015 ECLI-400, at ¶¶ 59–60. Thus, the Court used the "secondary" objective as an argument to reinforce, and contextualize, the prohibition of monetary financing. Yet, the issue would be different if the "secondary" objective could allegedly endanger the primary objective.

[290] Even if TFEU art. 127 (1) para. 2 uses mandatory language (the ESCB "shall" support) which suggests a *legal* (i.e., not political) obligation (*see* Elderson. *supra* note 117) the enforceability of such obligation before the courts would be extremely difficult.

[291] The combined reference to the primary and secondary objective could be used to justify an approach coordinated with other EU institutions, and to strengthen the view that total compartmentalization between monetary and economic policy is not possible, nor enshrined in the Treaties. As held by the Court of Justice, "It must be emphasised in that regard that Article 127(1) TFEU provides, inter alia, that (i) without prejudice to its primary objective of maintaining price stability, the ESCB is to support the general economic policies in the Union and that (ii) the ESCB must act in accordance with the principles laid down in Article 119 TFEU. Accordingly, within the institutional balance established by the provisions of Title VIII of the FEU Treaty, which includes the independence of the ESCB guaranteed by Article 130 and Article 282(3) TFEU, the authors of the Treaties did not intend to make an absolute separation between economic and monetary policies". BVerfG, 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, May 5, 2020 at ¶ 60.

[292] BVerfG 2 BvR 2728/13, Jan. 14, 2014, at 39, BVerfG, 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, May 5, 2020, at ¶¶ 163, 193. *Supra* 2.2.2.

[293] BVerfG 2 BvR 2728/13, Jan. 14, 2014, at ¶ 69.

[294] In *Gauweiler* the likelihood of undermining Union policies was considered relevant for finding the act unlawful because the policy in question was the duty to pursue a "sound budgetary policy," and this was connected to the prohibition of monetary financing. *See, e.g.*, BVerfG OMT II (after preliminary reference) at ¶ 193.

[295] BVerfG 2 BvR 2728/13, Jan. 14, 2014, at ¶¶ 80–83.

to bolster the conclusion based on how it classifies the act in the first place.

Transversal (e.g., constitutional) environmental principles can be a source of review, but several interpretative steps are needed to turn a broad cross-cutting objective into a specific obligation that applies precisely to a central bank. Thus, their use is uncertain.[296] This is the case even for relatively concrete duties, like the duty to integrate environmental considerations in defining and implementing Union policies under Article 11 TFEU ("integration principle"). EU Courts have used this principle in an imprecise way, i.e., lumped together with other environmental principles,[297] but cases like *Commission v. Sweden* may offer useful clues. The Court of First Instance (now General Court) annulled a Commission Directive that failed to classify a chemical weed killer (paraquat) as a dangerous substance, in light of scientific evidence linking it to serious risks to human health and animal diseases.[298] Although the Court lumped together the integration principle with the goal of a high level of environmental and health protection and the precautionary principle,[299] the Court's reasoning was fact-intensive and concluded that the Commission had failed to take scientific evidence adequately into consideration. Thus, it appears that EU Courts would focus on the scientific (and economic) evidence of climate change's impact on price stability more than a concrete legal basis, and the factual evidence of whether the ECB took it into consideration.

The standard of review of regulatory and supervisory decisions is different. Unlike in monetary decisions, prudential authorities do not execute a broad mandate, but are bound by more concrete statutory provisions. Thus, the decisions will normally be justiciable,[300] and the standard of review and degree of discretion granted to the authority will depend on both the interpretation of the relevant statute and the precision of its text.

With these specifics in mind, courts still tend to be deferential. In the United States, the standard of review of regulatory acts evolved due to decades of case law where courts had to determine whether financial authorities (mostly the Board of Governors of the Federal Reserve and the Office of the Comptroller of the Currency (OCC)) had implemented a permissible interpretation of the concept of the "business of banking." This was implemented to give effect to the separation of "banking" from "investment" activities under the Glass-Steagall Act,[301] and the

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[296] *Supra* 2.1.3.
[297] See, e.g., C-176/03, Comm'n v. Council, 2005 E.C.R. I-7923 para. 42; C-320/03, Comm'n v. Austria, EU:C:2005:684, ¶ 73; C-440/05, Comm'n v. Council, EU:C:2007:625, ¶ 60.
[298] C-246/07, Comm'n v. Sweden, 2010 ECLI-203.
[299] *Id.*
[300] There may be problems of standing to sue in cases where the act consists in adopting a regulation of general application or in cases where a supervisory act is challenged not by the affected entity, but by its shareholders, but these are relatively specific problems.
[301] 12 U.S.C. § 21 (2012), 12 U.S.C. §§ 377, 378.

branching restrictions under the MacFadden Act.[302] The courts' position went from a strict scrutiny, based on a purposive interpretation of the restrictions,[303] to a more lenient standard[304] in line with general trends in administrative jurisprudence.[305] Thus ultimately became a deference that crystalized in the 90s.[306] For "supervisory" decisions the courts also evolved from an initial "hands on" approach[307] to a more deferential standard for decisions over banks that breached the "safe and sound" standard.[308] Examples of stricter standards tend to fall outside the Fed and OCC actions.[309] Nonetheless, since the transition proposed above requires recharacterizing climate risk as financial risk, the courts' approach would largely depend on whether they accept this basic premise. It would depend on whether the courts characterize the exercise of power as one granted by the "financial" acts, or whether they view it as an "environmental" issue, which would likely lead to a finding that the act is beyond the authorities' mandate.

In the European Union, formally speaking, the courts apply the

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[302] 12 U.S.C § 36(c)(2) (1970). The problem arose when federal authorities tried to authorize branching in more generous terms than state authorities.

[303] In Inv. Co. Inst. v. Camp, 401 U.S. 617, 620 (1971), the Supreme Court held that OCC Regulation 9, which authorized banks to operate collective investment funds, was invalid under the Glass-Steagall Act. In First Nat'l Bank v. Dickinson, 396 U.S. 122, 122 (1969), the Supreme Court held OCC rulings authorizing national banks to operate 'mobile messenger services' and off-premises 'deposit machines' invalid under the McFadden Act, holding that 'branch' was a term of federal law.

[304] In Sec. Indus. Ass'n v. Fed. Rsrv. Bd., 468 U.S. 207, 207 (1984), the US Supreme Court confirmed the Federal Reserve Board's power to authorize a BHC to acquire a non-banking affiliate principally engaged in retail securities brokerage. In Clarke v. Sec. Indus. Ass'n, 479 U.S. 388, 388 (1987), the Supreme Court held that an OCC authorization to two national banks to establish brokerage subsidiaries was valid, as backed by a *plausible* interpretation of statutory concepts.

[305] *See generally* Chevron v. Nat. Res. Def. Council, 467 U.S. 837 (1984) ("*Chevron* deference," when an agency is interpreting a statute); Auer v. Robbins, 519 U.S. 452 (1997) ("*Auer* deference," when an agency is interpreting its own regulation). Other (older) standards, like that Skidmore v. Swift, 323 U.S. 134 (1944) apply to agency acts that are not formal regulations.

[306] In NationsBank v. Variable Annuity Life Ins. Co., 513 U.S. 251 (1995), the two lines of case law on the Glass-Steagall Act and the McFadden Act converged. The Supreme Court held that the OCC's decision to authorize banks to sell broker annuities was valid, despite the product was marketed by insurance companies, and regulated as insurance under state law.

[307] In First Nat'l Bank of Bellaire v. Comptroller of the Currency, 697 F.2d 674, 679 (5th Cir. 1983), the Fifth Circuit found that the evidence presented by the OCC was insufficient to sustain its capital order.

[308] After cases like Sunshine State Bank v. FDIC, 783 F.2d 1580, 1583–84 (11th Cir. 1986), US courts tended to defer to agency interpretations of whether a bank was engaging in "unsafe and unsound" practices, as long as it was within the bounds of reasonableness. See also FDIC v. Bank of Coushatta, 930 F.2d 1122, 1126 (5th Cir. 1991); Frontier State Bank Oklahoma v. FDIC, 702 F.3d 588 (10th Cir. 2012).

[309] In some cases, courts have refused to grant much deference to the Consumer Financial Protection Bureau (CFPB) acts other than regulations, e.g., Edwards v. First Am. Corp., 798 F.3d 1172, 1179–80 (9th Cir. 2015) (an amicus brief), but in Berlin v. Renaissance Rental Partners, 723 F.3d 119, 125–27 (2d Cir. 2013) the Second Circuit granted *Auer* deference. In Bus. Roundtable v. SEC, 647 F.3d 1144 (D.C. Cir 2011), the D.C. Circuit annulled the SEC's proxy rule for lacking a proper Cost-Benefit Analysis (CBA). See discussions *infra* Sections 3.2.2, 3.2.3.

"manifest error of assessment" in supervisory decisions[310] and monetary policy decisions[311] as a standard of review, but this means different things in practice.[312] In monetary policy decisions the standard of review is more deferential.[313] Even within supervisory decisions, the General Court has sometimes accepted a relatively broad interpretation of the statute to confer the ECB ample powers, such as in *Crédit Mutuel*,[314] while in others it has constrained the ECB's powers through a very restrictive interpretation, such as in *Banque Postale*.[315] The courts wish to be the ones in the driver's seat of statutory interpretation.[316] Finally, some precedents are also important, like the case *FBF v EBA*.[317] Here, the Court of Justice concluded that a quasi-regulatory act of the EBA's guidelines on the governance and oversight of retail banking products were valid, despite the fact that the legal basis for them were provisions on product regulation and that the guidelines largely concerned corporate governance arrangements. All of the above examples show that, even more than in the US, EU Courts' standard of review over regulatory and supervisory depends on the language of the actual statutory provisions.

Finally, within the Banking Union, national courts also review the acts of national authorities *and* even EU authorities, raising the issue of constitutional counter-limits. In 2019, the German Federal Constitutional

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[310] See, e.g., Case T-733/16, La Banque Postale v. Eur. Cent. Bank, 2018 ECLI-477, ¶ 69 (hereinafter Banque Postale); Case T-712/15 Crédit Mutuel Arkéa v. Eur. Cent. Bank, 2018 ECLI-900, ¶ 178 (hereinafter Arkéa).

[311] See Case C-62/14, Gauweiler v. Deutscher Bundestag, 2015 ECLI-400, at 68, 74, 81, 91; Case C-493/17, *Weiss*, 2018 ECLI-1000, at ¶¶ 24, 56, 78, 91.

[312] Even the formulation varies. Sometimes EU Courts state that, in areas that require "complex assessments" the authority should be granted "discretion" (or "broad discretion"). See Case C-62/14, Gauweiler v. Deutscher Bundestag, 2015 ECLI-400, at 68; Case C-493/17, *Weiss*, 2018 ECLI-1000, at ¶¶ 24, 73; Case T-712/15 *Crédit Mutuel* Arkéa v. Eur. Cent. Bank, 2017 ECLI-900, at 178. But sometimes they base the authority's discretion on the interpretation of the specific statute. See Case T-733/16, La *Banque Postale* v. Eur. Cent. Bank, 2018 ECLI-477, at ¶¶ 34-59. In theory, there is a difference between discretion to adopt policy positions and "technical discretion," more focused on the assessment of the facts, but the Court of Justice used the technical discretion formula in *Gauweiler* or *Weiss*, which were monetary policy decisions, and still granted broad deference. *See* Case C-62/14, Gauweiler v. Deutscher Bundestag, 2015 ECLI-400, para. 68; Case C-493/17, Weiss, ECLI-1000, at ¶ 73.

[313] *Supra* 2.2.2.

[314] Case T-712/15, Crédit Mutuel Arkéa v. European Central Bank (ECB), 2017 ECLI-900. The case concerned the consolidated supervision of banking groups and the extension, via interpretation, of such supervision, to a parent company that is not itself a credit institution.

[315] Furthermore, in *Crédit Mutuel*, Case T-712/15, Crédit Mutuel Arkéa v. European Central Bank (ECB), 2017 ECLI-900, the issue was a disputed interpretation of the rules on consolidated supervision, which the Court considered to be the authoritative interpretation, while in *Banque Postale*, Case T-733/16 120, La Banque postale v. European Central Bank (ECB), 2018 ECLI-477, the Court acknowledged from the outset that the ECB had a discretionary competence and yet went on to provide a finalistic interpretation of the relevant statute in a way that constrained the ECB's discretion.

[316] Thus, one contrast between *Banque Postale*, Case T-733/16 120, La Banque postale v. European Central Bank (ECB), 2018 ECLI-477, *Crédit Mutuel*, Case T-712/15, Crédit Mutuel Arkéa v. European Central Bank (ECB), 2017 ECLI -900, and other cases, and the US case law is that EU Courts' reasoning often suggests that there is "one right answer", i.e., one authoritative construction of the statute.

[317] Case C-911/19, Fédération bancaire française (FBF) v. Autorité de contrôle prudentiel et de résolution (ACPR), 2021 ECLI-599.

Court (FCC) decided in the so-called *SSM-SRM case*.[318] This case presented a challenge to the constitutionality of the main Banking Union pillars of the Single Supervisory Mechanism (SSM) and Single Resolution Mechanism (SRM), and held that they were constitutional *provided that the ECB and SRB competences were interpreted restrictively*.[319] Thus, even if the assimilation of climate change considerations by the ECB in its supervisory role were considered lawful by European courts, some national courts could still cause a constitutional crisis if, in their (unpredictable) view, this overstepped the ECB's "restrictive" mandate of supervision. This suggests that some degree of involvement of the national level could also limit the legal exposure of the SSM (ECB and national authorities) to a contrary verdict.

III. CONCLUSIONS.

Can/should central banks assimilate climate change considerations into their mandates? This paper offers an analytical approach that unpacks the different arguments embedded in that question. This shows that the there are three types of questions and arguments. We distinguish between arguments of "fit" (or "whether"), arguments of "opportunity" (or "when") and arguments on "suitability" (or "how"), and show that the debate is often muddled because the three tend to be conflated. Furthermore, to answer the different questions we need an interdisciplinary perspective, which combines law with complex science, decision-theory, and economics. Even if the question is the same (i.e., can/should central banks do something?) the normative reasons to answer it differ. Thus, we differentiate between the broader considerations of fit, opportunity and suitability, and the distinct (normally narrower) way in which they would be weighed by the courts.

This Part 1 considers the arguments of "fit", which try to answer the question *whether* central banks can, and should do something about climate change within their mandate. The answer seems to be a rotund "yes." This may seem striking, but most objections of "fit" are actually objections of "opportunity" or "suitability". The idea that central banks should concentrate just on a narrow set of variables is not based on a comparative reading of central banks' founding legal texts, but rather they are based on a convention about what central banks should do. As argued above, this is itself a relatively recent phenomenon. Even for central banks that are constitutionally constrained to focus on price stability (e.g., the ECB), their founding norms do not constrain the variables that shape the "transmission mechanism", and thus do not control the central bank's ability to influence prices. A narrow

[318] SSM Regulation, BVerfG 2019, 2 BvR 1685/14, 2 BvR 2631/14, July 30, 2019.
[319] It also held that both mechanisms were based on a distribution of competences between national and EU levels, rather than on the full transfer of competences to the ECB and/or SRB, and the delegation of some of those competences to national authorities by the ECB and SRB which plainly contradicted the finding of the General Court and the Court of Justice in the *Landeskreditbank* case. See Case T-122/15, *Landeskreditbank Baden*-Württemberg v. European Central Bank (ECB), 2017 ECLI-337.

convention about what those variables comprise led to egregious mistakes in the past, such as overlooking the impact of leverage and asset prices. Climate change promises to be a far more disruptive force, with an impact on commodity prices, supply chains, wage setting, or financial risk. Thus, understanding it should be a priority for central banks.

Central banks can also rely on their "peripheral" mandates (from "sound development" to "supporting government policies") or "transversal" environmental principles (e.g., to incorporate environmental principles across policies) as a basis for assimilating climate change. However, we are not convinced that this should be the main justification. Price stability is central bank's common ground, and other mandates and considerations can play a supporting role. Peripheral mandates and transversal provisions heavily rely on (and greatly vary with) each legal founding text. To transcend domestic boundaries and cooperate globally, central banks need a common language, not a cacophony. The competences on financial regulation and supervision could be another, seemingly powerful vehicle. They speak the common language of "risk", and conceptually speaking, there is little doubt that climate change is an important source of financial risk. The barriers are institutional, and depend on how regulatory and supervisory competences are allocated among different institutions, since central banks are often not the sole (and sometimes not even one of the main) regulatory/supervisory authorities.

These implications should help central banks delineate a strategy to deal with climate change as the means to secure price stability, as well as other objectives. If a shift is justified in this way, there should be little objections from a legal perspective. Climate litigation against public authorities shows that not only action, but also inaction, if unjustified, can carry a legal risk. The outcome varies widely, and there is a wide contrast between the decisions in some European countries (where climate-based arguments have been heard and won in courts) and decisions in the United States (where courts consider the matter outside their remit). Additionally, the fact that a central bank would be the authority taking action introduces a second variation. Leaving aside the arguments based on central banks' founding legal texts, the standard of review applied by courts suggests that central banks would find little legal obstacles to adopt a more active role in climate change. In some jurisdictions, courts tend to consider central bank acts as almost non-justiciable (US or Canada). When showing more openness to legal scrutiny, they have tended to apply a deferential standard, where decisions are upheld unless "manifestly" erroneous, and/or disproportionate (EU, including Germany). The less deferential courts, like the German Constitutional Court, are also among the keenest to assimilate pro-climate considerations into constitutional arguments. Thus, central banks will likely be able to assimilate climate change considerations into their mandates or else risk being unable to address climate change in the future.