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THE ECB'S MANDATE IN THE FACE OF CLIMATE CHANGE AND BIODIVERSITY LOSS¹

René Smits

A. INTRODUCTION	8.001	4. Preferred Interpretation of the Secondary Objective	8.051
1. Defining 'Sustainable Finance'	8.001	5. The EU Climate Law	8.054
2. Broad Outline of this Chapter	8.002	F. CONTRIBUTION TO THE OBJECTIVES OF THE UNION	8.060
B. HISTORY OF THE INTERPETATION OF THE MANDATE	8.006	G. INTEGRATION PROVISIONS	8.062
1. Primacy of Price Stability	8.006	1. The Incidence of Article 11 TFEU (Integration Provision relating to Environmental Protection)	8.062
2. Secondary Mandate and Other Relevant Provisions	8.007	2. General Consistency Clause (<i>Article 7</i>)	8.066
3. The ECB's Initial Approach: Solely Primary Mandate	8.008	3. Application to the CSPP	8.067
4. Secondary Mandate Held Primary Place When (Re-)interpreting Mandate	8.014	4. Integration Provisions: My Approach	8.069
5. Development of My Own Thinking	8.016	H. APPLICATION OF ARTICLE 216(2) TFEU: BINDING THE ECB TO 'PARIS'	8.070
6. Schedule of the Remainder of this Chapter	8.022	I. OPEN MARKET ECONOMY PRINCIPLE	8.075
7. Development of ECB Thinking on its Primary Mandate	8.025	1. The Open Market Principle: A Novelty in EU Law	8.075
C. NETWORK FOR GREENING THE FINANCIAL SECTOR	8.033	2. Market Neutrality Argument	8.077
1. Origins and Objective	8.033	3. Open Market Principle Does Not Require ECB to Act in Line with Dysfunctional Markets	8.081
2. Main Deliverables	8.036	4. Bank of England on Market Neutrality	8.083
3. Wider Context	8.038	5. Open Market Principle Not Enforceable	8.084
D. PRIMARY MANDATE: THE PREFERRED INTERPRETATION	8.042	J. FURTHER ARGUMENT: EMERGENCY RATIONALE AND CLIMATE STABILITY PRECONDITIONS AS A FALLBACK	8.086
E. THE ECB'S SECONDARY OBJECTIVE	8.044	K. IMPLICATIONS OF THE REASONING	8.091
1. Price Stability Takes Precedence	8.044	1. EU Taxonomy	8.092
2. Interpreting the Wording of the Secondary Mandate	8.046		
3. The Need for Economic Policy Clarity at EU Level	8.049		

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2. Taking a Longer-term Perspective?	8.095	M. PRUDENTIAL SUPERVISION: A DIFFERENT ENVIRONMENT	8.135
3. Including Climate Change Variables and Risks Into Account in Policy-Setting	8.096	1. The Legislative Framework for Prudential Supervision	8.135
4. The ECB's Own Funds	8.097	2. Risk as a Central Element of Prudential Supervision	8.139
5. Favouring or Requiring Green Collateral?	8.098	3. Climate Change Considerations in Supervision	8.140
6. Greening Asset Purchasing Programmes	8.100	4. Recent Developments in Prudential Supervision	8.142
7. Greening Bank Lending: Green TLTROs?	8.101	5. Climate-risk Litigation	8.145
8. Greening Foreign Reserve Management	8.104	N. OTHER TASKS: PAYMENTS	8.147
L. WHAT THE ECB HAS DECIDED	8.105	O. CONCLUDING REMARKS	8.151
1. Monetary Policy Review Results: Climate Action Plan	8.105	P. RECENT DEVELOPMENTS	8.158
2. Assessment	8.110	1. Practice and Critique of ECB Decarbonizing	8.158
3. What the ECB Had Already Undertaken	8.116	2. Beyond Climate: Biodiversity	8.159
4. What the ECB Has Undertaken since Its Climate Action Plan	8.121	3. Further Developments of Green Parameters	8.161
		4. ECB Subject to the EU Climate Law?	8.163
		5. Further Perspectives	8.164

A. INTRODUCTION

1. Defining 'Sustainable Finance'

8.001 When discussing sustainable finance, one needs to express a view on the meaning of the term. An insightful exposition on what supervisors understand was provided by Andrea Enria, Chair of the Supervisory Board of the European Central Bank (ECB), as he then was.² Enria defined sustainability in two different ways. In the first perspective, 'sustainability' means that banks are capable to withstand shocks and stay in business over the long term. The second definition relates to 'being sustainable on a larger scale, at the level of society', where 'climate change is one of the key issues'. This approach sees sustainable finance as incentivizing banks to invest more capital into green project and assets. This chapter takes this second view as its starting point. It asks the question whether, from a legal perspective, the mandate of the ECB authorizes it to take climate change and biodiversity loss into account in its policies and activities, or even requires it to do so.

2 *Regulation, Proportionality and the Sustainability of Banking*, speech by Andrea Enria, Chair of the ECB's Supervisory Board, at the Retail Banking Conference 'Creating sustainable financial structures by putting citizens first' of European Savings Bank Group, Brussels, 21 November 2019; at: www.bankingsupervision.europa.eu/press/speeches/date/2019/html/ssm.sp191121_1~a65cdec01d.en.html.

2. Broad Outline of this Chapter

In the context of climate change and biodiversity, discussions of the mandate of the European System of Central Banks (ESCB)³ often focus on its monetary policy brief and its prudential supervisory tasks, the two mainstays of activities of the Frankfurt-based euro-area central bank. Beyond environmental concerns, the scope of the Eurosystem's⁴ mandate has been the subject of litigation emanating from constitutional complaints from Germany – leading to the *Gauweiler* (OMT)⁵ and *Weiss* (PSPP)⁶ cases and to the stand-off between the German Constitutional Court and the European Court of Justice (CJEU)⁷ – and from the United Kingdom, leading to a judgment on the limitation of the ECB's mandate in the area of payments.⁸ This chapter is concerned with the scope of the ESCB's mandate in the face of climate change and biodiversity. **8.002**

The focus will first be on monetary policy, then extend to prudential supervision and, finally, will briefly touch upon other elements of the mandate, including payment systems oversight and the issuance of banknotes. **8.003**

It is submitted that core elements of the line of reasoning developed below apply to the entire mandate. For ease of reading, in the following sections I will refer to monetary policy and only occasionally mention supervision – the reader is invited to consider the other elements of the mandate included in the reasoning. **8.004**

Similarly, to facilitate understanding, I discuss the mandate of the ECB in full acknowledgement of the legal situation that it is the European *System of Central Banks* that is entrusted with this mandate. While recognizing the statutory injunction to operate in a decentralized manner,⁹ I focus on the central entity in the system.¹⁰ Since the ESCB is governed by the decision-making **8.005**

3 The ESCB consists of the ECB and the NCBs of all Member States. References to the ESCB in EU law may refer to either the system in its entirety or to the 'Eurosystem', that is, the monetary policy authority for the Euro Area (Article 282(1) TFEU).

4 The Eurosystem consists of the ECB and the National Central Banks (NCBs) of the Member States that have adopted the euro: Article 282, second sentence, TFEU.

5 Case C-62/14 *Peter Gauweiler and Others v Deutscher Bundestag*: ECLI:EU:C:2015:400.

6 Case C-493/17 *Weiss and Others*: ECLI:EU:C:2018:1000.

7 Judgment of the *Bundesverfassungsgericht* (BVerfG, German Constitutional Court, Second Senate, of 5 May 2020; English translation at: www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2020/05/rs20200505_2bvr085915en.html).

8 Case T-496/11, *UK v ECB*: ECLI:EU:T:2015:133. See, also: Case T-45/12 *UK v. ECB*: ECLI:EU:T:2015:289 and Case T-93/13 *UK v ECB*: ECLI:EU:T:2015:290.

9 Article 12.1, third paragraph, ESCB Statute Responsibilities of the decision-making bodies.

10 This also applies in the context of the ECB's prudential supervisory tasks: the Single Supervision Mechanism (SSM) consists of the ECB and National Competent Authorities (NCAs), with the ECB positioned

bodies of the ECB,¹¹ it is in the ECB's Governing Council that the fulfilment of the Eurosystem's mandate is ultimately decided, subject to judicial review and democratic control. The reader is invited to read the arguments as applying to the ESCB or the Eurosystem.¹² Likewise, references to the Statute of the European System of Central Banks and of the European Central Bank, Protocol No. 4 attached to the Treaty on the Functioning of the European Union (TFEU), will be short-handed as 'ESCB Statute'. Finally, in order to avoid unnecessary repetition, this chapter will speak about climate change when climate change and loss of biodiversity are meant,¹³ as both developments produce risks for central banks and for the financial system, beyond threatening our economies and the survival of mankind on our planet.

B. HISTORY OF THE INTERPETATION OF THE MANDATE

1. Primacy of Price Stability

8.006 The ECB's overriding objective is price stability: 'The primary objective of the [ESCB¹⁴] shall be to maintain price stability', Article 127(1) TFEU proclaims.¹⁵ Price stability is also the first of the three guiding principles underlying Economic and Monetary Union (EMU), compliance with which Article 119(3) TFEU requires.¹⁶ Price stability is further mentioned as an objective to

centrally. See the *L-Bank* judgment: Case C-450/17 P *Landeskreditbank Baden-Württemberg – Förderbank v European Central Bank* ECLI:EU:C:2019:372.

11 Article 8 ESCB Statute General Principle.

12 Similarly, in respect of the SSM and the prudential supervision mandate.

13 Only differentiating between the two issues when there is a need to so, such as in respect of international norms.

14 See the explanation above on the ECB, ESCB and Eurosystem.

15 This is repeated in Article 282(2) TFEU and in Article 2 ESCB Statute.

16 'These activities of the Member States and the Union shall entail compliance with the following guiding principles: stable prices, sound public finances and monetary conditions and a sustainable balance of payments.' The 'activities' to which this provision refers concern the establishment of an economic (first paragraph) and a monetary (second paragraph) union. Article 119(1) calls for 'the adoption of an economic policy which is based on the close coordination of Member States' economic policies, on the internal market and on the definition of common objectives, and conducted in accordance with the principle of an open market economy with free competition', while Article 119(2) specifies as follows: 'these activities shall include a single currency, the euro, and the definition and conduct of a single monetary policy and exchange-rate policy the primary objective of both of which shall be to maintain price stability and, without prejudice to this objective, to support the general economic policies in the Union, in accordance with the principle of an open market economy with free competition.'

be achieved in Article 3(3) TEU.¹⁷ The CJEU emphasized the importance of price stability in its *Gauweiler* judgment.¹⁸

The Protocol on the ESCB and the ECB is thus characterised 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. [italics added]

2. Secondary Mandate and Other Relevant Provisions

It is only in a secondary fashion that other objectives are relevant for the ECB's mandate. These further considerations, having to do with 'support [of] 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',¹⁹ are discussed in sections E and F below. Further provisions of relevance for the interpretation of what the ECB is mandated to undertake are the integration provisions of the TFEU,²⁰ notably Article 11, discussed in section G below, and the provision on the binding nature of international agreements (Article 216(2) TFEU), in relation to the Paris Agreement,²¹ a matter for discussion in section H below. Finally, as will be discussed in section I below, the principle of an open market economy favouring an efficient allocation of resources,²² often conflated with a principle of 'market neutrality', is also invoked as relevant for the interpretation of the ECB's mandate in the context of climate change and biodiversity. 8.007

17 The second sentence of Article 3(3) TEU reads as follows: 'It [the European Union] 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' (*italics added*). In its previous incarnation as Article 2 of the EC Treaty, price stability was mentioned as 'non-inflationary growth': 'The Community shall have as its task, by establishing a common market and an economic and monetary union and by implementing the common policies or activities referred to in Articles 3 and 3a [currently: Article 119 TFEU], to promote throughout the Community a harmonious and balanced development of economic activities, sustainable and *non-inflationary* growth respecting the environment, a high degree of convergence of economic performance, a high level of employment and of social protection, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States' (*italics added*).

18 Paragraph 44.

19 Article 127(1) TFEU, language which is repeated in Article 282(2) TFEU and in Article 2 ESCB Statute.

20 See Box 2 – integration provisions in the TFEU.

21 See the United Nations Framework Convention on Climate Change ELI: [http:// data.europa.eu/ eli/ convention/1994/69/oj](http://data.europa.eu/eli/convention/1994/69/oj) [1994] OJ L33/13; and the Paris Agreement [2016] OJ L282/4.

22 Article 127(1), third sentence, TFEU; Article 2, third sentence, ESCB Statute; Article 119(1) and (2) TFEU.

3. The ECB's Initial Approach: Solely Primary Mandate

8.008 Ever since its inception, the ECB has emphasised the twin characteristics of being an *independent* central bank and being entrusted with *delivering price stability* as its primary mandate. Insofar as support of economic policies in the European Union played any role, it was, at best, auxiliary. Most of the time, the reasoning the ECB followed was that a faithful implementation of its primary task constituted full execution of its secondary mandate, as well: providing price stability allowed the achievement of economic policy goals and contributed to the variety of objectives of the Union set out in Article 3 TEU. As Yolaïne Fischer has set out,²³ ‘ensuring price stability is considered to be instrumental in contributing to the achievement of the general economic policies of the EU, by supporting non-inflationary growth and a high level of employment’.

8.009 It is noteworthy that, in its very first communication on the monetary policy strategy it would pursue,²⁴ the ECB states: ‘As mandated by the Treaty establishing the European Community, the maintenance of price stability will be the primary objective of the ESCB. Therefore, the ESCB's monetary policy strategy *will focus strictly on this objective*’ [italics added].

8.010 The secondary objective is not even mentioned. In a similar vein, the first President of the ECB made clear, in a speech in Dublin seven weeks ahead of the launch of the euro,²⁵ that the serious concerns of the Governing Council about unemployment in the euro area would not diminish its commitment to price stability alone; only by working towards that ultimate goal would reducing unemployment be served. A longer quote will make this perspective clear:

[L]et me emphasise that the Governing Council of the ECB is very concerned about the unacceptably high rate of unemployment in the euro area. However, an inflationary monetary policy would not solve Europe's serious unemployment problem. On the contrary, an inflationary policy would not only unacceptably flout the Maastricht Treaty; a Treaty, let me remind you, that has been ratified by all the Member States of the European Union and endorsed by the public in referenda in several countries, including Ireland. *An inflationary monetary policy would almost certainly lead to higher unemployment in the medium run, as long-term interest rates would rise and the benefits of price stability*

23 Yolaïne Fischer, *Global warming: does the ECB mandate legally authorise a 'green monetary policy'?*, in Sustainability and Financial Markets, pp.163–98, notably at p.172.

24 *A stability-oriented monetary policy strategy for the ESCB*, press release, 13 October 1998, at: www.ecb.europa.eu/press/pr/date/1998/html/pr981013_1.en.html.

25 *The ESCB's stability-oriented monetary policy strategy*, speech by the President of the European Central Bank, Dr Willem F. Duisenberg, at the Institute of European Affairs on 10 November 1998 in Dublin, at: www.ecb.europa.eu/press/key/date/1998/html/sp981110.en.html.

would be lost. Such a policy would therefore be entirely counterproductive. Let me be very clear: *in the interest of all European citizens, the Governing Council is determined to protect price stability.* The ESCB's independence is a means to facilitate the achievement of this goal. *Only by preserving price stability and thereby creating the stable environment required for continued higher employment and growth, can the European System of Central Banks (ESCB) serve the public and address the public's understandable concerns.* [italics added]

We see here that any consideration of other policy objectives (in this case, employment) is seen as undermining the primary mandate, as if including high unemployment in the considerations would automatically lead the ECB to pursue an inflationary monetary policy.²⁶ **8.011**

We saw the same emphasis on the first leg of the mandate when, in 2003, the ECB's first monetary policy strategy review was announced²⁷ – the secondary objective was not even mentioned.²⁸ It was only in the monetary policy strategy review of 2020–1 that the introductory words to its conclusion²⁹ mentioned the secondary mandate and even highlighted several elements of the Union's objectives:³⁰ 'These objectives include balanced economic growth, 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.'

8.012

By then, the thinking of the ECB had developed such that climate change formed part of the considerations for the achievement of its *primary* mandate. **8.013**

26 How different it is on the other side of the Atlantic Ocean, where the US central bank, the Federal Reserve System, takes unemployment more seriously, in pursuit of its mandate 'to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates': Section 2A, Monetary policy objectives, Federal Reserve Act (see Ben Winck, 'The government is pursuing "maximum employment" for the first time. Here's how it differs from "full employment" and the risks it brings'. *Business Insider*. See: www.businessinsider.com/what-is-maximum-employment-full-employmentlabor-market-federal-reserve-risks-2021-6?international=true&r=US&IR=T#:~:text=The%20Fed%20is%20targeting%20%22maximum,inflationary%20spiral%20is%20set%20off).

27 *The ECB's monetary policy strategy*, press release, 8 May 2003, at: www.ecb.europa.eu/press/pr/date/2003/html/pr030508_2.en.html.

28 *The ECB's monetary policy strategy after the evaluation and clarification of May 2003*, Speech by Jean-Claude Trichet, President of the European Central Bank, delivered at the Center for Financial Studies' key event, Frankfurt am Main, 20 November 2003, at www.ecb.europa.eu/press/key/date/2003/html/sp031120.en.html.

29 *The ECB's monetary policy strategy statement*, at: www.ecb.europa.eu/home/search/review/html/ecb_strategyreview_monopol_strategy_statement.en.html. See, also, *ECB's Governing Council approves its new monetary policy strategy*, press release, 8 July 2021, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb_pr210708~dc78cc4b0d.en.html.

30 While also referring to the further mandate in respect of financial stability: 'The Eurosystem shall also 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.'

4. Secondary Mandate Held Primary Place When (Re-)interpreting Mandate

8.014 Until recently, then, the arguments proffered to explain why the ECB could (or could not) adopt policies or take measures which take climate change into account related mostly to the secondary mandate, to the incidence of the integration provision on the environment or to the binding nature of the Paris Agreement.³¹ Stronger realisation of the impact of climate change on the fulfilment of the price stability mandate has lately shifted the focus in the debate to the ECB's primary mandate. Economists have argued that the shocks resulting from climate change and the transition risks entailed may affect price stability and may undermine traditional methods of trying to achieve price stability to such an extent that there is no need to solely rely on the secondary objective and additional arguments for the advocacy of climate change consciousness.³² This change in the current of thinking also affects the approach I take here.

8.015 Below, I will first undertake a more inclusive interpretation of the primary and secondary objectives and then enter into the further arguments for a climate-conscious approach to the mandate of the ECB. Before doing so, let me explain the development of my own thinking.

5. Development of My Own Thinking

8.016 In my PhD thesis on the ECB, I wrote that³³

if two courses of action are open to the [Euro-]System, one of which is clearly more favourable to stable prices than the other, the choice should be for those measures which are most conducive to price stability. If there is no material difference in effect on price stability, the ESCB is free to choose a course of action on different grounds

8.017 and, referring to the objectives of Article 2 EC Treaty (now Article 3 TEU):³⁴ 'Indirectly, therefore, these objectives also bind the ESCB.'

31 See footnote 20 above.

32 See Franziska Bremus, Geraldine Dany-Knedlik and Thore Schlaak (2020). Price stability and climate risks: Sensible measures for the European Central Bank. *DIW Weekly Report*, 10(14), 206–13.

33 *The European Central Bank – Institutional Aspects*, 1997, p.187.

34 *The European Central Bank – Institutional Aspects*, 1997, p.190. In 1997, I added that '[i]t can certainly be argued, even in the absence of such a reference [to the Community's objectives], the ESCB were bound by Article 2's enumeration of objectives. After all, the ESCB is fully embedded in the Community legal order'. This was before the CJEU confirmed, also basing itself on the reference to the Community's objectives, in the *OLAF* case that 'the ECB, pursuant to the EC Treaty, falls squarely within the Community framework'. Judgment of 10 July 2003 in Case C-11/00 (*Commission v ECB*), ECLI:EU:C:2003:395.

My initial basic approach to the requirement to support economic policies³⁵ **8.018** emphasized the absence of a single Community economic policy and the legal requirement of such (largely national) economic policies as themselves being bound by the overall Treaty objectives. This finding is based on Article 102A EC Treaty,³⁶ currently Article 120 TFEU, the most ignored³⁷ of the economic union provisions in the EMU chapter, which reads:

Member States shall conduct their economic policies with a view to contributing to the achievement of the objectives of the Union, as defined in Article 3 of the Treaty on European Union, and in the context of the broad guidelines referred to in Article 121(2). The Member States and the Union shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119.

I also noted the possibility for the Community to adopt economic policy **8.019** measures based on Article 103A of the European Community Treaty (TEC),³⁸ currently Article 122 TFEU, as a route through which the Ecofin Council could adopt EU-wide policies which the ECB is required to support.^{39,40} The recent use of this provision for the SURE mechanism⁴¹ and the Recovery and Resilience Facility (RRF) funded by European Union Recovery Instrument⁴² makes this reference more topical again. Article 122 TFEU has also been invoked as the legal basis for the (voluntary and possibly mandatory)

35 *The European Central Bank – Institutional Aspects*, 1997, pp.187–90.

36 *The European Central Bank – Institutional Aspects*, 1997, pp.188 and 190.

37 In view of often divergent, domestically focused and inward-looking economic policies of the Member States and the observed major deviations from EU economic policy recommendations (see Konstantinos Efstathiou and Guntram Wolff, 'What Drives National Implementation of EU Policy Recommendations' [2019] Bruegel).

38 See for its text: www.cvce.eu/content/publication/2002/4/9/2c2f2b85-14bb-4488-9ded-13f3cd04de05/publishable_en.pdf. It is remarkable that this document is not found at the EurLex site.

39 *The European Central Bank – Institutional Aspects*, 1997, p.188.

40 In this context, I noted the distinction between EC-wide and Euro Area-specific measures and the possibility that economic policy coordination for the latter may become stricter than for the Community (now Union).

41 SURE was the temporary mechanism to support unemployment benefits in the Member States in the COVID-19 pandemic. See Council Regulation (EU) 2020/672 of 19 May 2020 on the establishment of a European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) following the COVID-19 outbreak, OJ L 159/1, 20.5.2020.

42 The RRF is a combined loan/grant facility within the Union's multi-annual budgetary framework. See Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility, OJ L 57/17, 18.2.2021. Disbursements for the RRF are undertaken on the basis of the European Union Recovery Instrument, based on Article 122 TFEU; see the references in recital 19 of the preamble to, and in Article 6 of, Council Regulation (EU) 2020/2094 of 14 December 2020 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis, OJ L 4331/23, 22.12.2020.

Union-wide demand reduction for natural gas, to counter diminishing gas supplies from Russia in the context of its full-scale invasion of Ukraine.⁴³

8.020 In my thesis, I declared the question whether the ESCB would be bound directly by the objectives of the Treaty ‘a matter of theoretical interest’ as ‘the reference to Article 2 EC Treaty [now Article 3 TEU] makes abundantly clear that the ESCB is to support economic policies with a view to contributing to the achievement of the Community’s goals’. I continued: ‘[i]t can certainly be argued that, even in the absence of such a reference, the ESCB were bound by Article 2’s enumeration of objectives’, because ‘the ESCB is fully embedded in the Community legal order’.⁴⁴

8.021 I still stand behind most of what I wrote in 1997, but have shifted towards a more comprehensive view of the relevance and pertinence of the secondary objective. I would no longer agree with the implication that Carel van den Berg⁴⁵ inferred from my insistence that the ECB is to support the *general* economic policies finding,⁴⁶ namely ‘that the ESCB can be measured not in terms of support of a specific course of action conducted by Member States or the Community, but rather by the support of *underlying trends* in economic policy’ [italics added].

6. Schedule of the Remainder of this Chapter

8.022 As will become clear below, I deem the ECB’s support for the EU’s climate policies and the adoption of climate-friendly measures and operations in furtherance of the Union’s Green Deal⁴⁷ to be squarely within its mandate.

43 Council Regulation (EU) 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas, OJ L 206/1, 8.8.2022.

44 A prelude to the subsequent finding of the CJEU, also basing itself on the reference to the Community’s objectives, in the *OLAF* case that ‘the ECB, pursuant to the EC Treaty, falls squarely within the Community framework’. Judgment of 10 July 2003 in Case C-11/00 (*Commission v ECB*), ECLI:EU:C:2003:395. The ECB has only been an EU institution since the Reform Treaty of Lisbon; the ECB is now mentioned among the institutions in Article 13(1) TEU. See Article 1 sub 14), Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007, OJ C 306/1, 17.12.2007.

45 C.C.A. van den Berg, *The Making of the Statute of the European System of Central Banks – An Application of Checks and Balances*, PhD, 2004, p.55. Van den Berg’s finding that ‘[i]t is very difficult to make this secondary objective operational’ and his sole focus on the level of interest rate set by the ECB as relevant for assessing compliance constitute a reading with which I would beg to differ.

46 *The European Central Bank – Institutional Aspects*, 1997, p.188.

47 See the 11 December 2019 announcement by the European Commission of the European Green Deal. This should enable Europe to become the first carbon-neutral continent in the world by 2050. See the Commission Communication COM(2019) 640 final at <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN>. See, also, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.

Also, furtherance of other economic policies and wider Union goals may be considered to be part of the ECB's mandate; but that issue is beyond the scope of this chapter.

The question I endeavour to answer in the following is whether the ECB's mandate *allows* or even *requires* it to include climate change and biodiversity loss considerations in exercising its functions and, if either is the case, what this might mean for its main areas of activity. **8.023**

In order to do so, the recent development of thinking within the ECB is first set out. **8.024**

7. Development of ECB Thinking on its Primary Mandate

At first sight, there seems to be not much scope to include considerations of climate change in understanding the ECB's mandate. As referred to above, recently, ECB officials have started to mention the risks which climate change poses for the fulfilment of the primary mandate. ECB President Christine Lagarde clearly mentioned climate change as an element to be included in policy-setting in an interview with the *Financial Times* published on 8 July 2020: 'as we have this price stability mandate that I described for you early on, climate change actually has an impact on price stability.'⁴⁸ Nine days later, ECB Executive Board member Isabel Schnabel, citing 'material risks to price stability in the medium to long term' posed by climate change, underlined the need to include climate change considerations in the execution of the central bank's core mandate.⁴⁹ She mentioned two paths along which climate change may diminish the effectiveness of monetary policy: 'large and persistent shocks to output inflation' as a result of delayed policy action against climate change, and impairment of the central bank's ability to address such shocks in case **8.025**

48 *Interview with Financial Times*, video interview with Christine Lagarde, President of the ECB, conducted by Roula Khalaf on 7 July 2020 and posted on 8 July 2020, at: www.ecb.europa.eu/press/inter/date/2020/html/ecb.in200708~8418847210.en.html. Ms Lagarde specified: 'even without changing our mandate, climate change has an impact. I'll tell you, it has an impact on how we model the economy going forward, how we forecast, how we measure risk, how we stress test institutions, how we value the collaterals that we receive, how we link and join forces with other national central banks to explore together what policies can actually have a decisive impact on fighting climate change. This clearly will be part of our strategy.' See *Financial Times*, 8 July 2020: *Lagarde puts green policy top of agenda in ECB bond buying – President wants central bank to 'explore every avenue' in fight against climate change*, at: www.ft.com/content/f776ea60-2b84-4b72-9765-2c084bff6e32.

49 *Never waste a crisis: COVID-19, climate change and monetary policy*, speech by Isabel Schnabel, Member of the Executive Board of the ECB, at a virtual roundtable on 'Sustainable Crisis Responses in Europe' organised by the INSPIRE research network, 17 July 2020, at: www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200717~1556b0f988.en.html.

‘[r]ising temperatures and an increased frequency of natural disasters [...] further suppress potential output growth and hence the real equilibrium interest rate around which central banks have to calibrate their policies’.⁵⁰

- 8.026** This line of reasoning concerns the primary (that is, price stability) mandate, as Schnabel made clear: ‘Importantly, this argument is not about weighing secondary objectives, which may provide additional justifications for monetary policy taking into account climate change. It is about protecting the primary objective.’⁵¹
- 8.027** It is noteworthy that, around the time that the ECB’s Board members were openly discussing the need to include climate change in preparation and execution of the central bank’s primary function, the ECB started a consultation on a draft guide on this matter for supervisory purposes.⁵² Also, Supervisory Board Chair Andrea Enria, who had already foreshadowed climate concerns in an earlier speech,⁵³ spoke about the need to take climate risks fully into account for prudential supervision. This was also reflected in public utterances in the ECB’s banking supervision Newsletter.⁵⁴
- 8.028** Six weeks after her aforementioned speech, Isabel Schnabel made the same argument in favour of an ECB contribution to tackling climate change.⁵⁵ Focusing on the urgency of strong policy responses from a variety of public and private actors, arguing that ‘there have been few instances in the past where society and policymakers have faced such a clear and significant threat to lives, jobs and prosperity’ and citing ‘broad agreement that climate risks continue to be mispriced in financial markets’, she concluded that ‘current market prices are unlikely to yield the needed transition towards a carbon-neutral economy at the pace required to stimulate investment and innovation and safeguard a sustainable growth path with stable prices’. This led her to call for ‘collective and concerted action by all stakeholders, first and foremost by legislators and

50 Ibid.

51 Ibid.

52 See the draft *ECB Guide on climate-related and environmental risks – Supervisory expectations relating to risk management and disclosure*, at: www.bankingsupervision.europa.eu/legalframework/publiccons/pdf/climate-related_risks/ssm.202005_draft_guide_on_climate-related_and_environmental_risks.en.pdf.

53 See n 2 above.

54 *Ramping up climate-related and environmental risk supervision*, ECB Supervision Newsletter, 18 November 2020, at: www.bankingsupervision.europa.eu/press/publications/newsletter/2020/html/ssm.nl201118_4.en.html.

55 *When markets fail – the need for collective action in tackling climate change*, speech by Isabel Schnabel, Member of the Executive Board of the ECB, at the European Sustainable Finance Summit, Frankfurt am Main, 28 September 2020, at: www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200928_1-268b0b672f.en.html.

national governments' and to state that '[t]he Eurosystem, for its part, cannot be a bystander in the transition towards a carbon-neutral economy'.

She identified 'three dimensions of support': as prudential supervisor (on which more in section M below), as large-scale investor and 'as independent guardian of the single currency', where 'we are investigating if and how our *monetary policy operations and portfolios* could be adjusted to reflect the fact that climate change, if not addressed swiftly, may affect the economy in ways that pose potentially material risks to price stability in the medium to long term'.⁵⁶ Schnabel mentioned *collateral*, which the ECB may decide to accept only 'if it is able to fully assess climate-related risks' or which the ECB may subject to haircuts representing the (climate-related) risks involved. Reassessing the benchmark allocation for *asset purchasing programmes* was a second method mentioned, requiring disclosure of climate-related risks involved in the assets and perhaps extending to 'excluding certain bonds – based on clear and transparent rules – that are used to finance projects that conflict with the decarbonisation objectives of the EU'.⁵⁷ Implicitly acknowledging the effects on mis-pricing and fostering a 'non-green' economy that the then current asset programmes were alleged to have,⁵⁸ Schnabel mentioned that, by thus changing course on monetary policy, the ECB 'could avoid a scenario in which [its] monetary policy contributes to locking in investments in sectors and technologies that are more acutely exposed to the disruptive effects of the transition to a carbon-neutral economy'. All the issues mentioned by Christine Lagarde and Isabel Schnabel were to be reflected upon in the ECB's monetary policy review.⁵⁹ This exercise in reassessing whether the ECB's monetary policy set-up is apt for the second decade of the twenty-first century has been affected,⁶⁰ as so much in Europe's economy and politics, by the outbreak of Covid-19 in 2020. In a speech of 30 September 2020, the ECB President summed up the challenges:

[W]e have to factor in a renewed focus on mitigating climate change, too, which could have an impact on inflation through progressive changes in the energy mix as we transition towards a carbon-neutral economy. *Climate change affects all aspects of monetary*

56 Bold in original.

57 Isabel Schnabel; see footnote 55 above.

58 Sini Matikainen, Emanuele Campiglio and Dimitri Zenghelis, 'The climate impact of quantitative easing', *Centre for Climate Change Economics and Policy*, May 2017, 1–36, at: www.lse.ac.uk/granthaminstitute/wp-content/uploads/2017/05/ClimateImpactQuantEasing_Matikainen-et-al-1.pdf.

59 See the Q&As on this exercise at: www.ecb.europa.eu/home/search/review/html/questions.en.html; and the *ECB Listens* portal at: www.ecb.europa.eu/home/search/review/html/form.en.html.

60 ECB Press Release, *ECB extends review of its monetary policy strategy until mid-2021*, 2 April 2020, at: www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200402~942a1358ee.en.html.

policy: output and inflation, long-term interest rates and policy transmission. That is why we are carefully studying the implications of climate change for our primary objective as part of our strategy review.⁶¹

8.030 A general contribution on the ECB's legal mandate by four authors from the institution does not mention climate change but is relevant in this context as they give their interpretation as a contribution to the monetary policy review.⁶² In their exhaustive treatment and prudent approach, their arguments are based on an analogy with the case law that accepts measures *indirectly* supporting price stability (by protecting the transmission mechanism of monetary policy: see the cases of *Gauweiler* and *Weiss*). The authors stipulate that monetary policy measures aiming at price stability 'may therefore take into account other considerations'. They mention 'full employment, a high level of protection and improvement of the quality of the environment, or financial stability', subject to these measures being necessary for price stability and embedded in decision-making that respects certain parameters, including proportionality. They emphasize the ECB's discretion in taking the necessary elements into account when devising monetary policy measures. When discussing the ECB's secondary objective, the authors distinguish between support for the general economic policies in the Union, which is a direct obligation, and contributing to the objectives of the Union, which is indirect as it works through the support of economic policies. It is up to the authorities responsible for these economic policies to take the specific decisions thereto; such policy-making is not for the ECB. Transparency is required: the authors argue that the ECB should identify the relevant economic policies in the Union which it seeks to support.

8.031 I agree with these authors' reading of the secondary objective as a self-standing source of competence: 'most plausible seems the interpretation according to which the ECB could rely on the secondary objective as an alternative legal basis for a monetary policy measure, provided this is without prejudice to price stability', footnoting as follows: 'This could suggest, for example, that the ECB could take action related to the protection of the environment if the action is covered by its competence to pursue the primary or secondary objectives'.⁶³

61 *The monetary policy strategy review: some preliminary considerations*, speech by Christine Lagarde, President of the ECB, at the 'ECB and Its Watchers XXI' conference, Frankfurt am Main, 30 September 2020, at: www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200930~169abb1202.en.html (italics added).

62 Michael Ioannidis, Sarah Jane Hlášková and Chiara Zilioli, *The Mandate of the ECB: Legal Considerations in the ECB's Monetary Policy Strategy Review* (September 2021). ECB Occasional Paper No. 2021/276, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3928298.

63 *Ibid.* This is not the place to criticise the authors for not including the Commission among the economic policy setters at EU level.

Their contribution is further relevant for the parameters it identifies for fulfilling the secondary objective.

The development of the thinking at the ECB reflects the collective reflections of the central banks⁶⁴ and supervisors who have gathered to exchange views and best practices on the green transition. Before expressing my own views on the preferred interpretation of the ECB's primary mandate, it is time to make an excursion to this relevant recent grouping. **8.032**

C. NETWORK FOR GREENING THE FINANCIAL SECTOR

1. Origins and Objective

The emerging awareness of the need to tackle climate change and to include the risks emanating from climate change in supervision of the financial industry and in devising monetary policy has brought central banks and supervisors together in a dedicated association. In humble beginnings,⁶⁵ the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) brought together eight central banks and supervisors in 2017, with the intention of exchanging best practices in this area on a voluntary basis, thus contributing to the development of financial-sector risk management related to climate and environmental threats and 'to mobilise mainstream finance to support the transition towards a sustainable economy'.⁶⁶ The purpose of the NGFS is now described more forcefully as follows:⁶⁷ **8.033**

The Network's purpose is to help strengthening the global response required to meet the goals of the Paris agreement and to enhance the role of the financial system to manage risks and to mobilize capital for green and low-carbon investments in the broader context of environmentally sustainable development. To this end, the Network defines and promotes best practices to be implemented within and outside of the Membership of the NGFS and conducts or commissions analytical work on green finance.

The renewed July 2020 Charter of the NGFS describes its objective as follows: **8.034**

64 An excellent overview of the challenges and central banks' methods of facing them can be found here: Fred Pearce, *As Disasters Mount, Central Banks Gird Against Threat of Climate Change*, 18 August 2021, at: <https://e360.yale.edu/features/as-disasters-mount-central-banks-gird-against-threat-of-climate-change>.

65 An intriguing account of how climate change became an accepted topic of discourse among central bankers, and an explanation of the development of such advocacy among 'first movers' (the Bank of England, the Banque de France and De Nederlandsche Bank), can be found in Katrijn Siderius (2022), *An unexpected climate activist: central banks and the politics of the climate-neutral economy*, *Journal of European Public Policy*, at: <https://doi.org/10.1080/13501763.2022.2093948>.

66 See www.ngfs.net/en.

67 See www.ngfs.net/en/about-us/governance/origin-and-purpose.

The [NGFS] is a group of Central Banks and prudential supervisory authorities willing, on a voluntary basis, to exchange experiences, share best practices, contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy. Its purpose is to define, promote and contribute to the development of best practices to be implemented within and outside of the Membership of the NGFS and to conduct or commission analytical work on green finance.⁶⁸

8.035 By 14 June 2022, the network of original eight agencies⁶⁹ had grown to 116 members and 19 observers.⁷⁰ Membership is geographically and institutionally diverse, with central banks and supervisory agencies spanning the continents, and including European Supervisory Authorities (ESAs)⁷¹ and the central banks of monetary unions (the ECB and the *Banque Centrale des Etats de l'Afrique de l'Ouest* (BCEAO)).⁷² It is noteworthy that several jurisdictions have a variety of agencies represented: both their central bank and their financial sector or market supervisor. The NGFS was initially energetically chaired by then DNB Director Frank Elderson, one of the world's two leading central bank protagonists of action against climate change, the other being Mark Carney. As Governor of the Bank of England,⁷³ this Canadian–British economist delivered a key speech⁷⁴ setting the issue of climate change squarely on the agenda in the City.⁷⁵ The current chair is Ravi Menon, Managing Director of the Monetary Authority of Singapore.

68 At: www.ngfs.net/sites/default/files/media/2020/09/03/ngfs_charter_final.pdf. The 2023 charter is similarly worded; see https://www.ngfs.net/sites/default/files/media/2023/04/27/ngfs_charter_-27_april_2023.pdf.

69 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 the Joint statement by the Founding Members of the Central Banks and Supervisors Network for Greening the Financial System – One Planet Summit at: www.banque-france.fr/en/communique-de-presse/joint-statement-founding-members-central-banks-and-supervisors-network-greening-financial-system-one.

70 See www.ngfs.net/en/about-us/membership. By end 2023, it had grown to 134 members and 21 observers.

71 The European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA). These authorities are entrusted with the coordination of supervision of financial services in the single market and have been given specific supervisory powers. They also play a role in the implementation of the EU's green taxonomy.

72 See www.bceao.int/. The Banque des Etats de l'Afrique Centrale (BEAC; www.beac.int/beac/la-beac/) and the Eastern Caribbean Central Bank (ECCB; www.eccb-centralbank.org/) are not members (yet).

73 Mark Carney is currently the UN Secretary-General's Special Envoy on Climate Action and Finance; see: www.un.org/sg/en/content/sg/personnel-appointments/2019-12-01/secretary-general-appoints-mark-joseph-carney-of-canada-special-envoy-climate-action-and-finance.

74 'Breaking the tragedy of the horizon – climate change and financial stability', speech by Mr Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board, at Lloyd's of London, London, 29 September 2015, at: www.bis.org/review/r151009a.pdf.

75 See also 'A new horizon', speech given by Mark Carney, Governor Bank of England at the European Commission Conference: A global approach to sustainable finance, 21 March 2019, at: www.bis.org/review/r190322a.pdf.

2. Main Deliverables

The key products of the NGFS, beyond the activation of mutual cooperation and inspiration on the global theme of climate change and the financial sector, have been a succession of reports and the guidance on its website. Among these are climate scenarios, assisting central banks and supervisors to design and analyse scenarios underpinning their preparations, and those of the financial-sector agents, for the green transition.⁷⁶ Exploring the ways in which central banks can remain resilient to climate change and how they can protect their balance sheets, a March 2021 report sets out a host of options to factor in climate change into their operations.⁷⁷ The guidance given always alludes to the central bank's specific mandate and acknowledges that while '[t]here is a broad consensus among members of the NGFS that, at the very least, central banks should carefully assess, and where appropriate adopt, additional risk management measures to protect their balance sheets against the financial risks brought about by climate change', 'there is as of yet no consensus among central banks as to what climate-related adjustments would be optimal', 'reflecting the diversity of existing central bank operational frameworks'. The inventory of options, the provision of criteria to assess the menu of options and the sketching of the strategic choices faced by central banks enable well-reasoned decision-making and thereby pave the way to operational choices. I have no doubt that the NGFS' work has prepared the ground for the choices made by the ECB, to be discussed in section L below.⁷⁸ **8.036**

The NGFS has also issued a number of recommendations, both to the members of its own grouping and to policy makers. The former include integrating climate-related risks into financial stability monitoring and micro-supervision (a prudential issue), integrating sustainability as a factor in central banks' own portfolios and bridging data gaps.⁷⁹ On this issue, the NGFS calls for 'convergence towards a common and consistent set of global sustainability disclosure standards' and a global taxonomy. More forward-looking data and more granular data are required upon which to base business decisions and **8.037**

76 See www.ngfs.net/ngfs-scenarios-portal/, and the (second) NGFS Climate Scenarios for central banks and supervisors, June 2021, at: www.ngfs.net/en/ngfs-climate-scenarios-central-banks-and-supervisors-june-2021.

77 *Adapting central bank operations to a hotter world: reviewing some options*, at: www.ngfs.net/sites/default/files/media/2021/06/17/ngfs_monetary_policy_operations_final.pdf.

78 For an overview of the NGFS' work and of climate-related measures taken by European central banks, see Clara Isabel González Martínez, *The role of central banks in combating climate change and developing sustainable finance*, *Banco de España Economic Bulletin* 3/2021; at: <https://ssrn.com/abstract=3937139>.

79 See the *Progress report on bridging data gaps*, May 2021, at: www.ngfs.net/sites/default/files/medias/documents/progress_report_on_bridging_data_gaps.pdf.

policy-making. A survey⁸⁰ on whether their mandates would provide an opportunity for central banks to reflect climate change in their operational framework provided insights into the diverse legal positions on the interlinkage of climate goals with the primary objective of central banks, again preparing the ground for well-founded decision-making. The *Guide on Climate-related Disclosure for Central Banks* provides guidance for central banks on how to produce climate-related disclosures, covering central banks' governance, strategy and risk management, in line with recommendations on financial disclosures issued by the Task Force on Climate-related Financial Disclosures (TCFD).⁸¹

3. Wider Context

8.038 The Network, as a dedicated association, works within a wider context of bodies engaged in the promotion of financial stability. The Financial Stability Board,⁸² once headed by Mark Carney,⁸³ has dedicated work on the impact of climate change on financial stability,⁸⁴ including stocktaking of the experience of financial authorities to take physical and transition risk into account,⁸⁵ and made an inventory of the implications of climate change for financial stability.⁸⁶ The FSB's main impact has been its proposal to the G20 in 2015 to establish an 'industry-led disclosure task force on climate-related risks'.⁸⁷ This TCFD has issued Recommendations⁸⁸ which focus on governance, strategy, risk management and metrics and targets. It keeps track of adherence to its Recommendations, and has issued further guidance.⁸⁹

80 *Survey on monetary policy operations and climate change: key lessons for further analyses*, December 2020, at: www.ngfs.net/sites/default/files/medias/documents/survey_on_monetary_policy_operations_and_climate_change.pdf.

81 *Guide on climate-related disclosure for central banks*, December 2021, at: www.ngfs.net/sites/default/files/medias/documents/guide_on_climate-related_disclosure_for_central_banks.pdf.

82 See www.fsb.org/.

83 See his Arthur Burns Memorial Lecture, given as Governor of the Bank of England, in Berlin on 22 September 2016: *Resolving the climate paradox*, at: www.fsb.org/wp-content/uploads/Resolving-the-climate-paradox.pdf.

84 See www.fsb.org/work-of-the-fsb/financial-innovation-and-structural-change/climate-related-risks/.

85 *Stocktake of financial authorities' experience in including physical and transition climate risks as part of their financial stability monitoring*, 22 July 2020, at: www.fsb.org/2020/07/stocktake-of-financial-authorities-experience-in-including-physical-and-transition-climate-risks-as-part-of-their-financial-stability-monitoring/.

86 *The Implications of Climate Change for Financial Stability*, 23 November 2020, at: www.fsb.org/wp-content/uploads/P231120.pdf.

87 *Proposal for a disclosure task force on climate-related risks*, 9 November 2015, at: www.fsb.org/wp-content/uploads/Disclosure-task-force-on-climate-related-risks.pdf.

88 *Recommendations of the Task Force on Climate-related Financial Disclosures, Final Report*, 15 June 2017, at: www.fsb.org/wp-content/uploads/P290617-5.pdf.

89 See: *Guidance on Risk Management Integration and Disclosure*, October 2020, at: www.fsb.org/wp-content/uploads/P291020-2.pdf. See also *Guidance on Scenario Analysis for Non-Financial Companies*, October 2020, at: www.fsb.org/wp-content/uploads/P291020-3.pdf. After its 2023 status report, the TCFD has fulfilled its

The central banks' central bank, the Basel-based Bank for International Settlement (BIS), is also active in this area. It undertakes research,⁹⁰ with a notable publication introducing the concept of the Green Swan and highlighting⁹¹ **8.039**

radical uncertainty associated with a physical, social and economic phenomenon that is constantly changing and involves complex dynamics and chain reactions. Traditional backward-looking risk assessments and existing climate-economic models cannot anticipate accurately enough the form that climate-related risks will take. These include what we call 'green swan' risks: potentially extremely financially disruptive events that could be behind the next systemic financial crisis.

The Basel Committee on Banking Supervision (BCBS) has issued guidelines.⁹² **8.040**
The BIS has a 'green finance' section of its Innovation Hub⁹³ and has even issued three green bonds: one in US dollars, one in euros and an Asian Green Bond Fund, in compliance with private green bond standards ('green bond fund initiative').⁹⁴ For more BCBS initiatives on green finance, see section M below.

It is against the backdrop of these global initiatives and activities that the ECB **8.041**
has been reflecting on its mandate, to the interpretation of which we now return.

D. PRIMARY MANDATE: THE PREFERRED INTERPRETATION

I consider the previously quoted views of the Executive Board members **8.042**
relevant for the interpretation of the ECB's primary mandate. This is not because economists⁹⁵ should have precedence when interpreting the law, and certainly not because the ECB board would be able to give an authoritative

remit and disbanded, with the FSB requesting the IFRS Foundation to take over monitoring of companies' climate-related disclosures.

90 See www.bis.org/topic/green_finance/research.htm. And: *Guidance on Metrics, Targets, and Transition Plans*, October 2021, at: https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf.

91 *The green swan – Central banking and financial stability in the age of climate change*, Patrick Bolton, Morgan Despres, Luiz Awazu Pereira Da Silva Frédéric Samama and Romain Svartzman, January 2020, at: www.bis.org/publ/othp31.pdf.

92 See www.bis.org/topic/green_finance/cooperation.htm.

93 See www.bis.org/about/bisih/topics/green_finance.htm.

94 *BIS launches green bond fund for central banks*, press release, 26 September 2019, at: www.bis.org/press/p190926.htm; *BIS launches second green bond fund for central banks*, press release, 25 January 2021, at: www.bis.org/press/p210125.htm; *BIS launches Asian Green Bond Fund*, press release, 25 February 2022, at: www.bis.org/press/p220225.htm.

95 Isabel Schnabel is an economist by training; Christine Lagarde has a legal professional background.

interpretation unchecked by the courts and academic critique, but because an acknowledgement of climate change effects on the pursuit of the price stability mandate is especially relevant in the context of a multidisciplinary approach to interpreting the law. This is, again, no abdication of responsibility on the part of lawyers but rather an acknowledgement of the necessity to rely on other disciplines when it comes to society's, or nature's, effects on human behaviour and the regulation thereof. Just as economics needs to rely on (climate) science when assessing the likely impact of climate change on economic variables, so are lawyers dependent on economists' assessments of developments and relationships when interpreting an 'economic' mandate, such as that of the ECB.⁹⁶ And both depend on climate change scientists to assess the future of the planet and the actions needed to save it from its most dominant inhabitants: human animals.⁹⁷ Assuming the validity of the assessment of the impact of climate change on economic variables and on the ECB's pursuit of price stability, I consider an interpretation that not only *allows* but actually *requires* the central bank to take climate change and biodiversity into account when devising and implementing monetary policy to be a valid and compellingly convincing interpretation of the ECB's mandate.⁹⁸ This is my preferred interpretation of the relevant provisions.⁹⁹

8.043 The question then is to what extent the ECB may or should take climate change into account in setting and executing monetary policy. This will be the subject of section K below. First, I turn to a weighing of secondary objectives in the context of the issue of climate change.

96 The word 'economic' is in quotation marks because in the law of the EMU a distinction is made between 'economic' and 'monetary', with the latter an exclusive Union competence and the former primarily within the purview of Member States and, in any case, in the hands of the (State and Union) governments and not the central banks. See Articles 3(1)(c), 2(3), 5(1) and (2) and 136 TFEU. Here, I use the word 'economic' in the wide, non-legal sense of the word as encompassing monetary union matters. I recall paragraph 60 of the CJEU's judgment in the *Weiss* Case (judgment of 11 December 2018 in Case C-493/17, ECLI:EU:C:2018:1000): 'the authors of the Treaties did not intend to make an absolute separation between economic and monetary policies.'

97 See the August 2021 report by the Intergovernmental Panel on Climate Change (IPCC): *Climate Change 2021: The Physical Science Basis*, at: www.ipcc.ch/report/ar6/wg1/#FullReport.

98 Shared by Banque de France Governor François Villeroy de Galhau: 'the financial stability and monetary policy mandates of central banks impose the obligation and also give them the tools to respond to the climate imperative'; see his: 'Climate change: central banks are taking action', Banque de France Financial Stability Review No. 23, June 2019 (Greening the financial system: the new frontier), at: https://entreprises.banque-france.fr/sites/default/files/media/2019/08/27/financial_stability_review_23.pdf#page=8. Most recently, see *Climate Change 2022 Mitigation of Climate Change Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, October 2021, at: www.ipcc.ch/report/ar6/wg3/.

99 Recalling Article 127(1), first sentence; Article 282(2), second sentence, TFEU; and Article 2 ESCB, first sentence, ESCB Statute.

E. THE ECB'S SECONDARY OBJECTIVE

1. Price Stability Takes Precedence

When addressing the issue of climate change as relevant for the interpretation of the ECB's mandate, attention has hitherto largely focused on the secondary objective, which was discussed in the paragraphs on the history of the interpretation approach. As stated previously, this requires the ECB to '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'.¹⁰⁰ The secondary objective clearly has a subordinate role as the relevant provisions begin: 'Without prejudice to the objective of price stability, the ESCB shall support [...]'. **8.044**

The Treaty's insistence on the precedence of price stability is made abundantly clear in the provisions governing the euro's external relations. Article 219 in Title V on international agreements of Part Five of the TFEU (relating to the Union's external action) sets out how exchange-rate arrangements may be made in respect of the euro. Both in the case of 'formal' exchange-rate agreements (Article 219(1) TFEU)¹⁰¹ – unlikely in the present-day context of floating exchange rates¹⁰² – and when adopting 'general orientations for exchange rate policy' (Article 219(2) TFEU),¹⁰³ the precedence of price stability is crystal **8.045**

100 Article 127(1) TFEU; language which is repeated in Article 282(2) TFEU and in Article 2 ESCB Statute.

101 Article 219 (1) TFEU reads: 'By way of derogation from Article 218, the Council, either on a recommendation from the European Central Bank or on a recommendation from the Commission and after consulting the European Central Bank, in an endeavour to reach a consensus consistent with the objective of price stability, may conclude formal agreements on an exchange-rate system for the euro in relation to the currencies of third States. The Council shall act unanimously after consulting the European Parliament and in accordance with the procedure provided for in paragraph 3. The Council may, either on a recommendation from the European Central Bank or on a recommendation from the Commission, and after consulting the European Central Bank, in an endeavour to reach a consensus consistent with the objective of price stability, adopt, adjust or abandon the central rates of the euro within the exchange-rate system. The President of the Council shall inform the European Parliament of the adoption, adjustment or abandonment of the euro central rates.'

102 Which came about 50 years ago at the time of writing of the first version of this chapter: on 15 August 1971, US President Nixon announced the severing of the link between gold and the US dollar, which had underpinned the post-Second World War Bretton Woods system of fixed but adjustable parities between the main western currencies. See Barry Eichengreen, *The Big Float*, 11 June 2021, Project Syndicate, at: www.project-syndicate.org/onpoint/nixon-shock-bretton-woods-collapse-fifty-years-later-by-barry-eichengreen-2021-06?barrier=accesspaylog.

103 Article 219(2) TFEU reads: 'In the absence of an exchange-rate system in relation to one or more currencies of third States as referred to in paragraph 1, the Council, either on a recommendation from the Commission and after consulting the European Central Bank or on a recommendation from the European Central Bank, may formulate general orientations for exchange-rate policy in relation to these currencies. These general orientations shall be without prejudice to the primary objective of the ESCB to maintain price stability.'

clear. When the ECB is consulted on a formal agreement,¹⁰⁴ this consultation is to endeavour ‘to reach a consensus [between the Council and the ECB] consistent with the objective of price stability’. Similarly, when determining the euro’s rate in an exchange-rate system, that is in applying a ‘formal’ agreement on the relation of the euro with the currencies of third countries, the Council’s consultations with the ECB¹⁰⁵ are to strive for a consensus to reach price stability. In the absence of formal arrangements for exchange-rate policy, the Council may adopt (but has refrained from doing so until now) ‘general orientations’ which ‘shall be without prejudice to the primary objective of the ESCB to maintain price stability’. In the previous section, an interpretation of this overriding primary mandate to maintain price stability which *permits*, nay even *requires*, the ECB to take climate change and biodiversity into account has been presented as compellingly convincing.

2. Interpreting the Wording of the Secondary Mandate

8.046 Having thus established that the priority for price stability in the ECB’s mandate is omnipresent in the Treaty,¹⁰⁶ one may start to interpret the words devoted to the secondary objective. Before exploring what they say about the relevance of climate change for the European Union’s central bank, it may be useful to explain some of the peculiarities of the language used.

8.047 There is no obligation to support ‘the’ EU’s ‘economic policy’ because there is no such thing. When EMU was established, the conduct of monetary policy was centralised, but economic policy remained largely an affair of the individual states. This is borne out by Articles 2(3)¹⁰⁷ and 5 TFEU¹⁰⁸ that grant coordinating powers to the Union in respect of the Member States’ economic policies. Beyond prohibitions – of monetary financing of the public sector (Article 123 TFEU), of privileged access of the public sector to the financial

104 This consultation is prescribed when the Council acts on a recommendation of the Commission. Alternatively, the ECB itself can submit a recommendation to the Council for a formal exchange-rate agreement.

105 Again, such consultations are mandated in case the adoption, adjustment or abandonment of a central rate for the euro in relation to a third currency emanates from the Commission. Alternatively, the ECB itself can submit a recommendation to the Council for determining or abandoning the euro’s central rate in an agreement.

106 And in the ESCB Statute, where Article 2 mirrors Articles 127(1) and 282(2) TFEU on the ESCB’s mandate.

107 Which reads: ‘The Member States shall coordinate their economic and employment policies within arrangements as determined by this Treaty, which the Union shall have competence to provide.’

108 Paragraph 1 of which reads: ‘The Member States shall coordinate their economic policies within the Union. To this end, the Council shall adopt measures, in particular broad guidelines for these policies. Specific provisions shall apply to those Member States whose currency is the euro.’ Paragraph 2 concerns the coordination of employment policies and the right of initiative to coordinate social policies.

sector (Article 124 TFEU) and of mutual liability or debt assumption (the 'no bail-out clause' of Article 125 TFEU)¹⁰⁹ – and rather generally phrased obligations,¹¹⁰ the economic union provisions largely provide for coordination. Both general economic policy coordination (Article 121) and specific and ultimately intrusive rules on budgetary constraints (Article 126, the so-called Excessive Deficits Procedure) are provided for. Even though these Treaty provisions have been 'topped up' by the Stability & Growth Pact¹¹¹ and elaborated in economic governance rules,¹¹² which have been vastly expanded since the great financial crisis and the subsequent sovereign debt crisis, the underlying approach is one of Member State competences in the area of economic policy. This explains the reference to supporting 'general economic policies': both the 'general' and the plural (*policies*) imply that there is, as yet, no EU (or euro-area) economic policy, except as a result of coordination and market pressure¹¹³ towards convergence.

109 Case C-370/12 *Pringle*: ECLI:EU:C:2012:756.

110 Such as in Article 120(1), first sentence, cited above.

111 Resolution of the European Council on the Stability and Growth Pact Amsterdam, 17 June 1997 [1997] OJ C236/1. Elaborated in Council Regulations of 7 July 1997: No 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies, and No 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure, [1997] OJ L 209/1 and L209/6.

112 Reference is made to the 'six-pack' of legislation adopted in 2011 and the 'two-pack' which followed in 2013, and to the 'Fiscal Compact Treaty'. See Regulation (EU) No 1173/2011 of the European Parliament and of the Council of 16 November 2011 on the effective enforcement of budgetary surveillance in the euro area [2011] OJ L306/1; Regulation (EU) No 1174/2011 of the European Parliament and of the Council of 16 November 2011 on enforcement measures to correct excessive macroeconomic imbalances in the euro area [2011] OJ L306/8; Regulation (EU) No 1175/2011 of the European Parliament and of the Council of 16 November 2011 amending Council Regulation (EC) No 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies [2011] OJ L306/12; Regulation (EU) No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances [2011] OJ L306/25; Council Regulation (EU) No 1177/2011 of 8 November 2011 amending Regulation (EC) No 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure [2011] OJ L306/33; Council Directive 2011/85/EU of 8 November 2011 on requirements for budgetary frameworks of the Member States [2011] OJ L306/41 [the 'six-pack']; Regulation (EU) No 472/2013 of the European Parliament and of the Council of 21 May 2013 on the strengthening of economic and budgetary surveillance of Member States in the euro area experiencing or threatened with serious difficulties with respect to their financial stability [2013] OJ L140/1; Regulation (EU) No 473/2013 of the European Parliament and of the Council of 21 May 2013 on common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the Member States in the euro area [2013] OJ L140/11 [the 'two-pack']; and the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, at: www.consilium.europa.eu/media/20399/st00tscg26_en12.pdf.

113 The idea underlying the Maastricht concept of EMU was that, when national governments acted within the rather loose confines of the economic union provisions, markets would also induce proper (budgetary) behaviour. The 2008–12 crisis proved that concept to be unsustainable. This is not the place to elaborate further on the 'unbalanced nature' of EMU (a well-developed monetary arm next to an underdeveloped economic union arm), or on how to redress this condition.

8.048 Additionally, Article 122 TFEU (already referred to above) provides for the adoption of ‘measures appropriate to the economic situation’ and allows for EU financial assistance in case events beyond a Member State’s control lead to severe difficulties. As indicated before, this provision underlies common storage of strategic material and supported the temporary support mechanism in the sovereign debt crisis.¹¹⁴ It has since been used again in the context of the pandemic crisis¹¹⁵ – the European Union Recovery Instrument¹¹⁶ is based on it – as well as for joint demand reduction for natural gas. Furthermore, Article 136 TFEU provides for strengthened economic policy cooperation in respect of the euro-area Member States, but even this article does not provide for a common euro-area economic policy.

3. The Need for Economic Policy Clarity at EU Level

8.049 This state of affairs has made the required support of economic policies a rather flimsy secondary objective: without a clear, single policy to follow, all the ECB could do was ensure its monetary policy did not undermine the general trend of these policies. At the least, the ECB is to take into consideration the thrust of the economic policy recommendations to individual governments issued by the Council under the preventive arm of the SGP,¹¹⁷ or the euro-area specific broad economic policy guidelines (BEPGs) issued by the Council.¹¹⁸ It would be recommendable for such BEPGs to be more specific in their requirements for greening the economy and fostering the transition to a CO₂-free economy than the latest versions are.¹¹⁹ Although the ‘green and digital transitions’ are

114 Council Regulation (EU) No 407/2010 of 11 May 2010 establishing a European financial stabilisation mechanism [2010] OJ L118/1.

115 Council Regulation (EU) 2020/672 of 19 May 2020 on the establishment of a European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) following the COVID-19 outbreak [2020] OJ L159/1.

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

117 Article 5(2) Regulation 1466/97, as amended. These annual Council recommendations concern a Member State’s National Reform Programme and simultaneously deliver an opinion on their Stability Programme. For the 2020 recommendations annex opinions, see https://ec.europa.eu/info/publications/2020-european-semester-country-specific-recommendations-commission-recommendations_en. See the Broad Economic Policy Guidelines issued in 2015: Council Recommendation (EU) 2015/1184 of 14 July 2015 on broad guidelines for the economic policies of the Member States and of the European Union, OJ L 192, 18.7.2015, p.27.

118 Council Recommendation of 13 July 2021 on the economic policy of the euro area, OJ C 283/1, 15.7.2021, Council Recommendation of 5 April 2022 on the economic policy of the euro area (2022/C 153/01), OJ C 153/1, 7.4.2022, and Council Recommendation of 16 May 2023 on the economic policy of the euro area, [2023] OJ C180/1.

119 This point is in line with a recent Bruegel policy contribution. Its authors posit that ‘it is very likely that climate change will lead to increasing economic divergence between member states’ and note that ‘binding, measurable targets are absent and not demanded from member states’, concluding with a call for ‘binding

mentioned and climate change and climate mitigation occur in the text, the ambition of the 2021 guidelines falls far short of the European Climate Law,¹²⁰ adopted around the same time. While the 2022 guidelines are more explicit in their references to the green and digital transitions, and refer to the RRF as inducing structural transformation in the context of these transitions, they lack focus and specificity on 'green' economic policy-making.¹²¹ For the ECB to derive guidance from EU policy makers, clarity of language and specificity of measures expected would be helpful.¹²²

Despite this lack of specificity, the ECB has shown its willingness to underpin EU politicians' economic policy decision-making. Its newly introduced Transmission Protection Instrument (TPI) may be activated depending on the pursuit of 'sound and sustainable fiscal and macroeconomic policies' by the jurisdiction whose public bonds it would purchase in order 'to support the effective transmission of monetary policy'.¹²³ Thus, the ECB is making a monetary policy instrument supportive of the EU's fiscal and economic policy framework¹²⁴ – a clear example of application of its secondary objective.¹²⁵ **8.050**

4. Preferred Interpretation of the Secondary Objective

As set out above in section B, the ECB itself has held in the past that proper implementation of its primary mandate sufficed where its secondary objective is concerned: ensuring price stability would allow the achievement of the other objectives.¹²⁶ This approach to Article 127(1), second sentence, TFEU (since **8.051**

adaptation plans'. Although they do not relate this to the BEPGs, I consider this a useful instrument for binding national governments and, thereby, influencing regional and local governments. Klaas Lenaerts, Simone Tagliapietra and Guntram Wolf, *How can the European Union adapt to climate change while avoiding a new fault line?*, Policy Contribution Issue no 11/22, June 2022, at: www.bruegel.org/sites/default/files/2022-06/PC%2011%202022.pdf.

120 See the section below on this EU regulation.

121 And, shockingly for a document dated 5 April 2022, fail to mention the war in Ukraine as relevant for the 'surge in energy prices' (which is twice mentioned and considered 'linked to the post-lockdown adjustment process') while, again, not specifying what policy action is to be taken beyond the labour market.

122 The EU green taxonomy is a case in point: it assists the ECB in making 'green' investment choices.

123 Press Release, *The Transmission Protection Instrument*, 21 July 2022, at: www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220721~973e6e7273.en.html.

124 The ECB refers to the Excessive Deficit Procedure (Article 126 TFEU); the Excessive Imbalance Procedure (Article 121 TFEU); debt sustainability analyses by the Commission; the European Stability Mechanism; and the IMF, and to the commitments undertaken in the recovery and resilience plans for the RRF as four constituent elements for TPI eligibility of Member States' public debt to be purchased on the secondary market.

125 This was remarked by Martin Sandbu in his comments on the TPI: *The ECB reminds everyone who really has the authority*, Financial Times, 21 July 2022, at: www.ft.com/content/3f1e6cb3-1a63-412e-bb1f-a8624760fd86.

126 Yolaine Fischer, *Global warming: does the ECB mandate legally authorise a 'green monetary policy'?*, in Sustainability and Financial Markets, pp.163–98, at p.172.

given up by the ECB itself) deprives this provision of ‘*effet utile*’ and makes it senseless as the secondary objective is read as subsumed in the primary objective.

8.052 It is submitted that, in the context of climate change, biodiversity and perhaps beyond,¹²⁷ the ECB’s secondary objective and the reference to Article 3 TEU contained therein are solid bases for changing course and including climate change considerations in setting and implementing monetary policy. Even without the reference to Article 3 TEU, the clear adoption of climate change policies by the Union mandates the ECB to heed these economic policies and to adjust its monetary policy to adapt to them. Again, I recall what I wrote in 1997:¹²⁸ ‘in case of such a material choice [between measures which are more and those which are less supportive of the economic policies in the EC], the [Euro-]System is to opt for measures which support the policies adopted by the Community [Union].’

8.053 The EU Climate Law is a clear signal of the course of EU economic policies for the coming decades.

5. The EU Climate Law

8.054 General economic policies in the Union now clearly reflect the intention to steer Europe towards a CO₂-free economy, even the first carbon-free¹²⁹ economy in the world. The European Climate Law¹³⁰ makes the intentions of the legislator abundantly clear.¹³¹ Providing ‘a framework for the irreversible

127 A case can be made for more attention to be given, in setting and implementing monetary policy, to employment or other social factors based on the reference to Article 3 TEU, or on the so-called integration provisions on consistency with other policy objectives (Articles 7–13 TFEU). As already mentioned above, this goes beyond the scope of this chapter. For the incidence of Article 11 TFEU, see section G below.

128 *The European Central Bank – Institutional Aspects*, 1997, p.189.

129 In line with Dirk Schoenmaker, the term ‘carbon-free’ stands for the absence of ‘all greenhouse gas emissions, which include carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O)’. See Dirk Schoenmaker, ‘Greening monetary policy’ (2021) *Climate Policy*, vol. 21, no. 4, 581–92, <https://doi.org/10.1080/14693062.2020.1868392>.

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

131 With the initiation, on 14 July 2021, of a host of implementing proposals, the European Commission has made its resolve to ‘deliver the European Green Deal’ crystal-clear. See, among many others, ‘Fit for 55’: delivering the EU’s 2030 Climate Target on the way to climate neutrality, COM/2021/550 final, and proposals on land use, energy efficiency and adapting the Emissions Trading System, at: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en#documents. (See the consolidated text of Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending

and gradual reduction of anthropogenic greenhouse gas emissions by sources and enhancement of removals by sinks regulated in Union law', Article 1 reads:

This Regulation sets out a *binding objective of climate neutrality in the Union* by 2050 in pursuit of the long-term temperature goal set out in point (a) of Article 2(1) of the Paris Agreement, and provides a framework for achieving progress in pursuit of the global adaptation goal established in Article 7 of the Paris Agreement. This Regulation also sets out a *binding Union target of a net domestic reduction in greenhouse gas emissions for 2030*. [italics added]

Article 2 is even more specific and addresses the Member States *and* the EU's institutions: **8.055**

Climate-neutrality objective

1. Union-wide greenhouse gas emissions and removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing emissions to net zero by that date, and the Union shall aim to achieve negative emissions thereafter.
2. The relevant Union institutions and the Member States shall take the necessary measures at Union and national level, respectively, to enable the collective achievement of the climate-neutrality objective set out in paragraph 1, taking into account the importance of promoting both fairness and solidarity among Member States and cost-effectiveness in achieving this objective.

To this author it is clear that the ECB, with its balance sheet¹³² equal to 60 per cent of the euro-area GDP,¹³³ is among the 'relevant' institutions addressed in this provision. **8.056**

In the light of the above, an obligation to support these policies and adapt monetary policy towards carbon neutrality can be derived from the ECB's secondary objective. There is no compelling reason for the ECB to avoid a judgment on environmental, social and governance (ESG) performance and transition preparedness in pursuing a green monetary policy as Schoenmaker posits, based on the need to avoid 'specific policies on the environment'. I consider such specific involvement of central bankers in choosing between 'green' and 'non-green' a valid mechanism for realising the mandate as contained in the secondary objective, not a steering of monetary policy towards a specific policy. **8.057**

Council Directive 96/61/EC, OJ L 275/32, 25.10.2003, at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003L0087-20210101>.

132 See <https://thetractable.com/charts/european-central-bank-balance-sheet-is-equal-to-64-of-eurozone-gdp>.

133 And its central role in banking supervision: see below.

- 8.058** Rather, as the central bank for the euro area which is clearly steering towards a carbon-free economy, the ECB is expected to serve the general economic policies adopted; this may well encompass making value judgements, naturally based on adequate research and appropriate reasoning (motivation); requirements which also derive from the case law on the discretion Union institutions have in complex economic assessments.¹³⁴
- 8.059** The reference to the objectives of the Union enshrined in Article 3 TEU make this obligation only more strict, as will be explained in the next section.

BOX 8.1 TREATY PROVISIONS RELATING TO THE ECB'S MANDATE IN THE CONTEXT OF CLIMATE CHANGE [RELEVANT ELEMENTS UNDERLINED]¹³⁵

Article 127(1) TFEU

The primary objective of the European System of Central Banks (hereinafter referred to as 'the ESCB') shall be to maintain price stability. 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. The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119.

Article 11 TFEU

Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development.

Article 3 TEU

1. The Union's aim is to promote peace, its values and the well-being of its peoples.¹³⁶

134 See paragraph 69 of the judgment of 16 June 2015 in Case C-62/14 (*Peter Gauweiler and Others v Deutscher Bundestag*), ECLI:EU:C:2015:400: 'Nevertheless, where an EU institution enjoys broad discretion, a review of compliance with certain procedural guarantees is of fundamental importance. Those guarantees include the obligation for the ESCB to examine carefully and impartially all the relevant elements of the situation in question and to give an adequate statement of the reasons for its decisions', with references to the discretion of the EU legislature in areas of environmental policy(!): judgments in *Afton Chemical*, C-343/09, EU:C:2010:419, paragraph 28, and *Billerud Karlsborg and Billerud Skärblacka*, C-203/12, EU:C:2013:664, paragraph 35.

135 Reproduced from my study 'SSM and the SRB accountability at European level: room for improvements?' Banking Union, prepared for European Parliament's Economic Governance Support Unit (EGOV), April 2020, at: [www.europarl.europa.eu/RegData/etudes/STUD/2020/645726/IPOL_STU\(2020\)645726_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2020/645726/IPOL_STU(2020)645726_EN.pdf).

136 Protection against climate change would contribute to the well-being of Europeans.

2. [...]
3. 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.¹³⁷ [...]
4. The Union shall establish an economic and monetary union whose currency is the euro.
5. 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,¹³⁸ as well as to the strict observance and the development of international law, including respect for the principles of the United Nations Charter.
6. The Union shall pursue its objectives by appropriate means commensurate with the competences which are conferred upon it in the Treaties.

F. CONTRIBUTION TO THE OBJECTIVES OF THE UNION

The indirect reference to the Union's ultimate objectives in the mandate of the ECB provides an eloquent case for including climate change and biodiversity in the ECB's remit. A number of these objectives are clearly connected to the challenges of climate change. The Union strives for 'the *sustainable development of Europe* based on *balanced economic growth* and price stability';¹³⁹ both the element of 'sustainability' and the 'balance' in the growth objective are evident indications of the relevance of climate change related issues. Similarly, '*a high level of protection and improvement of the quality of the environment*'¹⁴⁰ is a clear indication of the 'green' objectives the Union seeks to achieve – again an obvious indication for the ECB to observe this aspect in pursuing monetary policy.¹⁴¹

137 Future generations will bear the brunt of climate change, so solidarity with our offspring is imperative.

138 Human rights include the right to life (Article 2) and environmental protection (Article 37) under the Charter of Fundamental Rights of the European Union ('EU Charter').

139 Article 3(3), second sentence, TEU (italics added).

140 Article 3(3), second sentence, TEU (italics added).

141 A strong plea for honouring its secondary mandate, arguing – as I do – that the ECB is legally required to incorporate climate change considerations into its monetary policy framework, came from Martin Sandbu: *The ECB should follow the Fed's embrace of a second mandate*, Financial Times, 31 August 2020, at: www.ft.com/content/380e6290-ded1-4050-aa5f-9c3d1b9ed2bd.

8.061 Two elements of the EU's objectives relate to intergenerational issues, which climate change clearly is – if the present generation in charge does not take adequate action it may be too late for the next generation to save the world as we know it, or even to sustain human habitation across the globe. The Union strives for '*solidarity between generations and protection of the rights of the child*'¹⁴² and, in the context of 'its relations with the wider world', it is 'to contribute to [...] *the protection of human rights, in particular the rights of the child*'.¹⁴³ Even though the latter objective was situated by the Treaty authors in the global context, it may be assumed that the protection of human rights, which include social and economic rights,¹⁴⁴ is also intended to address those of its own citizens. Furthermore, the interests of European citizens and those of other jurisdictions coincide when it comes to combating climate change¹⁴⁵ so that addressing human rights in the context of extra-Union situations still underscores the relevance of taking climate change into account for the central bank. Again, a reference to children is a clear indication of the forward-looking, inter-generational approach of the Treaty when it comes to the Union's objectives. I take these references as clearly validating taking into account climate change in the conduct of monetary policy. This also holds true for the objective of 'contribut[ing] to the *protection of its citizens*',¹⁴⁶ which must be understood as encompassing their right to life and to development¹⁴⁷ – aspects which are seriously threatened by climate change. It is '*the sustainable development of the Earth*'¹⁴⁸ which most obviously concerns a global issue such as climate change. Because the ECB's mandate indirectly refers to this objective as well, there is no doubt in my mind that there is an obligation to support policies that help to preserve the Earth, and to adopt policies in the ECB's own fields of competence that help the Earth to develop in a sustainable manner. A final reference is of a legal nature: 'the strict observance and *the development of international law*, including respect for the principles of the United Nations Charter'¹⁴⁹ would seem to imply that the Union will uphold its obligations under the Paris Agreement and any other international agreement in the area of climate

142 Article 3(3), fourth sentence, TEU (italics added).

143 Article 3(5), second sentence, TEU (italics added).

144 Article 34 EU Charter.

145 Even though one evidently has to admit that the effects of climate change will affect inhabitants of jurisdictions with less economic development more harshly and will affect the poor worse than the rich. Also, inhabitants of unprotected low-lying jurisdictions, such as several Pacific Ocean islands, Bangladesh or the Maldives, are more at risk than those of geographically higher-situated, or better protected, human beings.

146 Article 3(5), first sentence, TEU (italics added).

147 Article 2 EU Charter.

148 Mentioned as an objective of the Union in Article 3(5), second sentence, TEU (italics added).

149 Article 3(5), second sentence, final words, TEU (italics added).

change and biodiversity,¹⁵⁰ and that, consequently, the ECB has to abide by these as well. This argument is a prelude to the reasoning in respect of Article 216(2) TFEU, to be expounded in section H.

G. INTEGRATION PROVISIONS

1. The Incidence of Article 11 TFEU (Integration Provision relating to Environmental Protection)

Even though, on the basis of the reasoning set out above, I conclude that the ECB has a clear mandate to green its monetary policy (and remember: the reasoning followed here also applies to other fields of competence, subject to their specificities, as it is only for the sake of easy reading that these sections focus on monetary policy), it is worthwhile to further explore additional arguments. One such argument, which has been strongly made by Javier Solana,¹⁵¹ is the incidence of Article 11 TFEU on the environment.¹⁵² **8.062**

Article 11 reads as follows: ‘Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development.’ The provision forms part of a Title¹⁵³ in the Treaty that instructs the Union to be consistent in its policies and activities (Article 7), highlighting six aspects which need to be observed: equal treatment, especially between men and women (Article 8); employment and social aspects (Article 9); non-discrimination (Article 10); environmental protection (Article 11); consumer protection (Article 12); and animal welfare (Article 13).¹⁵⁴ **8.063**

150 UN Framework Convention on Climate Change; UN Convention on Biological Diversity; Council Directive 92/43/EEC Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora); European Parliament and Council Directive 2009/147/EC Birds Directive (Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, OJ L 20/7, 26.1.2010); the Convention on International Trade in Endangered Species of Wild Fauna and Flora; the Bonn Convention on Migratory Species (CMS); the Bern Convention on the Conservation of European Wildlife and Natural Habitats (www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104?module=treaty-detail&treatynum=104).

151 Javier Solana, ‘The power of the Eurosystem to promote environmental protection’ (2019) *European Business Law Review* 30, no. 4: 547–76.

152 The use of the term ‘environment’ reveals a perception of reality as humans standing aloof from, rather than being part of, a whole including nature.

153 Title II (Provisions having general application) of Part One (Principles) of the TFEU.

154 The remaining provisions of this Title concern services of general economic interest (Article 14), transparent governance (Article 15), data protection and privacy (Article 16) and respect for religious and non-confessional organizations (Article 17).

- 8.064** As a ‘horizontal’ or ‘cross-sectional’ clause, Article 11 intends to ensure that environmental concerns are integrated in all policies, which must include monetary policy. Moreover, the reference to ‘sustainable development’ in Article 11 may be taken to include the Sustainable Development Goals (SDGs).¹⁵⁵
- 8.065** The SDGs are objectives for the achievement by 2030 of a global society in which hunger and extreme poverty have been eradicated; adequate health and quality education, clean water and sanitation, affordable clean energy and decent work are available; climate action is undertaken; gender discrimination has ended; and good governance is provided. The 17 goals have been adopted in a Resolution of the General Assembly of the United Nations (UNGA).¹⁵⁶ As a UNSG resolution is not a legally binding instrument, the SDGs derive their power from the vision of a better world for all and should inspire public authorities, private actors and non-governmental organizations (NGOs) alike. As it is written on a UN website: ‘While the Global Goals are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of the 17 Goals.’¹⁵⁷ Because of their interdependency, the SDGs provide a fitting framework for a sustainable and equitable world.

2. General Consistency Clause (*Article 7*)

- 8.066** Beyond the specific instruction contained in Article 11 TFEU, the general consistency clause of Article 7 TFEU, which instructs the EU to ‘ensure consistency between its policies and activities’,¹⁵⁸ is a strong argument for the ECB to ensure its policies and activities are congruent with those of the EU at large,

155 A statement on the European Commission’s website (‘We are committed to implement the SDGs in all our policies and encourage EU countries in doing the same’), at https://ec.europa.eu/international-partnerships/sustainable-development-goals_en, may not be legally convincing but is an indication of the commitment by the EU’s executive to the SDGs.

156 *Transforming our world: the 2030 Agenda for Sustainable Development*, Resolution A/RES/70/1, adopted on 25 September 2015; see: <https://sustainabledevelopment.un.org/index.php?page=view&type=111&cnr=8496&menu=35>.

157 At: www.globalgoals.org/faq.

158 Fischer argues that ‘specific attention must also be given to Article 7 TFEU’: Yolaine Fischer, *Global warming: does the ECB mandate legally authorise a ‘green monetary policy’?*, in *Sustainability and Financial Markets*, at p.173.

where the Commission,¹⁵⁹ the Parliament¹⁶⁰ and the European Council¹⁶¹ have endorsed the Green Deal and the transition towards a carbon-free economy by 2050.

3. Application to the CSPP

Solana's contribution emphasizes the Corporate Sector Purchasing Programme (CSPP), part of the ECB's Asset Purchasing Programme (APP). Solana's central question is formulated as follows: 'The indirect effect that the CSPP is having on climate change raises an evident question: is the Eurosystem bound by an obligation to protect the environment?' Relying on case law in respect of the integration principle for environmental protection in other fields,¹⁶² Solana convincingly argues¹⁶³ that the ECB, in devising monetary policy, must likewise adhere to Article 11, while correctly conceding that 'absolute priority of environmental protection would be untenable'.¹⁶⁴ He argues that 'failure to comply with [Article 11 TFEU] could raise serious doubts about the validity of monetary policy measures',¹⁶⁵ although he expects a 'lenient standard of compliance with Art. 11 TFEU' should the CJEU be confronted with a ques-

159 See footnote 47 above.

160 See the references to 'the impact of climate change on inflation dynamics and transmission risks in monetary policy' and to 'the ECB, as a European institution, [being] bound by the Paris Agreement' and the '[calls] on the ECB to align its collateral framework with climate change-related risks and to disclose its level of alignment with the Paris Agreement, as well as examining such alignment in the banking sector' and 'for a proactive and qualitative risk management approach which integrates climate change-related systemic risks' in the European Parliament's resolution of 10 February 2021 on the European Central Bank – annual report 2020; at: www.europarl.europa.eu/doceo/document/TA-9-2021-0039_EN.html.

161 See the European Council conclusions of 20 June 2019, at: www.consilium.europa.eu/media/39922/20-21-euco-final-conclusions-en.pdf. Notable quotes: 'The EU can and must lead the way, by engaging in an in-depth transformation of its own economy and society to achieve climate neutrality' and 'to ensure a transition to a climate-neutral EU in line with the Paris Agreement' and 'The EU and its Member States remain committed to scaling up the mobilisation of international climate finance from a wide variety of private and public sources'. The European Council conclusions of 12 December 2019 stated: 'the European Council endorses the objective of achieving a climate-neutral EU by 2050, in line with the objectives of the Paris Agreement' (with Poland resisting this conclusion); see: www.consilium.europa.eu/media/41768/12-euco-final-conclusions-en.pdf. The 11–12 December 2020 European Council conclusions were even more explicit: 'To meet the objective of a climate-neutral EU by 2050 in line with the objectives of the Paris Agreement, the EU needs to increase its ambition for the coming decade and update its climate and energy policy framework. To that end, the European Council endorses a binding EU target of a net domestic reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990. It calls on the co-legislators to reflect this new target in the European Climate Law proposal and to adopt the latter swiftly'; see: www.consilium.europa.eu/media/47296/1011-12-20-euco-conclusions-en.pdf.

162 Solana mentions the common agricultural policy, the common transport policy, the internal market and the common commercial policy.

163 Solana, p.558.

164 Solana, p.559.

165 Solana, p.549.

tion about the legality of monetary policy measure in the context of Article 11 TFEU.¹⁶⁶

8.068 The value of Javier Solana's contribution lies in his insistence that the Eurosystem 'take into account horizontal objectives of environmental protection when designing and implementing the policy measures that aim at its primary objective of price stability', in what he calls 'the procedural obligation laid down in Art. 11 TFEU' beyond the 'substantive dimension' of the provision. Moreover, by citing rather formalistic answers by ECB President Mario Draghi to questions on the environmentally adverse effects of the CSPP,¹⁶⁷ Solana drew attention to the lack of engagement on the issue of climate change that appeared in Frankfurt as recently as 2017. How times have changed.

4. Integration Provisions: My Approach

8.069 My own approach to Article 11 TFEU in relation to the mandate of the ECB is that, even if there were no convincing arguments derived from the primary mandate, or from the secondary mandate and the references to the Union's ulterior objectives (which there are plenty, as argued above), Article 11 TFEU clearly obliges the European Union's central bank to take the environment seriously into account when devising monetary policy.¹⁶⁸ This obligation concerns the *procedural* steps towards devising monetary policy (that is, research, options of measures, and so on) and the *substantive* contribution to environmental protection: whenever price stability may be maintained in manners conducive to protection of the environment, the opportunity to adopt such 'green' measures may not be foregone.

BOX 8.2 TREATY INTEGRATION PROVISIONS¹⁶⁹

Article 7 TFEU

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.

Article 8 TFEU

¹⁶⁶ Solana, p.561.

¹⁶⁷ See the Committee on Economic and Monetary Affairs, 'Transcript of the Monetary Dialogue with Mario Draghi, President of the ECB, Held on 25 September 2017', p.11 at: www.ecb.europa.eu/press/key/date/2017/html/ecb.sp170925_2_transcript.en.pdf.

¹⁶⁸ This is also supported by the general consistency clause of Article 7 TFEU.

¹⁶⁹ Provisions of the Treaty on European Union and the Treaty on the Functioning of the European Union.

In all its activities, the Union shall aim to eliminate inequalities, and to promote equality, between men and women.

Article 9 TEU

In defining and implementing its policies and activities, the Union shall take into account requirements linked to the promotion of a high level of employment, the guarantee of adequate social protection, the fight against social exclusion, and a high level of education, training and protection of human health.

Article 10 TEU

In defining and implementing its policies and activities, the Union shall aim to combat discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation.

Article 11 TEU

Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development.

H. APPLICATION OF ARTICLE 216(2) TFEU: BINDING THE ECB TO 'PARIS'

A further argument to consider 'greening' of the ECB's activities legally imperative derives from Article 216(2) TFEU. This provides that '[a]greements concluded by the Union are binding upon the institutions of the Union and on its Member States'. With the EU a signatory to the Paris Agreement, which it has ratified,¹⁷⁰ the 2016 convention binds all EU institutions, including the ECB. Without elaborating on the scope and nature of the Paris Agreement,¹⁷¹ it is useful to recall its objective, as set out in Article 2(1):

- (a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1,5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
- (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and

¹⁷⁰ See n 21.

¹⁷¹ On which others have contributed widely: see Jennifer Jacquet and Dale Jamieson, 'Soft but significant power in the Paris Agreement' (2016) *Nature Climate Change*, vol. 6, no. 7, 643–6 and Kayla Clark, 'The Paris Agreement: its role in international law and American jurisprudence' (2018) *Notre Dame J. Int'l Comp. L.* vol. 8, 107.

- (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

8.071 In the context of finance, the following provision¹⁷² seems of particular relevance:

3. As part of a global effort, developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country-driven strategies, and taking into account the needs and priorities of developing country Parties. Such mobilization of climate finance should represent a progression beyond previous efforts.’ [underlining added, RS]

8.072 As an EU institution, the ECB should ensure that, in implementing its mandate in an independent fashion, its activities are in line with the EU’s global commitments to ‘reduce the risks and impacts of climate change’ and help ‘mobilis[e] climate finance’. Since Eurosystem financing (of banks, also to support their role in providing credit to the real economy) can be characterised as ‘public funds’, Article 9(3) of the Paris Agreement may be considered to be addressed to the euro area’s central banks.

8.073 In the context of Article 216 TFEU, it may be recalled that the European Parliament has reminded the ECB on several occasions of its being bound by the Paris Agreement. It did so in its reports on the ECB’s annual reports for 2017,¹⁷³ 2018,¹⁷⁴ 2019¹⁷⁵ and 2020.¹⁷⁶ In its feedback to the European Parliament on the resolution on its 2018 annual report, the ECB explained

172 Article 9(3) Paris Agreement.

173 Paragraph 25 of the European Parliament resolution of 16 January 2019 on the ECB Annual Report 2017 (2018/2101(INI)) reads as follows: ‘25. Recalls that the ECB as an EU institution is bound by the Paris agreement; invites the ECB, in full respect of its mandate, its independence and the risk management framework, to integrate the commitment to the Paris agreement and economic, social and governance principles (ESG principles) into its policies.’ Available at: www.europarl.europa.eu/doceo/document/TA-8-2019-0029_EN.html.

174 Paragraph 19 of the European Parliament resolution of 12 February 2020 on the European Central Bank Annual Report for 2018 (2019/2129(INI)) reads as follows: ‘19. Recalls that, as an EU institution, the ECB is bound by the Paris Agreement on climate change and that this should be reflected in its policies, while fully respecting its mandate and its independence; welcomes the emergence of a discussion about the role of central banks and supervisors in supporting the fight against climate change; calls on the ECB to implement the environmental, social and governance principles (ESG principles) into its policies, while fully respecting its mandate and its independence.’ Available at: www.europarl.europa.eu/doceo/document/TA-9-2020-0034_EN.html.

175 European Parliament resolution of 10 February 2021 on the European Central Bank Annual Report 2020 [what is meant is 2019], at: www.europarl.europa.eu/doceo/document/A-9-2021-0002_EN.html#title1.

176 Paragraph 22 of the European Parliament resolution of 16 February 2022 on the European Central Bank – annual report 2021 (2021/2063(INI)), at: www.europarl.europa.eu/doceo/document/TA-9-2022-0029_EN.html.

how it takes climate change into account.¹⁷⁷ After first pointing at the measures governments can take – they are said to have ‘a broad spectrum of policy options available to them to tackle climate change, including carbon pricing through fiscal measures’ – the ECB acknowledges that central banks can ‘support and complement the collective endeavour of governments by focusing on their areas of competence’. It specifies that, in the monetary policy review, ‘the ECB will closely examine the risks that climate change poses to the conduct of monetary policy and how climate change considerations can be included in the Eurosystem’s monetary policy framework’; mentions¹⁷⁸ that it is ‘already contributing to the transition to a low-carbon economy’ by holding 20 per cent of the ‘eligible green bond universe’ under its corporate bond purchasing programme, the CSPP,¹⁷⁹ announces that its micro- and macroprudential frameworks may incorporate climate-related risks; and recalls further involvement. This includes membership of the NGFS and technical input into the work of the Technical Expert Group on Sustainable Finance¹⁸⁰ which assisted the European Commission in the development of an EU Taxonomy for green finance. Furthermore, the ECB stated that it was ‘exploring how to further incorporate climate change concerns in its own operations’ (staff pension fund portfolio,¹⁸¹ own funds portfolio¹⁸²) and that it was ‘stepping up its analytical and research capabilities on climate change’. Two years later, in feedback to the European Parliament’s resolution on the ECB Annual Report 2019,¹⁸³ the ECB set out the many steps it had undertaken (inauguration of

177 ECB, Feedback on the input provided by the European Parliament as part of its resolution on the ECB Annual Report 2018, 7 May 2020 at: www.ecb.europa.eu/pub/pdf/other/ecb.20200507_feedback_on_the_input_provided_by_the_european_parliament~4d3f01294d.en.pdf.

178 Adding ‘following the principle of market neutrality’, on which more below.

179 On the green bonds purchases by the Eurosystem under the CSPP, see *Purchases of green bonds under the Eurosystem’s asset purchase programme*, prepared by Roberto A. De Santis, Katja Hettler, Madelaine Roos and Fabio Tamburrini and published as part of the ECB Economic Bulletin, Issue 7/2018, at: www.ecb.europa.eu/pub/economic-bulletin/focus/2018/html/ecb.ebbox201807_01.en.html. See also FAQ on sustainability-linked bonds, at: www.ecb.europa.eu/paym/coll/standards/marketable/html/ecb.slb-qa.en.html.

180 See https://ec.europa.eu/info/publications/sustainable-finance-technical-expert-group_en.

181 Which works with ‘a selective exclusion list’ and whose investment managers as ‘signatories of the United Nations Principles for Responsible Investment must apply proxy voting guidelines incorporating environmental, social and governance considerations’. On the UNPRI, see: www.unpri.org/pri/.

182 Where ‘the ECB is investigating if and how climate-related considerations can be integrated’.

183 The relevant paragraphs in the European Parliament’s resolution of 10 February 2021 on the European Central Bank Annual Report 2020 (2020/2123(INI)) read as follows: ‘Actions against climate change [...] 18. Notes, respecting the independence of the ECB, the impact of climate change on inflation dynamics and transmission risks in monetary policy; recalls the impact of the ECB in maintaining price stability; recalls that the ECB, as a European institution, is bound by the Paris Agreement; [...] 19. Takes note of President Lagarde’s commitment to examine climate-friendly changes to ECB’s operations and ‘to explore every avenue available in order to combat climate change’; calls on the ECB to align its collateral framework with climate change-related risks and to disclose its level of alignment with the Paris Agreement, as well as examining such alignment in the banking sector; [...] 20. Welcomes the fact that the purchases of green bonds and their share of the ECB’s portfolio continue to increase; [...] 21. Encourages efforts to increase research capabilities

the climate change centre, acceptance of certain sustainability-linked bonds as collateral and for asset purchases, the announcement of annual climate-related disclosures for Eurosystem euro-denominated non-monetary policy portfolios, incorporating environmental standards in the own funds and pension fund portfolios, integrating climate risk into stress-testing, publication of the *Guide on Climate-related and Environmental Risks*) and mentioned the monetary policy strategy review in which it was ‘assessing further steps’.¹⁸⁴

- 8.074** In the context of the binding nature of international agreements, it should be recalled that such norms are also in existence, or in preparation, for biodiversity. The 1993 Convention on Biological Diversity,¹⁸⁵ ratified by the European Union,¹⁸⁶ was scheduled to be followed with a convention in 2022 at the Kunming Biodiversity Conference, an event postponed four times due to the Covid pandemic;¹⁸⁷ the 15th UN biodiversity conference (COP15) was held in December 2022 in Montreal, Canada. In a resolution¹⁸⁸ of January 2020, the European Parliament called for this follow-up agreement to contain ‘legally binding targets’. The EU’s own Biodiversity Strategy¹⁸⁹ for 2030 is part of the European Green Deal, which shows the close connection between the climate change and biodiversity objectives.

I. OPEN MARKET ECONOMY PRINCIPLE

1. The Open Market Principle: A Novelty in EU Law

- 8.075** The ‘principle of an open market economy with free competition, favouring an efficient allocation of resources’ was inserted into primary EU law as guiding

regarding the impact of climate change on financial stability and the euro area.’ See www.europarl.europa.eu/doceo/document/A-9-2021-0002_EN.html#title1.

184 ECB, Feedback on the input provided by the European Parliament as part of its resolution on the ECB Annual Report 2019, 14 April 2021, at: www.ecb.europa.eu/pub/pdf/other/ecb.20210414_feedback_on_the_input_provided_by_the_european_parliament~7d4de6f4c2.en.pdf.

185 OJ L 309/3, 13.12.1993, ELI: <http://data.europa.eu/eli/convention/1993/626/oj>. See, also: www.cbd.int/doc/legal/cbd-en.pdf.

186 See www.cbd.int/information/parties.shtml.

187 See https://en.wikipedia.org/wiki/2022_Kunming_Biodiversity_Conference.

188 European Parliament resolution of 16 January 2020 on the 15th meeting of the Conference of Parties (COP15) to the Convention on Biological Diversity, at: www.europarl.europa.eu/doceo/document/TA-9-2020-0015_EN.pdf. Parliament ‘calls on the Commission and the Member States to strengthen the implementation mechanisms of the CBD and to actively pursue the development of ambitious legally binding targets, detailed timelines, clear performance indicators, tracking instruments and peer review/reporting mechanisms based on common standards – ideally in cooperation with sub-national governments – to ensure full transparency and accountability for the Parties and the overall effectiveness of the next Global Biodiversity Strategy plan’.

189 See https://ec.europa.eu/environment/strategy/biodiversity-strategy-2030_en.

the functioning of EMU. The injunction can be found in Article 119(1) and (2) TFEU and thus includes the economic union 'pillar' of EMU, to which the first paragraph is devoted just as much as the monetary 'pillar' which the second paragraph of Article 119 specifies. The principle is mentioned twice, and ahead of Article 119(3), where the 'guiding principles' for the entire enterprise are specified.¹⁹⁰ The principle of an open market economy is repeated¹⁹¹ in the second sentence of Article 127(1) TFEU, where the ESCB specifically is addressed: 'The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119.'

The principle has been reformulated from the draft that the Committee of **8.076** Governors had proposed¹⁹² which was a mere injunction 'to act consistently with free and competitive markets'.¹⁹³ Even though the insertion of the open market principle was an innovation and an explicit confirmation that the EEC project was one of free markets, as many had held before the Maastricht Treaty¹⁹⁴ specified so, this principle is not an effective hindrance to a 'green' tilt of the Eurosystem's activities, as will be explained below. At the outset of EMU, I wrote that '[t]his admonition may make it difficult for the ESCB to adopt monetary control measures which are contrary to free competition between financial institutions or which contain an element of subsidy'.¹⁹⁵ The Eurosystem should endeavour to avoid measures which evidently count as a subsidy provided to one market participant over another, or to one clearly delineated class of market participants over a competing category. In this perspective, the principle seeks to extend to the financial sector's engagements with the central bank the prohibition of state aid (Article 107 TFEU). The principle cannot be read as requiring the central bank to treat all classes of assets similarly: distinctions on the basis of creditworthiness are a clear example of permitted differentiation between assets and, hence, issuers. This already indicates that taking the risks ensuing from climate change into

190 The guiding principles are: stable prices; sound public finances and monetary conditions; and a sustainable balance of payments.

191 The TEU, in Article 3(3), also refers to 'a highly competitive social market economy' in the context of the internal market. This paragraph mentions this objective as one of many; it contains – in the same sentence – other objectives including 'a high level of protection and improvement of the quality of the environment'.

192 See the draft statute and the accompanying commentary of 16 November 1990, at: www.ecb.europa.eu/ecb/access_to_documents/document/cog_pubaccess/shared/data/ecb.dr.parcg2019_0109draftstatute19901115.en.pdf?2a924dc4462ce1045313d1acd5d00949.

193 *The European Central Bank – Institutional Aspects*, 1997, p.181.

194 The Treaty of Maastricht established the European Union and amended the Treaty establishing the European Economic Community (EEC Treaty), inter alia with provisions on EMU.

195 *The European Central Bank – Institutional Aspects*, 1997, p.191.

account in distinguishing between assets does not infringe the principle of an open market economy.

2. Market Neutrality Argument

8.077 Yet, an often-cited rebuke to calls for the ECB to include climate change considerations in its non-standard monetary policy measures is that this would run counter to the principle of market neutrality. The ECB itself, in its response to the European Parliament in the context of its accountability vis-à-vis Europe's parliamentarians, recalls the principle of market neutrality.¹⁹⁶ Often, reference is made to the principle of an open market economy favouring an efficient allocation of resources that was, as indicated, introduced when the EMU provisions were adopted in the Treaty of Maastricht. These two principles, although closely related, should be distinguished. The first (market neutrality)¹⁹⁷ is a self-imposed rule that central banks apply to their operations, whereas the second is a public law injunction to the European central banking system. Moreover, as will be argued below, the second rule does not stand in opposition to an interpretation of the ECB's mandate as requiring it to actively operate in a manner which helps diminish climate change and loss of biodiversity.

8.078 As early as 2006, the ECB announced that, in its portfolio operations, it would follow the market neutrality principle.¹⁹⁸ In an exposé on managing its foreign reserves, own funds and pension fund portfolios, the ECB stated: 'The ECB's portfolio management activities are subject to strict rules which ensure market neutrality, ethical behaviour and a strict separation between portfolio management and policy-making', explaining 'market neutrality' as follows: '[The ECB] endeavours, in its portfolio management activities, not to cause any undue distortion in market prices. In practice, this means that the ECB's portfolio management activities are only conducted in markets that are deep and liquid enough to ensure that portfolio management transactions are easily absorbed at market-determined prices.'¹⁹⁹

196 See the ECB, Feedback on the input provided by the European Parliament as part of its resolution on the ECB Annual Report 2018, n 177.

197 See Jens van 't Klooster, *The Myth of Market Neutrality: A Comparative Study of the European Central Bank's and the Swiss National Bank's Corporate Security Purchases*, DOI: <https://doi.org/10.1080/13563467.2019.1657077>, 18 September 2020.

198 Portfolio management at the ECB, Monthly Bulletin April 2006, at: www.ecb.europa.eu/pub/pdf/other/pp75-86_mb200604en.pdf?b9a17c47ba3fa4e5313bc0b8345d3a1e.

199 Ibid.

In explaining its CSPP, the ECB also explained its adherence to ‘market neutrality’, again with reference to the principle of an open market economy.²⁰⁰ More generally, for all the asset purchasing programmes, the ECB confesses that it ‘adheres to the principle of market neutrality’.²⁰¹ **8.079**

The ‘principle of market neutrality’ is only a rule when emanating from the ECB itself, as can be read in its Guideline on NCBs’ asset and liabilities management.²⁰² Although the ECB has presented ‘market neutrality’ as the operational concept which serves the principle of an open market economy,²⁰³ it is submitted that there is no legal requirement to operate market neutrality under the Treaty-given principle. **8.080**

3. Open Market Principle Does Not Require ECB to Act in Line with Dysfunctional Markets

First and foremost, the principle of an open market economy does not oblige the ECB to act in conformity with markets that are dysfunctional. The additional words ‘favouring an effective allocation of resources’ in the injunction to follow the market-conformity principle make clear what the Treaty authors intended: they had in mind that monetary policy should not undermine freely functioning markets to bring about an efficient allocation of resources. After all, that’s what free markets are supposed to do: ensure that resources are allocated through the price mechanism resulting from demand and supply in **8.081**

200 The ECB’s corporate sector purchase programme: its implementation and impact, in: ECB Economic Bulletin, Issue 4/2017, at: www.ecb.europa.eu/pub/pdf/ecbu/eb201704.en.pdf. The reasoning is as follows: ‘In pursuing its objective of maintaining price stability, the ECB is mandated to act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources. Consequently, the ECB aims for a market-neutral implementation of the APP, and therefore CSPP purchases are conducted according to a benchmark that reflects proportionally the market value of eligible bonds.’

201 See the explanation of the APP on its website: www.ecb.europa.eu/mopo/implement/omt/html/index.en.html.

202 In Guideline (EU) 2019/671 of the European Central Bank of 9 April 2019 on domestic asset and liability management operations by the national central banks (recast) (ECB/2019/7), OJ L 113/11, 29.4.2019, ELI: <http://data.europa.eu/eli/guideline/2019/671/oj>, the ECB imposes the following limitation on remuneration: ‘The remuneration of non-monetary policy deposits other than government deposits shall take into account the principles of proportionality, market neutrality and equal treatment.’ Article 4(2) Limitations on the remuneration of non-monetary policy deposits.

203 In a reply to a written question from an MEP relating to sustainability considerations, President Lagarde wrote, as recently as 21 November 2019: ‘In the implementation of monetary policy, the operational concept of market neutrality has been considered the most appropriate concept to, on the one hand, ensure the effectiveness of the ECB’s monetary policy measures from a price stability perspective and, on the other hand, respect the principle of an open market economy.’ Letter from the ECB President to Mr Ernest Urtasun, MEP, on monetary policy, at: www.ecb.europa.eu/ecb/access_to_documents/document/correspondence/shared/data/ecb.dr.cor20191121Urtasun.en.pdf; the MEP’s question (Z-045/2019) can be found here: www.europarl.europa.eu/doceo/document/ECON-QZ-641438_EN.pdf.

an as efficient manner as possible. There is widespread agreement that current market mechanisms do not lead to an efficient allocation of resources when the effects on climate change are included in the assessment. When prices do not reflect the true costs or benefits of an instrument for society as a whole, markets do not lead to Pareto efficiency. The European CO₂-emission scheme has been introduced precisely to ensure that the carbon effects of production are ‘priced in’.²⁰⁴ Should monetary policy adopt the outcome of current markets as a given which the central bank feels bound to accept and follow, this policy would effectively go *against* an efficient allocation of resources by prolonging the financing of ‘non-green’ production factors.

8.082 It is, therefore, submitted that the principle of an open market economy with free competition favouring an effective allocation of resources does not stand in the way of a ‘greening’ of the ECB’s activities.²⁰⁵ This principle is even considered to require the opposite: a recalibration of the ECB’s operations to reflect a truly efficient and market-conforming outcome. Of course, this raises issues of taxonomy (which assets can be considered ‘green?’) and requires an assessment that needs to be underpinned by adequate reasoning (why the central bank opts for certain operations or classes of assets rather than blindly following the current market outcomes). Such issues do not amount to an adequate rebuttal of the legal assessment that the market-conformity principle does not stand in the way of a ‘greening’ of operations; indeed, that it requires such greening. This author reads the principle not as *opposing* a ‘greening’ but as *requiring* it.

4. Bank of England on Market Neutrality

8.083 In this context it is interesting to note that another central bank seems to embrace a perspective under which its own ‘market neutrality principle’ operates in a novel fashion. Bank of England Governor Andrew Bailey suggested²⁰⁶ becoming ‘climate change consistent neutral’: to distinguish between assets in their climate-related effects and then not to make a distinction among such

204 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC [2003] OJ L275/32.

205 Contrary to the stance taken by then Bundesbank President Jens Weidmann, *How central banks should address climate change*, Financial Times, 19 November 2020, at: www.ft.com/content/ed270eb2-e5f9-4a2a-8987-41df4eb67418.

206 How to Build Back Greener after the Pandemic, Bloomberg podcast by Stephanie Flanders and Lucy Meakin, 29 October 2020, at: www.bloomberg.com/news/articles/2020-10-29/how-to-build-back-greener-after-the-pandemic. The statement was brought to my attention by a tweet from Positive Money of 29 October 2020, at: <https://twitter.com/positivemoneyuk/status/1321819698007281670?s=11>.

'green' assets.²⁰⁷ I consider this a valid approach, also for other central banks that are (self-)bound to market neutrality.

5. Open Market Principle Not Enforceable

As a further consideration on the principle of an open market economy, it is recalled that, admittedly in another (internal market) context, the Court has ruled²⁰⁸ that Articles 3a, 102a and 103 EC Treaty (currently Articles 119, 120, 126 TFEU) 'do not impose on the Member States clear and unconditional obligations which may be relied on by individuals before the national courts. What is involved is a general principle whose application calls for complex economic assessments which are a matter for the legislature or the national administration.' Yolaine Fischer, whose writing²⁰⁹ drew my attention to this, also refers to the Opinion of the Advocate General²¹⁰ in this reference for a preliminary ruling on the compatibility with EU law of the French system of fixed book prices. The Advocate General opines that the articles cited are 'rather principles which, on their own, have no binding legal effect but which are to be viewed in conjunction with the other provisions of Community law which define their content more closely'²¹¹ and concludes: 'obligations may arise for Member States only from provisions of Community law which are worded in a sufficiently specific, precise and clear manner. However, that specifically is not so in the case of the abovementioned general principles of an open market economy with free competition and economic policy.'²¹²

I agree with Fischer that this assessment of the effect of the principle of an open market economy also applies to EU institutions, such as the ECB. The ECB is free to act within its discretion in the complex economic assessments it is bound to make in pursuing its price stability mandate and carrying out its functions, having due regard to the principle without this prescribing a fixed outcome, irrespective of the circumstances the ECB faces.

207 The Bank of England's vanguard role in taking climate change into consideration in its monetary and prudential policies becomes clear from its third TCFD aligned disclosure: *The Bank of England's climate-related financial disclosure 2022*, 22 June 2022, at: www.bankofengland.co.uk/prudential-regulation/publication/2022/june/the-bank-of-englands-climate-related-financial-disclosure-2022.

208 Judgment of 3 October 2000 in Case C-9/99 (*Echivrolles Distribution SA v Association du Dauphiné and Others*), ECLI:EU:C:2000:532.

209 Yolaine Fischer, *Global warming: does the ECB mandate legally authorise a 'green monetary policy'?*, in *Sustainability and Financial Markets*, pp.163–98.

210 Opinion of Advocate General Alber of 6 June 2000; ECLI:EU:C:2000:299.

211 Opinion, paragraph 49.

212 Opinion, paragraph 50.

J. FURTHER ARGUMENT: EMERGENCY RATIONALE AND CLIMATE STABILITY PRECONDITIONS AS A FALLBACK

- 8.086** For the sake of completeness, reference should be made to other arguments that may be advanced for the conclusion that climate change and biodiversity loss are to be included in the setting of monetary policy. A first such reasoning relates to the emergency nature of the impending global disaster should climate change not be countered and halted, or biodiversity loss stopped and reversed. For the central bank of a region representing 16 per cent of global output²¹³ not to take climate change into account would amount to a gross neglect of its duties. This approach can be likened to the perspective taken in 2012 when the ECB, faced with widespread lack of belief in the continuity of the single currency and with actual preparations for its demise across business, acted with President Mario Draghi's famous statement in London: 'Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough.'²¹⁴ This statement preceded the announcement of a set of monetary policy measures, announced but never implemented, that were intended to dispel market speculation on the end of the euro.²¹⁵ Faced with existential threats, this time to the continuity of society and the economy as we know it, interpreting one's mandate by stretching it to the limits may be considered justified.
- 8.087** A slightly different perspective is that taken by Yolaine Fischer, who argues that climate stability is a precondition for obtaining price stability,²¹⁶ or even that 'the survival of the euro is a prerequisite [for] the Eurosystem's mandate', and that 'the preservation of the existence of the euro [...] is an essential – or existential – part of the Eurosystem's primary objective, i.e. the preservation of price stability'.²¹⁷ Her argument is, essentially, that in worst-case scenarios which would unfold if no climate action is taken, there is no single currency to be the guardian of, or price stability to be maintained, as EMU may be considered at risk in economic and political upheavals triggered by climate change.

213 See www.statista.com/statistics/253512/share-of-the-eu-in-the-inflation-adjusted-global-gross-domestic-product/.

214 Verbatim of the remarks made by Mario Draghi, speech by Mario Draghi, President of the European Central Bank at the Global Investment Conference in London, 26 July 2012, at: www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html.

215 The so-called Outright Monetary Transactions (OMT); press release, Technical features of Outright Monetary Transactions, 6 September 2012, at: www.ecb.europa.eu/press/pr/date/2012/html/pr120906_1.en.html. For the currently relevant TPI, see the text accompanying n 123 above.

216 Yolaine Fischer, at p.174.

217 Yolaine Fischer, at p.177.

These additional interpretative routes, relying on ‘emergency’ powers, provide ammunition to the new reading of the ECB’s mandate that I present here. I consider the arguments based on the primary and secondary objective, on the consistency clauses and on the binding nature of international agreements adequate for this reading without a need to rely on ‘emergency’ powers. **8.088**

Finally, a word on the precedence of central banking action and its appropriateness when other actors fail to act. Here, a quote from a UNEP study²¹⁸ is worth citing: **8.089**

The case for central banks to pursue sustainability objectives beyond their traditional core mandates of maintaining monetary and financial stability can be seen as an application of the theory of the second best. If first best policies for fixing the misallocation of capital cannot be implemented, then the government may resort to a second best policy and mandate the central bank or financial supervisor to address negative environmental externalities by using the tools they have at their disposal. Thus, it is important to initially consider if other actors can adopt first best policies that make a policy engagement of the central bank redundant. If first best policies are impossible because of political deadlock or the weakness of the institutions that should pursue them, possible second best policies by other agents – including the central bank – and their potential distortions need to be considered.

In this chapter, the argument is that governments may mandate central banks to act when other (political) action fails. I would argue that this ‘second-best’ option may also be applicable when the mandate is already, implicitly ‘green’, as I have argued, and primary decision-making is inadequate. **8.090**

K. IMPLICATIONS OF THE REASONING

What does the approach to the mandate as set out above imply for monetary policy? Before going into this, a look at the EU Taxonomy is in order, since the ECB may have to rely on classification of activities as ESG-conforming. **8.091**

1. EU Taxonomy

The EU is developing a taxonomy for ESG activities and assets. Various legal acts set out the requirements for labelling items as in conformity with ESG standards. They also impose transparency requirements. This legislation is further meant to assist in avoiding ‘greenwashing’. Central to these standards **8.092**

218 Ulrich Volz, *On the Role of Central Banks in Enhancing Green Finance*, Inquiry Working Paper 17/01, February 2017, at: http://unepinquiry.org/wp-content/uploads/2017/02/On_the_Role_of_Central_Banks_in_Enhancing_Green_Finance.pdf.

is the Taxonomy Regulation,²¹⁹ which defines what can count as an ‘environmentally sustainable investment’. It defines environmental objectives: climate change mitigation and adaptation, the transition to a circular economy, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control and the protection and restoration of biodiversity and ecosystems.²²⁰ It sets out what a substantial contribution to any of these objectives entails²²¹ and which activities substantially harm environmental objectives.²²² Technical screening criteria will be specified in delegated acts adopted by the Commission.²²³ The first of such legal acts, the EU Taxonomy Climate Delegated Act,²²⁴ defines these criteria for economic activities substantially contributing to climate change mitigation or adaptation. The lengthy detailed descriptions,²²⁵ not yet including the agricultural sector, require navigation, for which an EU Taxonomy Compass has been devised.²²⁶ Further delegated acts specify elements of the taxonomy, including reporting requirements²²⁷ and how to treat natural gas and nuclear power under the taxonomy²²⁸ – an issue that created a lot of political discourse,²²⁹ with court action against the Commission announced.²³⁰

219 Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, OJ L 198/13, 22.6.2020.

220 Article 9, Taxonomy Regulation.

221 Articles 10–16, Taxonomy Regulation.

222 Article 17, Taxonomy Regulation.

223 Articles 19 and 23, Taxonomy Regulation.

224 Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives, [2021] OJ L442/1.

225 The delegated act contains a mere 7 pages but its annexes run to 50 pages: see https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852/amending-and-supplementary-acts/implementing-and-delegated-acts_en.

226 See: <https://ec.europa.eu/sustainable-finance-taxonomy/>.

227 Commission Delegated Regulation (EU) 2021/2178 of 6 July 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by specifying the content and presentation of information to be disclosed by undertakings subject to Articles 19a or 29a of Directive 2013/34/EU concerning environmentally sustainable economic activities, and specifying the methodology to comply with that disclosure obligation, [2021] OJ L 443/9. Directive 2013/34/EU, the EU’s annual statements directive ([2013] OJ L182/19), requires certain companies to publish a (consolidated) non-financial statement.

228 Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities, [2022] OJ L 188/1.

229 This legal act could have been rejected by the Council or the Parliament as co-legislators, but was not.

230 The Luxembourg Minister for Energy tweeted on 6 July 2022: ‘I deeply regret that today @Europarl_EN failed to object to the delegated act under the #EUTaxonomy, allowing #gas & #nuclear to be part of the EU sustainable finance policy’ and announced joint court action together with Austria against the act; see <https://twitter.com/ClaudeTurmes/status/1544630232388444160>.

Further main legal acts in the EU Taxonomy are the Sustainable Finance Disclosures Regulation (SFDR),²³¹ the Non-Financial Reporting Directive (NFRD),²³² the Benchmark Regulation²³³ and the Benchmark Regulation Amendment.²³⁴ These are all further implemented in technical standards, including by the ESAs.^{235,236} The taxonomy is a sign of the implementation of the SDGs and the Paris Agreement, to which the preamble of several of the legal acts specifically refer.²³⁷ A Corporate Sustainability Reporting Directive, proposed by the Commission and in the course of begin adopted by the Council and Parliament, extends and details sustainability reporting²³⁸ and the Corporate Sustainability Due Diligence Directive (CSDDD).²³⁹ **8.093**

The EU Taxonomy therefore is another clear indication of the legislative intent to 'green' the economy, to encourage the transition to a carbon-neutral economy and to re-direct financial flows to sustainable investments. This is a further clear indicator of the desirable direction of the economy in the eyes of the legislator. Also, the criteria and benchmarks resulting from the taxonomy will be guidance for the ECB when re-directing its own portfolios and activities towards sustainable finance. This is made clear in the ECB's latest reporting on its climate-related actions.²⁴⁰ **8.094**

231 Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector, [2019] OJ L 317/1.

232 Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups [2014] OJ L 330/1.

233 Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014, [2016] OJ L 171/1; consolidated text at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R1011-20191210>.

234 Regulation (EU) 2019/2089 of the European Parliament and of the Council of 27 November 2019 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks, [2019] OJ L 317/17.

235 By way of example, see EBA, ESMA, EIOPA, Final Report on draft Regulatory Technical Standards with regard to the content, methodologies and presentation of disclosures pursuant to [Articles of the SFDR], JC 2021 03, 2 February 2021, at: www.esma.europa.eu/sites/default/files/library/jc_2021_03_joint_esas_final_report_on_rts_under_sfdr.pdf.

236 See www.esma.europa.eu/policy-activities/sustainable-finance/climate-related-benchmarks.

237 See recitals 2 and 3 of the preamble to the Taxonomy Regulation, and recitals 1–3 of the SFDR.

238 Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting, [2022], OJ L 322/15.

239 Corporate sustainability due diligence: Council and Parliament strike deal to protect environment and human rights, press release, 14 December 2023, at: <https://www.consilium.europa.eu/en/press/press-releases/2023/12/14/corporate-sustainability-due-diligence-council-and-parliament-strike-deal-to-protect-environment-and-human-rights/>.

240 See the text accompanying n 305 below.

2. Taking a Longer-term Perspective?

8.095 Taking a brief look at what a new reading of the ECB's mandate might entail in the area of monetary policy,²⁴¹ the very first change to expect might be the inclusion of a longer-term perspective into the ECB's monetary policy stance. This might mean introducing into the expectations of business and households an element of long-term prediction, namely that the transition to a CO₂-free economy will be accompanied by sufficient measures on the central bank side to maintain price stability. Thus, the scenario planning that central banks and supervisors expect banks subject to their supervision to undertake is an activity that central banks must engage in themselves. The research and planning undertaken by central banks can be expected to be influenced by climate change in any reading of their mandates. A clear presentation of how climate change would affect monetary policy, in either a doom scenario or one of addressing the climate change challenge, was given by Benoît Coeuré in 2018.²⁴² He identified the shocks, their distribution and their persistence that would affect the devising of monetary policy, while discussing options to change course in respect of monetary policy portfolios, where his analysis shied away from a more robust interpretation of the mandate.

3. Including Climate Change Variables and Risks Into Account in Policy-Setting

8.096 Such scenario planning would then spill over from research into policy. Where transition risks and physical risks undermine the goal of price stability, one would expect the central bank to incorporate such variables in its monetary policy stance – as the ECB is doing, to be elaborated in section L below.

4. The ECB's Own Funds

8.097 A quick win in greening a central bank's activities concerns the bank's own funds, that is, its capital, and its own pension fund's investments. Provided there is a sufficiently clear taxonomy on which to base its investment decisions, the central bank can start playing its part by ensuring these are 'greened'. Again, this underscores the importance of a proper taxonomy. It is these examples that ECB President Christine Lagarde gave in her press conference

241 Other areas of activity will be the subject of sections below.

242 *Monetary policy and climate change*, speech by Benoît Coeuré, Member of the Executive Board of the ECB, at a conference on 'Scaling up Green Finance: The Role of Central Banks', organized by the Network for Greening the Financial System, the Deutsche Bundesbank and the Council on Economic Policies, Berlin, 8 November 2018, at: www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181108.en.html.

on 23 January 2020. She referred to the ECB Pension Fund and its paid-up capital and reserves, and, furthermore, mentioned the CSPP and collateral. She also recalled the elements described in the previous section: having climate risk embedded in risk assessment, models and forecasts, and including it in the financial stability approach in the ESRB: stress-testing and pilot.²⁴³

5. Favours or Requiring Green Collateral?

Ensuring that 'climate-related financial risks are given due consideration in their own risk management' is an element of greening that even long-term (former) sceptics such as Jens Weidmann favour.²⁴⁴ The ESCB Statute requires lending by the Eurosystem to be effected 'based on adequate collateral' (Article 18.1, second indent, *in fine*). Thus, even without giving climate considerations the role welcomed by this author, a case can be made for working towards a system in which collateral is only acceptable if it will not be tainted by deterioration due to climate change. Accepting securities issued by industries which engage in economic activities that will become redundant, or bonds representing companies whose assets become stranded, is not a wise policy for any financial market operator. It is forbidden territory for a central banking system working under the injunction of collateral adequacy, such as the Eurosystem. Should the taxonomy for financial products be insufficient to make a distinction between 'adequate' and 'inadequate' collateral, the ECB will have to undertake its own research to establish the level of risk it can run when accepting collateral in an economy that is transitioning. An interesting suggestion by Jens Weidmann is for the Eurosystem to 'consider only purchasing securities or accepting them as collateral for monetary policy purposes if their issuers meet certain climate-related reporting obligations',²⁴⁵ thus relying on adequate disclosure by the market to weigh the risk profile of its portfolio of assets purchased or of collateral accepted. A slightly different angle was already taken on this point by then-Executive Board member Benoît Cœuré in his 2018 speech on climate change and the Eurosystem,²⁴⁶ where he alluded to the effect of the introduction of a green taxonomy which, 'once adopted, [would] automatically be reflected in our collateral framework. That is, once

243 Press conference by Christine Lagarde, President of the ECB, Frankfurt am Main, 23 January 2020, at: www.ecb.europa.eu/press/pressconf/2020/html/ecb.is200123~0bc778277b.en.html. Ms Lagarde did not make mention of the Public Sector Purchasing Programme (PSP) share for marketable debt instruments issued by international or supranational institutions located in the Euro Area, or of 'green' T-LTROs (*targeted* long-term refinancing operations, that is, 'linked to [the banks'] loans to non-financial corporations and households'.

244 The quote is from his contribution to the *Financial Times* cited in n 205.

245 This quote also is from his contribution to the *Financial Times* cited in n 205.

246 *Monetary policy and climate change*, Benoît Cœuré, cited in n 242.

markets and credit risk agencies price climate risks properly, the amount of collateralised borrowing counterparties can obtain from the ECB will be adjusted accordingly.’

8.099 Beyond its own risk measurement requirements, the obligation to support the economic policies in the Union would also provide a valid legal argument for greening collateral. In this context, mention may be made of the argument put forward during the hearing before the Committee on economic and monetary affairs of the European Parliament by Frank Elderson, as a candidate for the function of Executive Director at the ECB.²⁴⁷ In his view, the mandate and the requirement of adequate collateral necessitate that climate change risk (physical risk, transition risk) are taken into account.

6. Greening Asset Purchasing Programmes

8.100 As already intimated, working towards a ‘green threshold’ for the purchasing of assets would be another step the central bank could take to ensure its observance of climate-related risk management and support of climate policies. Here, the same instruments that would apply for the greening of collateral can be put to good use: an adequate green taxonomy, ratings based on disclosures by financial market participants and own research into the measure of contribution to a CO₂-neutral economy or to transitioning towards such an economy. Taking the carbon intensity of assets into account in the context of monetary policy has been proposed by Dirk Schoenmaker: ‘a tilting approach to steer or tilt the allocation of the Eurosystem’s assets and collateral towards low-carbon sectors, which would reduce the cost of capital for these sectors relative to high-carbon sectors.’²⁴⁸

7. Greening Bank Lending: Green TLTROs?

8.101 As a final example of the kind of changes that can be brought about in the monetary policy sphere once the central banks heed their mandate in a climate change-relevant manner, Targeted Long-Term Refinancing Operations (TLTROs) may be mentioned.²⁴⁹ Such operations serve to finance the banks in the euro area with the specific intention of ensuring that such financing results

247 As he then was. Public hearing on 9 November 2020, at: www.youtube.com/watch?v=CWam9__AL4Y&ab_channel=PositiveMoneyEurope. See, also, Mr Elderson’s opening statement, at: www.dnb.nl/actueel/algemeen-nieuws/speeches-oud/opening-statement-by-frank-elderson-to-the-economic-and-monetary-affairs-committee-of-the-european-parliament/

248 Dirk Schoenmaker, *Greening monetary policy*, Bruegel Working Paper, Issue 02, 19 February 2019. Also available in a 6 November 2020 version at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3242814.

249 See www.ecb.europa.eu/mopo/implementation/oml/html/index.en.html.

in on-lending to the real economy (hence 'targeted'). When banks report on their on-lending activities they will receive an extra advantageous interest rate on their borrowing, in current circumstances, which will be paid by the ECB for on-lending. Greening of such operations would entail that the criteria for the ECB's subsidy are widened to include an element of sustainability: solely on-lending which supports activities that are considered 'green' or that contribute to the transition to a CO₂-free economy will be subsidized.

Such green TLTROs have been proposed by Jens van 't Klooster and Rens van Tilburg,²⁵⁰ who advocate a selective approach to the ECB's refinancing of banks' lending activities, based on the EU's green taxonomy. Commercial banks should prove the taxonomy compliance of individual loans to households and firms for construction, renovation and energy-saving measures for such lending to count in the context of a Green TLTRO. The authors argue that the ECB should 'start a limited pilot programme today targeted on funding for building and renovations in accordance with the Taxonomy requirement for real estate'. **8.102**

It is clear that such a programme relies more heavily on the appraisal capacity of the ECB than on ratings of 'greenness' of securities based on the taxonomy, as here the ECB needs to validate the reporting by banks of their 'green' on-lending. Yet, this is not different *in principle* from the task it has set itself by engaging in unconventional central banking operations with TLTROs, which is based on banks reporting their on-lending to the real economy. Again, as with other greening operations, green TLTROs rely on the existence of an appropriately developed taxonomy. **8.103**

8. Greening Foreign Reserve Management

Hardly covered thus far is the issue of greening foreign reserves, whose management is one of the basic tasks of the ECB.²⁵¹ Uncharted thus far, the issue of making foreign reserves compatible with green standards seems a relevant avenue to explore.²⁵² **8.104**

250 Jens van 't Klooster and Rens van Tilburg, *Targeting a sustainable recovery with Green TLTROs*, September 2020 (*Positive Money Europe & Sustainable Finance Lab*), at: www.positivemoney.eu/wp-content/uploads/2020/09/Green-TLTROs.pdf. Note that this was written when the ECB was fighting possible deflation; targeted lending is not an instrument to combat inflation.

251 Article 127(2), third indent: 'to hold and manage the official foreign reserves of the Member States.'

252 Strong support for a wide array of climate-mitigating monetary policy instruments, including greening foreign reserve management, is expressed by Lena Boneva, Gianluigi Ferrucci and Francesco Paolo Mongelli in 'Climate change and central banks: what role for monetary policy?' *Climate Policy*, vol. 22, no. 6, 770–87 at: <https://doi.org/10.1080/14693062.2022.2070119>.

L. WHAT THE ECB HAS DECIDED

1. Monetary Policy Review Results: Climate Action Plan

8.105 After this already lengthy discussion of the history of the interpretation of the ECB's mandate in the context of EU policy preferences including on climate change and biodiversity loss, and of my preferred interpretation of the mandate, both primary and secondary and embedded in other Treaty provisions, it is time to have a look at the ECB's projected climate change measures, and their first year of implementation. These were announced at the end of the monetary policy review, on 8 July 2021. The press release²⁵³ and comprehensive action plan²⁵⁴ make the ECB's commitment crystal clear. The first lines read as follows:

The ECB's Governing Council is strongly committed:

- to further incorporating climate change considerations into its monetary policy framework;
- to expanding its analytical capacity in macroeconomic modelling, statistics and monetary policy with regard to climate change;
- to including climate change considerations in monetary policy operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases;
- to implementing the action plan in line with progress on the EU policies and initiatives in the field of environmental sustainability disclosure and reporting.²⁵⁵

Before elaborating on the action plan, the communiqué states that

the Governing Council underlines its commitment to more systematically reflect environmental sustainability considerations in its monetary policy. The decision follows the conclusion of the strategy review of 2020–21, in which the reflections on climate change and environmental sustainability were of central importance.²⁵⁶

8.106 A clear reference to the political primate – 'Addressing climate change is a global challenge and a policy priority for the European Union. While governments and parliaments have the primary responsibility to act on climate

253 *ECB presents action plan to include climate change considerations in its monetary policy strategy*, press release, 8 July 2021, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1~f104919225.en.html.

254 Detailed roadmap of climate change-related actions, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1_annex~f84ab35968.en.pdf.

255 See the ECB press release of 8 July 2021.

256 *Ibid.*

change, within its mandate, the ECB recognises the need to further incorporate climate considerations into its policy framework²⁵⁷ – is followed by an eloquent explanation of the reasons why climate change affects price stability:

Climate change and the transition towards a more sustainable economy affect the outlook for price stability through their impact on macroeconomic indicators such as inflation, output, employment, interest rates, investment and productivity; financial stability; and the transmission of monetary policy. Moreover, climate change and the carbon transition affect the value and the risk profile of the assets held on the Eurosystem's balance sheet, potentially leading to an undesirable accumulation of climate-related financial risks.²⁵⁸

Even the legal obligation to incorporate climate change into its policies is highlighted: 'With this action plan, the ECB will increase its contribution to addressing climate change, *in line with its obligations under the EU Treaties*'²⁵⁹ (italics added). **8.107**

On the measures in the action plan, it is stated that '[t]he design of these measures will be *consistent with the price stability objective* and should take into account the implications of climate change *for an efficient allocation of resources*'²⁶⁰ (italics added). This wording makes clear that price stability and the efficiency injunction will be prevalent: the two main elements of discussion on what the ECB can or must do, as set out above. **8.108**

The areas of climate change action announced by the ECB are:²⁶¹ **8.109**

1. *Macroeconomic modelling and assessment of implications for monetary policy transmission*: developing models and analyses on the impact of climate change and 'related policies'²⁶² on the economy and corporates and citizens.²⁶³
2. *Statistical data for climate change risk analyses*: developing 'experimental indicators' on 'green financial instruments and the carbon footprint of financial institutions' and the latter's exposure to physical risk. Again, this element relates to EU policy-making and legislation as the development

257 Ibid.

258 Ibid.

259 Ibid.

260 Ibid.

261 Formatting taken over from the ECB communication.

262 The policies adopted to address climate change for which governments and parliaments have the primary responsibility, as the ECB stated. Of course, these public actors include the EU's political institutions: Parliament, Council, European Council.

263 In ECB parlance: 'households and firms'.

- is to be ‘in line with progress on the EU policies and initiatives in the field of environmental sustainability disclosure and reporting’.
3. *Disclosures as a requirement for eligibility as collateral and asset purchases*: by 2022, the ECB is to detail plans on requiring disclosure for private assets²⁶⁴ to include this ‘as a new eligibility criterion or as a basis for a differentiated treatment for collateral and asset purchases’. Here, too, EU policy-making on sustainability disclosure is dominant. Also, proportionality – the crucial element in the judicial assessment of central bank measures²⁶⁵ – is mentioned as a means to take account of SMEs.
 4. *Enhancement of risk assessment capabilities*: developing climate stress tests to the Eurosystem’s balance sheet, based on the already existing climate stress methodology for the economy as a whole. Credit rating agencies (CRAs) will face scrutiny as to whether they adequately incorporate climate change risks into their credit ratings.
 5. *Collateral framework*: climate risks are to be included in the assessment of the adequacy of collateral posted; monitoring ‘structural market developments in sustainability products’ and, surprisingly, a readiness ‘to support innovation in the area of sustainable finance within the scope of its mandate’, in the context of which reference is made to the 20 September 2020 press release on acceptance of sustainability-linked bonds as collateral.²⁶⁶
 6. *Corporate sector asset purchases*: corporate bond purchases by the ECB will ‘incorporate climate change criteria, in line with its mandate’. This means there needs to be ‘alignment of issuers with, at a minimum, EU legislation implementing the Paris agreement through climate change-related metrics or commitments of the issuers to such goals’. Disclosure of climate-related information of the CSPP will begin in 2023. Such disclosures are already undertaken for the non-monetary policy portfolios.²⁶⁷ Based on a ‘common stance for climate change-related sustainable and responsible investment principles for euro-denominated non-monetary policy portfolios’, the ECB and the NCBs of the euro area are preparing climate-related disclosures by 2023, starting on the basis of the ‘recommendations of the Task Force on Climate-related Financial Disclosures

264 Note: not for public assets, thus keeping the PSPP out of focus.

265 The case law on the OMT and the PSPP; see nn 5, 6 and 7.

266 *ECB to accept sustainability-linked bonds as collateral*, press release, 22 September 2020, at: www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200922~482e4a5a90.en.html.

267 *Eurosystem agrees on common stance for climate change-related sustainable investments in non-monetary policy portfolios*, press release, 4 February 2021, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210204_1~a720bc4f03.en.html.

(TCFD) as the initial framework'. The TCFD²⁶⁸ was mandated by the Financial Stability Board (FSB) to develop standards for transparent climate-related disclosures.²⁶⁹ Among the four categories of disclosures (Governance, Strategy, Risk Management, Metrics and Targets, graphically depicted as shown in Figure 8.1), the Eurosystem will be 'reporting, as a minimum, in the category of metrics and targets'.



Source: Figure 2 of the TCFD's June 2017 Recommendations.

Figure 8.1 Core elements of recommended climate-related financial disclosures

268 See www.fsb-tcfid.org/.

269 See the *Recommendations of the Task Force on Climate-related Financial Disclosures*, 15 June 2017, at: <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf>.

2. Assessment

8.110 A fair assessment needs to await actions and follow-up; developments in the first year are indicated under sub-section 3 below, and assessed there. The following remarks concern the announcement only.

8.111 The European Parliament welcomed the ECB's inclusion of climate change in its monetary policy, in a resolution²⁷⁰ mentioning 'climate' 29 times (as against 9 times the year before²⁷¹), and, in the monetary dialogue with Parliament, the ECB President explained what the central bank is undertaking.²⁷² Parliament is crystal clear in its assessment of the ECB's legal obligations:²⁷³

Recalls that the ECB, as an EU institution, is bound by the EU's commitments under the Paris Agreement; emphasises that tackling the climate and biodiversity emergency requires the ECB to take an integrated approach that should be reflected in all its policies, decisions and operations, together with adhering to its mandate of supporting the general economic policies of the Union, specifically, in this case, the achievement of a climate-neutral economy by 2050 at the latest, as outlined in the European Climate Law; considers that the ECB needs to use all the tools at its disposal to fight and mitigate climate-related risks.

8.112 My own view is that the ECB has come a long way in acknowledging the issue of climate change and addressing it in its policies and activities: it is at the forefront of central banks' action. Its example is likely to move other central banks. And, while governments, including the legislative and executive institutions at EU level, are still the main agents that need to move on climate change, a clear direction from the central banks may spur the public authorities to do their part.

8.113 Greening of portfolios and collateral will of necessity be undertaken gradually, as ECB board member Isabel Schnabel made clear in an interview.²⁷⁴ Also,

270 European Parliament resolution of 16 February 2022 on the European Central Bank – annual report 2021 (2021/2063(INI)), at: www.europarl.europa.eu/doceo/document/TA-9-2022-0029_EN.html.

271 European Parliament resolution of 10 February 2021 on the European Central Bank – annual report 2020 (2020/2123(INI)), at: www.europarl.europa.eu/doceo/document/TA-9-2021-0039_EN.html.

272 European Parliament plenary debate on the ECB Annual Report, Introductory statement by Christine Lagarde, President of the ECB, at the plenary session of the European Parliament, Strasbourg, 14 February 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220214_1-ec87ef8c3a.en.html.

273 European Parliament resolution of 16 February 2022, paragraph 22.

274 In her interview with *FOCUS Magazin*, conducted by Carla Neuhaus on 17 August and published on 20 August 2021, at: www.ecb.europa.eu/press/inter/date/2021/html/ecb.in210821-186713780d.en.html, Isabel Schnabel said, on re-directing the CSPP, that 'it would not make sense to completely exclude climate offenders' because 'We have to focus on accelerating the transition to a climate-neutral economy. Excluding certain sectors or firms from our asset purchase programme would be counterproductive. In order to lower emissions, firms with high levels of carbon emissions are extremely important because they offer scope for making the

drawing up criteria to select bonds will take time: '[W]e need to draw up new criteria for selecting bonds. For example, we could in the future buy more bonds from firms that commit to the goals of the Paris climate agreement and thus show that they are willing to adapt their business model.' So, making progress will take time.

There is an obvious lacuna in the action plans: the public sector bonds purchased are not (yet?) included in the re-direction. With more EU sovereigns, and the EU itself, issuing green bonds, this may be an element to be included in further steps towards fostering the green transition. **8.114**

Biodiversity is not part of the climate action plan, yet it is an element in the ECB's Environmental Statement²⁷⁵ and is clearly in sight of the ECB's Board members.²⁷⁶ Broadening the scope of the transitional policies to reflect biodiversity loss's danger to the planet and, by implication, to the economy of the euro area and its monetary and financial stability is a commendable next objective for the ECB.²⁷⁷ The less visible impact of biodiversity loss and the absence of a binding international agreement with prominence like that of the Paris Agreement may explain (but not justify) the absence, hitherto, of biodiversity loss from the ECB's plans. **8.115**

3. What the ECB Had Already Undertaken

Prior to the monetary policy strategy review announcements on climate change action, the ECB had already undertaken various measures in this area. Beyond a 'Green ECB' campaign in its premises, exhorting staff and visitors to act 'green', the environmental impact of the central bank's activities is being mapped and steadily improved.²⁷⁸ This includes energy and material efficiency, **8.116**

most progress. If these firms want to become climate-neutral, they are dependent on favourable financial conditions.' On buying green bonds only, she stated: 'a purely green asset purchase programme would not be realistic at present in any case.'

275 See the 2021 Update, at: www.ecb.europa.eu/ecb/orga/climate/green/pdf/ecb.environmentalstatement202107~e1430ebcae.en.pdf. The 2023 Update is here: <https://www.ecb.europa.eu/ecb/climate/green/html/ecb.environmentalstatement2023307~59d31f2afe.en.html>.

276 Frank Elderson, *Patchy data is a good start: from Kuznets and Clark to supervisors and climate*, keynote speech at the ECB-EBRD joint conference on 'Emerging climate-related risk supervision and implications for financial institutions', Frankfurt am Main, 16 June 2021; at: www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210616~44c5a95300.en.html.

277 NGFS Occasional Paper, *Biodiversity and financial stability: exploring the case for action*, at: www.ngfs.net/sites/default/files/medias/documents/biodiversity_and_financial_stability_exploring_the_case_for_action.pdf.

278 As elaborated in the 2021 update of the ECB's Environmental Statement, at: www.ecb.europa.eu/ecb/orga/climate/green/html/ecb.environmentalstatement202107~e1430ebcae.en.html.

also in producing banknotes, green procurement, biodiversity at the premises and reductions in travel.

- 8.117** Also, the ECB has established a Climate Centre²⁷⁹ to centralize all research and policy-making in the field. A former employee of the Dutch central bank, which has been at the vanguard of climate change-related policies in the area of central banking, was appointed as its first head.²⁸⁰
- 8.118** The effects that climate change may have on monetary policy had been extensively mapped in ‘Climate change and monetary policy in the euro area’,²⁸¹ an issue in the Occasional Paper Series written in the context of the monetary policy review by the Eurosystem Work Stream on Climate Change and Monetary Policy’. The paper also maps the possible climate-related actions the Eurosystem may take, notably including climate change in modelling and in four specific areas (disclosure, risk assessment, collateral framework and the CSPP). The study goes in-depth into the relationship between climate and monetary policies but does not explore the potential expansion of climate-consciousness in other monetary policy instruments than these four areas.
- 8.119** In an op-ed²⁸² published *after* the adoption of the ECB’s Climate Action Plan, Isabel Schnabel reiterated the three channels of influence between climate change and monetary policy. First, the transmission of monetary policy measures to financing conditions of households and firms may be impaired through physical risks or stranded assets on banks’ balance sheets, and through ‘a sharp and abrupt rise in credit risk premiums’. Also, central banks themselves may suffer losses through securities bought or collateral received. Second, climate change may lower or raise the equilibrium rate of interest (balancing savings and investments): lowering may through economic factors such as labour productivity, morbidity and mortality affected by climate change, through re-allocation of resources or through precautionary savings and reduced investments. Third, climate change and transition policies may influence inflation

279 ECB sets up climate change centre, press release, 25 January 2021, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210125_1~3fc4ebb4c6.en.html.

280 ECB appoints Irene Heemskerk as head of its climate change centre, press release, 30 April 2021, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210430~2042cc7f07.en.html.

281 F. Drudi, C. Holthausen, E. Moench, P. Weber (2021), Climate change and monetary policy in the euro area, *ECB Occasional Paper Series*, at www.ecb.europa.eu/pub/pdf/scpops/ecb.op271%7E36775d43c8.en.pdf?8068c39c5c19cd647e471b4ef8f60e5a.

282 ECB OP-ED, Climate change and monetary policy, contribution by Isabel Schnabel to the International Monetary Fund’s magazine Finance and Development, Frankfurt am Main, 31 August 2021, at: www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210831~3a7cecbf52.en.html.

dynamics, such as climate shock or mitigation policies (for instance: carbon pricing).

An early action on climate change effected by the ECB was the innovative stress test for physical and transition risk announced²⁸³ in spring 2021. Encompassing ‘approximately four million companies worldwide and 2,000 banks – almost all monetary financial institutions in the euro area’, the ECB, in cooperation with *Urgentem*²⁸⁴ and *Four Twenty Seven*,²⁸⁵ effected a climate change stress test based on scenario planning. In this first-of-its-kind exercise, the ECB mapped both physical and transition risks, finding that these are ‘two sides of the same coin: greater policy action may increase the impact of transition risks, but at the same time reduce physical risks in later decades’.²⁸⁶ The idea behind the effort was to ‘help ensure that the financial system is resilient to the transition to a low-carbon economy, by providing more and better information to market participants on the risks from climate change’.²⁸⁷ Just after the adoption of its climate road map, the ECB published the results of this stress test,²⁸⁸ which assessed the impact of climate change on more than four million firms worldwide and 1,600 euro-area banks under three different climate policy scenarios.²⁸⁹ Beyond this economy-wide stress test, the ECB submits the banks to a test of their climate-preparedness.²⁹⁰

4. What the ECB Has Undertaken since Its Climate Action Plan

Beyond what was presented above, since the announcement of its climate agenda the ECB has clarified its stance and identified what can be done at short notice and what depends on further data or public sector rules.

283 *Shining a light on climate risks: the ECB's economy-wide climate stress test*, THE ECB BLOG post by Luis de Guindos, ECB Vice-President, 18 March 2021, at: www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210318~3bbc68ffc5.en.html.

284 A data provider on emissions and climate risk: see www.urgentem.net/.

285 Currently Moody's ESG Solutions; see: <https://427mt.com/>.

286 *Shining a light on climate risks: the ECB's economy-wide climate stress test*, THE ECB BLOG post by Luis de Guindos, ECB Vice-President, 18 March 2021, at: www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210318~3bbc68ffc5.en.html: ‘This relationship is one of the key elements captured and quantified in the ECB economy-wide climate stress test.’

287 Ibid.

288 Firms and banks to benefit from early adoption of green policies, ECB's economy-wide climate stress test shows, Press Release, 22 September 2021, at: www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210922~59ade4710b.en.html.

289 Spyros Alogoskoufis, Nepomuk Dunz, Tina Emambakhsh, Tristan Hennig, Michiel Kaijser, Charalampos Kouratzoglou, Manuel A. Muñoz, Laura Parisi and Carmelo Salleo, *ECB economy-wide climate stress test – Methodology and results*, ECB Occasional Paper Series, No 281, September 2021, at: www.ecb.europa.eu/pub/pdf/scpops/ecb.op281~05a7735b1c.en.pdf.

290 ECB Banking Supervision launches 2022 climate risk stress test, Press Release, 27 January 2022, at: www.bankingsupervision.europa.eu/press/pr/date/2022/html/ssm.pr220127~bd20df4d3a.en.html.

- 8.122** The role of monetary policy in the green transition has been set out in speeches, as well as the grinding progress towards C&E disclosure. Two speeches deserve special mention in this account of what the ECB has undertaken.
- 8.123** The prominent place of climate change in considerations at the ECB was highlighted by Frank Elderson’s speech on climate litigation at the 2021 ECB Legal Conference.²⁹¹ Beyond the arguments for including climate change in the central bank’s considerations and activities discussed here, Elderson emphasized ‘climate-related human rights’ in his reflections on climate litigation, referring to former United Nations High Commissioner for Human Rights Mary Robinson’s definition of climate change as the ‘greatest human rights issue of our time’.²⁹²
- 8.124** During the Glasgow meeting of the United Nations Climate Change Conference (COP 26),²⁹³ the ECB issued a climate pledge.²⁹⁴ Its statement starts: ‘the ECB pledges to contribute, within its field of responsibility, to decisive action by policymakers to implement the Paris Agreement and mitigate the consequences of climate change’; recalls the Paris Agreement’s aim of making financial flows compatible with the green transition; reiterates the financial sector’s ‘key role’ ‘by mobilising funds towards a more sustainable economy’; and makes undertakings relating to specific actions. The ECB pledged to

[integrate] climate-related risks into financial stability monitoring and prudential supervision of banks, to [integrate] sustainability factors into own portfolio management, to [explore] the effects of climate-related risks on the Eurosystem monetary policy framework within our mandate, to [bridge] data gaps on climate-related data and to [work] towards higher awareness and intellectual capacity, also through technical assistance and knowledge sharing.²⁹⁵

291 *When you need change to preserve continuity: climate emergency and the role of law*, speech by Frank Elderson, ECB Legal Conference 2021, Frankfurt am Main, 25 November 2021, at: www.ecb.europa.eu/press/key/date/2021/html/ecb.sp211125~2da387f2ce.en.html.

292 Mary Robinson, Video Message to the Panel of Experts on Climate Leadership, on the eve of the Pacific Islands Forum, 2 September 2013, at: www.mrfcj.org/media/pdf/2013-09-04-MR-PIF-Video-Message.pdf.

293 See: <https://ukcop26.org/>.

294 The ECB pledge on climate change action, at: www.ecb.europa.eu/pub/pdf/other/ecb.pledge_climate_change_action211103~6af74636d8.pt.pdf.

295 Ibid.

In March 2022, Isabel Schnabel²⁹⁶ expressed the need to address the three shocks resulting from transition to a CO₂-free economy:²⁹⁷ ‘climateflation’ (inflation resulting from direct costs of climate change; (indirect) results of natural disasters and severe weather events); ‘fossilflation’ (price rises resulting from increased costs of oil and gas, due to the resurgence in use after the pandemic and the war in Ukraine but also ‘the ability of energy producers to steer supply in an oligopolistic market’); and ‘greenflation’ (inflation induced by the increased use of metals and minerals for green technology which are scarce and more expensive than input in conventional production). These three types of inflation will not be addressed by increasing the inflation target or excluding energy from the price increase benchmark. What monetary policy *can* do is distinguish between the three in the ECB’s policy response, and to ‘green’ the monetary policy framework. As Schnabel explained on the types of inflation she distinguishes:

Climateflation and fossilflation share many of the characteristics of both an adverse supply shock and a terms of trade shock’, whereas ‘greenflation is much more likely to be the result of a strong and persistent positive demand shock, or investment boom, that re-establishes the ‘divine coincidence’ of monetary policy – that is, the ability of central banks to stabilise inflation and output simultaneously.²⁹⁸

Around the same time, Frank Elderson deplored the lack of progress in banks disclosing their C&E risk profiles in stark wording,²⁹⁹ noting only marginal improvement in disclosure, and mostly at smaller banks: ‘none of the 115 banks directly supervised by the ECB fully meets our supervisory expectations for disclosures.’³⁰⁰ These words are telling:

296 *A new age of energy inflation: climateflation, fossilflation and greenflation*, speech by Isabel Schnabel, at a panel on ‘Monetary Policy and Climate Change’ at The ECB and its Watchers XXII Conference, 17 March 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220317_2-dbb3582f0a.en.html.

297 While also eloquently putting into words the value of price rises in view of the green transition and the need to dissociate from Russian energy supply after the invasion into Ukraine: ‘Today, our dependence on fossil energy sources is not only considered a peril to our planet, it is also increasingly seen as a threat to national security and our values of liberty, freedom and democracy.’ And: ‘There is a price to be paid for going green at a pace that reflects the dual objective of safeguarding both our planet and our right to self-determination. But that price, including the fiscal support required to protect the most vulnerable members of society, is worth paying.’

298 *A new age of energy inflation: climateflation, fossilflation and greenflation*, n 295.

299 *Full disclosure: coming to grips with an inconvenient truth*, keynote speech by Frank Elderson, 14th European Bank Institute Policy Webinar on the ECB’s supervisory approach on climate-related and environmental risks, 14 March 2022, at: www.bankingsupervision.europa.eu/press/speeches/date/2022/html/ssm.sp220314~0422f4b854.en.html.

300 Saying: ‘many of the banks raising the bar in C&E disclosures are small and medium-sized – showing that remarkable progress is achievable by all.’ Ibid.

Banks are trying to compensate for the poor quality of their disclosures by issuing a great volume of information around green topics. We end up with a lot of white noise and no real substance on what both markets and supervisors really want to know: how exposed is a bank to C&E risks and what is it doing to manage that exposure? It is of course relevant for banks to publicise their efforts to, for example, reduce the electricity consumption of their branches. However, it would be much more significant if they were to announce how they are steering their activities towards risk management practices that are aligned with a carbon-neutral economy. Looking at the world through green-coloured glasses' is not quite the same as a sound management of all material C&E risks.

8.127 What C&E risk disclosure, a permanent focus of the ECB's supervisory activities, means for commercial banks was spelled out in a subsequent speech:³⁰¹

banks should not misconstrue the ECB's actions as an outright call for divesting from carbon-intensive activities or from geographical regions vulnerable to physical risk. Rather, we are asking banks to fully grasp the physical and transition risks and to actively start managing them, with the aim of making their portfolios more resilient to C&E risks.

8.128 The lack of progress in C&E risk disclosure is also relevant for the greening of monetary policy, as Isabel Schnabel remarked in her speech three days later, with a reference to calls for green TLTROs:³⁰² 'Many banks, for example, do not yet effectively differentiate between green loans and other loans, making a green TLTRO difficult on a practical level.'

8.129 On 4 July 2022 the ECB issued its Climate Agenda 2022,³⁰³ which begins with an excellent summary of its current (legal) thinking about its mandate. First, speaking as a monetary authority: 'Climate change and the transition to a greener economy affect our primary objective of maintaining price stability due to their impact on our economy and on the risk profile and value of the assets on the Eurosystem balance sheet.' Then, considering its prudential tasks: 'As a supervisory authority, it is our duty to contribute to the safety and soundness of the banking sector by ensuring the industry has made adequate preparations to manage climate-related risk.' Third comes secondary objectives-related considerations: 'Furthermore, as a European institution,

301 *Towards an immersive supervisory approach to the management of climate-related and environmental risks in the banking sector*, keynote speech by Frank Elderson, Industry outreach on the thematic review on climate-related and environmental risks, 18 February 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220218~c55e646426.en.html.

302 Jens van 't Klooster and Rens van Tilburg, *Targeting a sustainable recovery*, September 2020, at: <https://www.positivemoney.eu/wp-content/uploads/2020/09/Green-TLTROs.pdf>.

303 ECB climate agenda 2022, at: www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220704_annex~cb39c2dcbb.en.pdf.

acting within our mandate and without prejudicing our primary objective, it is our duty to play our part in supporting general economic policies which contribute towards the achievement of the EU's Treaty-based objectives. Such objectives include protecting the environment.'

These reflections precede an enumeration of the core objectives the ECB sees for itself in this context: (1) 'managing and mitigating the financial risks associated with climate change and assessing its economic impact'; (2) 'promoting sustainable finance to support an orderly transition to a low-carbon economy'; and (3) sharing of expertise 'to foster wider changes in behaviour'. The latter of the three goals pursued signals a messenger role. Improving its models and gathering more data will influence its climate strategy and actions, so the ECB states. The document then specifies, with deadlines, what actions it intends to undertake in six priority areas³⁰⁴ with a focus on data gathering, analysis, risk assessment, considering climate-friendly monetary policy options and transparency. The accompanying press release is more explicit regarding several of the policy undertakings envisaged.³⁰⁵ **8.130**

A striking feature is the absence of any reference to topics beyond the collateral framework and the CSPP: there's no indication of specific lending for transition purposes beyond '[r]esearch the potential role of central banks in financial markets and green innovation', an activity that seemed to have ended before the 2022 climate agenda was issued. The detailed specification of activities is to be lauded for the opportunity it provides to hold the independent central bank to account. **8.131**

The same holds for the letter to the European Parliament's Committee on Economic and Monetary Affairs of the same date,³⁰⁶ in which President **8.132**

304 These are: (1) Assess the macroeconomic impact of climate change and mitigation policies on inflation and the real economy; (2) Improve the availability and quality of climate data to better identify and manage climate-related risks and opportunities; (3) Enhance climate change-related financial risk assessment; (4) Consider options for monetary policy operations and assess the impact of climate change on monetary policy (5) Analyse and contribute to policy discussions to scale up green finance; (6) Increase transparency and promote best practices to reduce the environmental impact.

305 The accompanying press release of 4 July 2020 (*ECB takes further steps to incorporate climate change into its monetary policy operations*) emphasizes (1) decarbonizing corporate bond holdings; (2) a 'new limits regime [that] aims to reduce climate-related financial risks in Eurosystem credit operations' for the collateral framework; (3) compliance with the Corporate Sustainability Reporting Directive (CSRD) as eligibility requirement for collateral in Eurosystem credit operations; and (4) 'urg[ing] rating agencies to be more transparent about how they incorporate climate risks into their ratings and to be more ambitious in their disclosure requirements on climate risks': www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220704~4f48a72462.en.html.

306 Letter from the ECB President to Irene Tinagli, ECON Chair, on progress on climate-related action plan, at: www.ecb.europa.eu/pub/pdf/other/ecb.mepletter220704_Tinagli~466b72513d.en.pdf?ef8c7e0645c2cbc204187b325879e8c9.

Lagarde informed Parliament on the progress since the climate action plan had been adopted. She wrote that ‘the ECB has decided to adjust corporate bond holdings in the Eurosystem’s monetary policy portfolios and its collateral framework, to introduce climate-related disclosure requirements and to enhance its risk management practices’, specifying these along the lines of other ECB communications in early July 2022. Two further elements of this letter merit emphasis. First is the intention to review and, possibly, adapt the measures, with a view

(1) to confirm that they continue to fulfil their monetary policy objectives; (2) to ensure – within its mandate – that the relevant measures continue to support the decarbonisation path to reach the goals of the Paris Agreement and the EU climate neutrality objectives; (3) to respond to future improvements in climate data and climate risk modelling or changes in regulation; and (4) to address additional environmental challenges, within its price stability mandate.³⁰⁷

8.133 Second, as in all its communications, the ECB squarely puts the onus on policy makers as the primary actors mandated to adopt the measures needed to address climate change³⁰⁸ and, here, also holds politicians responsible for delays: ‘the ECB is not acting in a vacuum, but rather in conjunction with the policies decided by other policymakers’; the actions announced ‘are on track to meet the deadlines indicated in the climate roadmap’ except for those ‘that rely on the application of the forthcoming Corporate Sustainability Reporting Directive (CSRD)’, whose implementation date is delayed, while possible ‘further delay in the national transposition of the CSRD or the adoption of the harmonised reporting standards would have knock-on effects on the implementation of the ECB’s actions’.³⁰⁹ On this theme, the ECB President issues a clear call for legislative action:

I am also counting on the co-legislators’ ambition and willingness to further strengthen the regulatory framework underpinning climate-related disclosures and risk assessments, as well as to develop sound standards for sustainable financial products. For instance, improving climate disclosures and harmonised reporting of climate-related data for structured finance assets would help incorporate climate considerations into the treatment of those asset classes. In a similar vein, more ambitious regulatory requirements for CRAs’ disclosure of climate risks are crucial to improving the Eurosystem’s

307 Ibid.

308 ‘Although elected governments bear the primary responsibility of addressing climate change – and have more powerful tools to do so than central banks – the ECB is convinced that all policymakers need to take appropriate measures within their own mandates and respective areas of competence.’ Ibid.

309 Ibid.

risk assessment capabilities. Swift agreement on the European green bond standard remains key to enhancing the credibility and effectiveness of green bonds.³¹⁰

In a blogpost of 8 July 2022, two members of the Executive Board declared: **8.134** ‘the ECB can, within its mandate, act as a catalyst for greening the financial system.’³¹¹ Isabel Schnabel and Frank Elderson bring to mind that the EU’s trajectory towards climate neutrality by 2050 has ‘implications for inflation during the transition phase’, ‘makes parts of the capital stock redundant and creates financial risks’. Turning away from ‘market neutrality’ in its corporate bond portfolio, which made this ‘[reflect] the existing bond universe’, the ECB will diminish the ‘carbon bias’ in its portfolio and ‘start tilting the reinvestments from maturing corporate bonds – around €30 billion every year – towards assets issued by companies with a better climate performance’.

M. PRUDENTIAL SUPERVISION: A DIFFERENT ENVIRONMENT

1. The Legislative Framework for Prudential Supervision

In this separate³¹² element of its mandate, the ECB is operating in a different **8.135** environment. Although vested with the same level of independence as for monetary policy and all its tasks,³¹³ the fact of the matter is that prudential supervision concerns the application to supervised entities of standards set by the legislator. Thus, norms established elsewhere, both at Union level and beyond (global standard-setting bodies such as the BCBS³¹⁴ and the Financial Stability Board (FSB)), and at national level,³¹⁵ prescribe what the ECB can

310 Ibid.

311 *A catalyst for greening the financial system*, ECB Blogpost, 8 July 2022, by Frank Elderson and Isabel Schnabel; at: www.ecb.europa.eu/press/blog/date/2022/html/ecb.blog220708~1c7076c7b1.en.html.

312 Article 25 SSM Regulation requires a separation between the prudential supervisory and monetary functions; an internal ‘Chinese wall’ maintaining different decision-making lines on distinct issues; monetary policy versus prudential policy and even versus systemic financial stability; the ECB’s tasks in relation to the European Systemic Risk Board (ESRB) are also to be separated from the SSM-related tasks.

313 The basic provision on independence is Article 130 TFEU, which basically outlaws any interference from political bodies with the ECB’s exercise of its powers and the carrying out of its tasks and duties. This is echoed in Article 7 ESCB Statute. The preamble to the SSM Regulation states the following: ‘the ECB should exercise the supervisory tasks conferred on it in full independence, in particular free from undue political influence and from industry interference which would affect its operational independence’ and follows up with Article 19 on independence of the ECB and the National Competent Authorities (NCAs), which carries the same language as Article 130 prohibiting the giving, or seeking, of instructions from bodies politic by members of the ECB’s Supervisory Board.

314 See the BCBS’ *Principles for the effective management and supervision of climate-related financial risks*, 15 June 2022, at: www.bis.org/bcbs/publ/d532.htm. These 18 principles set out how banks can manage climate-related financial risks and how supervisors should supervise these risks.

315 The ECB is to apply ‘all relevant Union law, and where this Union law is composed of Directives, the national legislation transposing those Directives’: Article 4(3) SSM Regulation.

do when it seeks to incorporate climate change in its supervision. It is for this reason that the ECB has to rely on the element of ‘risk’ as a basis for any furtherance of climate-related supervision. After all, risk is the pervasive factor in prudential regulation: avoiding and containing risk, or provisioning for its realisation, is what banks need to do and what supervisors look into.

- 8.136** The Union’s prudential framework has hitherto been very modest when it comes to addressing climate change.³¹⁶ Even the most recent amendments to the Single Rulebook³¹⁷ only introduced a minimal greening. Apart from a requirement for the European Banking Authority to undertake a study and for the Commission, on the basis thereof, to *potentially* propose legislation for a dedicated treatment of ESG-relevant exposures,³¹⁸ and an additional requirement for the EBA to study³¹⁹ the inclusion of ESG factors in the annual Supervisory Review and Evaluation Process (SREP),³²⁰ there are only modest disclosure requirements for credit institutions. Under CRR2, banks need to disclose ‘information on ESG risks, including physical risks and transition risks, as defined in the [EBA] report referred to in Article 98(8) of [CRD5]’.³²¹ This disclosure is to take place annually for the first year, and biannually thereafter.³²²
- 8.137** The ECB has called for mandatory provisions in prudential regulation for banks to have net-zero transition plans, compliance with which the ECB can super-

316 See Box 8.3, prudential provisions relating to climate change and ESG.

317 See the interactive Single Rulebook at: www.eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook.

318 The EBA is to report by 28 June 2025 ‘whether a dedicated prudential treatment of exposures related to assets or activities associated substantially with environmental and/or social objectives would be justified’, ‘if appropriate’ followed by a legislative proposal from the Commission: Article 501 c Capital Requirements Regulation (CRR)).

319 This study was issued on 23 June 2021: *EBA report on management and supervision of ESG risks for credit institutions and investment firms* (EBA/REP/2021/18); at: www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf.

320 This is (in Basel parlance) ‘Pillar 2’ of supervision: the supervisor’s annual exercise whether solvency, liquidity, risk management and governance of a supervised entity are sufficient, potentially leading to extra requirements for an individual bank beyond what is generally required: Articles 97 and 104 CRD5. Pillar 1 concerns the general solvency and liquidity requirements; Pillar 3 refers to the disclosure requirements that seek to infuse a market-induced correction to the assumption of excessive risks.

321 Article 449a CRR 2.

322 On 24 January 2022, the EBA has submitted to the Commission draft *Implementing Technical Standards (ITS) on prudential disclosures on ESG risks in accordance with Article 449a CRR*, EBA/ITS/2022/01, at: www.eba.europa.eu/implementing-technical-standards-its-prudential-disclosures-esg-risks-accordance-article-449a-crr#pane-new-7bdd87fb-e02f-492a-99d6-129449e3cf9d.

wise.³²³ Support for the Banking Package 2021 was reiterated recently.³²⁴ This Banking Package³²⁵ proposed by the Commission would strengthen somewhat the green prudential standards, yet disappoints expectations of strong regulatory support for the green transition.³²⁶ The requirement, in Article 501c CRR, to explore the imposition of ESG-related factors in risk weighing was brought forward in time (to end-2023) but weakened as the mention of a legislative proposal by the Commission was scrapped(!). A requirement to report ESG exposures to the competent authorities is added to Article 430 CRR. In the CRD, ESG risks are added to the issues the robust governance arrangements are required to address (Article 74), while Article 76 on a biannual risk review is strengthened, first by adding ‘the current, short, medium and long-term impacts of environmental, social and governance factors’ and second by requiring that the bank ‘develops specific plans and quantifiable targets to monitor and address the risks arising in the short, medium and long-term from the misalignment of the business model and strategy of the institutions, with the relevant Union policy objectives or broader transition trends towards a sustainable economy in relation to environmental, social and governance factors’. Misalignment of business plans with government policy is thus a risk to be monitored, quantified and addressed, which *is* a remarkable yet wholly justifiable constraint on free enterprise: without adequately addressing climate change, there will be no room for any business. A credit institution needs to be more robust in addressing ESG risks as required by a new Article 87a CRR. This is taken further by adding to Article 401 on the SREP the possibility for the supervisors to require banks to alter their business models, governance

323 Bloomberg TV, interview with Frank Elderson, conducted by Francine Lacqua, on 2 November 2021, at: www.ecb.europa.eu/press/inter/date/2021/html/ecb.in211103~e8bc85b25.en.html: ‘My point would be that I would very much welcome in the new package of the European Commission that, at least in the European Union, there be a clear mandatory legal requirement for banks to have Paris-compatible transition plans so that we can easily supervise their alignment with the Paris Accord.’

324 *Good, bad and hopeful news: the latest on the supervision of climate risks*, keynote speech by Frank Elderson, 10th Annual Conference on Bank Steering & Bank Management at the Frankfurt School of Finance & Management, Frankfurt am Main, 22 June 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220622~860a2aef6b.en.html: ‘revisions to the Capital Requirements Directive currently under discussion by the EU co-legislators further reaffirm the ECB’s mandate in this area by broadening the supervisory toolkit to address environmental, social and governance risks, and by explicitly requiring banks to have concrete plans to address C&E risks arising from misalignment with EU climate targets.’

325 See https://finance.ec.europa.eu/publications/banking-package_en.

326 See the Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor, COM/2021/664 final, at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0664>; and the Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/36/EU as regards supervisory powers, sanctions, third-country branches, and environmental, social and governance risks, and amending Directive 2014/59/EU, COM/2021/663 final, at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0663>.

strategies and risk management for this reason. Excerpts of the proposed changes are shown in Box 8.3.

8.138 The proposals are subject to amendments from the European Parliament.³²⁷ One such amendment is most promising: the Greens propose to include a new Article 126b in the CRD under which a bank's fossil fuel exposures vis-à-vis corporate clients would be assigned heavy weightings; notably, *new* such exposures would be weighed at 1,250 per cent or, in other words, require 100 per cent capital.

2. Risk as a Central Element of Prudential Supervision

8.139 Being bound by the – thus far – minimalist approach of the legislator in this field of activity, the ECB has to rely on the element of risk, pervasive in supervisory standards, to include climate concerns in its supervision.³²⁸ It has done so. The ECB published a *Guide on Climate-related and Environmental Risks* whose subtitle makes clear what it entails: *Supervisory Expectations relating to Risk Management and Disclosure*.³²⁹ The Guide presents supervisory expectations for 'significant credit institutions' (that is, banks under direct supervision of the ECB)³³⁰ which are said not to be binding but are to be taken on board in the supervisory dialogue with banks. Thus, even though formally non-binding, the Guide's 'expectations' will form the basis for SSM's engagement with the banks and may result in SREP decisions requiring changes to solvency requirements, governance and risk management. The Guide is rife with supervisory expectancies on understanding environmental risks, taking them into account in a bank's business strategy and risk management systems and own stress-testing, while arguing for disclosure according to the European Commission's *Guidelines on Non-financial Reporting: Supplement on Reporting Climate-related Information*.³³¹ In the October 2018 progress report, NGFS

327 Available at: www.europarl.europa.eu/doceo/document/ECON-AM-735427_EN.pdf. A political compromise has been achieved which could not be reflected here; see *Commission welcomes political agreement on EU banking package*, 27 June 2023, at <https://finance.ec.europa.eu/news/commission-welcomes-political-agreement-eu-banking-package-2023-06-27.en>.

328 Presaged by Andrea Enria in his speech in November 2019 when he said: 'so far, [banks] have addressed climate change from the angle of corporate social responsibility. Now they should expand their focus and approach it also from the angle of risk management and disclosure.'

329 *ECB publishes final guide on climate-related and environmental risks for banks*, press release, 27 November 2020, at: www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr201127-5642b6e68d.en.html.

330 And with an exhortation to National Competent Authorities (NCAs) 'to apply the expectations set out in this guide in their supervision of less significant institutions in a manner that is proportionate to the nature, scale and complexity of the activities', in the interest of a 'consistent application of high supervisory standards across the euro area'.

331 [2019] OJ C209/1.

members acknowledged that ‘climate-related risks are a source of financial risk. It is therefore within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks.’³³²

3. Climate Change Considerations in Supervision

The question this chapter seeks to answer is whether such a climate-related approach by the ECB is within its mandate. Due to the instruction of the Treaty³³³ and the legislator³³⁴ to serve financial stability and the widely recognized negative potential effects of climate change on financial stability, there is no doubt in my mind that the ECB’s mandate in this area also includes climate change-related approaches and measures – naturally, as indicated, within the framework of the hitherto modest legislative supervisory framework. **8.140**

Strong arguments can be made to include environmental–financial risks in supervision: a risk category combining biodiversity-related financial risks (BRFR) and climate-related financial risks (CRFR).³³⁵ Additional reasons may be adduced here, based on the ECB’s secondary mandate and on provisions discussed above (Articles 11 and 216(2) TFEU). After all, the secondary mandate to support economic policies in the Union also fully supports taking full account of the clear direction of EU policies to engage in a continent-wide conversion to a CO₂-free, circular economy by 2050. **8.141**

4. Recent Developments in Prudential Supervision

The early summer of 2022 was a busy time for the ECB in relation to climate change. Beside the announcements on the monetary policy front, the ECB gave away the preliminary findings resulting from its ongoing thematic review of climate-related and environmental risks (C&E risk). Most banks are still far from aligning their practices with the ECB’s expectations in the *Guide on Climate-related Risks*.³³⁶ **8.142**

332 Network for Greening the Financial System (2019), First Comprehensive Report: A call for action – Climate Change as a source of financial risk: www.ngfs.net/sites/default/files/medias/documents/ngfs_first_comprehensive_report_-_17042019_0.pdf.

333 Article 127(5) TFEU and Article 25.1 ESCB Statute.

334 The SSM Regulation mentions ‘financial stability’ 11 times, notably in recital 55 of the preamble: ‘The conferral of supervisory tasks implies a significant responsibility for the ECB to safeguard financial stability in the Union, and to use its supervisory powers in the most effective and proportionate way.’

335 See, for instance, Katie Kedward, Josh Ryan-Collins and Hugues Chenet, Biodiversity loss and climate change interactions: financial stability implications for central banks and financial supervisors (2022) *Climate Policy*, DOI: 10.1080/14693062.2022.2107475, at: <https://doi.org/10.1080/14693062.2022.2107475>.

336 *Guide on climate-related and environmental risks Supervisory expectations relating to risk management and disclosure*, November 2020, at: www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf.

- 8.143** In a speech,³³⁷ Frank Elderson did not hide the ECB's disappointment. He also called on banks to seize the opportunity that the green transition provides, saying: 'As the supervisor, our focus is on the safety and soundness of banks. Above all, we want to promote the stability of individual institutions and preserve financial stability. But banks should also want to effectively manage C&E risks and position themselves to benefit from the green transition.' He considered it 'reasonable that banks can be fully compliant with all our expectations by the end of 2024 at the latest'.
- 8.144** C&E risk inclusion in commercial banks' business had been advanced by the adoption by the BCBS of the *Principles for the Effective Management and Supervision of Climate-related Financial Risks*.³³⁸ This 'principles-based approach to improving risk management and supervisory practices related to climate-related financial risks' contains 18 'high-level principles': 12 addressed to banks and 6 to prudential supervisors. The Principles reference other BCBS standards.³³⁹ The BCBS argues that, because of longer than usual horizons for realization of climate risks, 'banks should take a prudent and dynamic approach to developing their risk management capacities'.

5. Climate-risk Litigation

- 8.145** Finally, as explained by Frank Elderson, the risk of climate litigation is to be taken into consideration. Supervisory authorities and central banks may become the subject of such litigation and, indeed, already are: 'While central banks and supervisors should of course not overstep their mandate, there is also a legal risk of being sued for failing to act and comply with legal obligations.'³⁴⁰ Climate litigation³⁴¹ is a novel phenomenon leading to notable judicial decisions.³⁴² Although governments and corporations have been the

337 *Good, bad and hopeful news: the latest on the supervision of climate risks*, keynote speech by Frank Elderson, 10th Annual Conference on Bank Steering & Bank Management at the Frankfurt School of Finance & Management, Frankfurt am Main, 22 June 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220622~860a2aef6b.en.html.

338 See n 314

339 They refer to the *Core principles for effective banking supervision* (BCPs; at: www.bis.org/basel_framework/standard/BCP.htm) and *Supervisory Review Process* (SRP; at: www.bis.org/basel_framework/standard/SRP.htm) as well as to the *Corporate governance principles for banks* (at: <https://www.bis.org/bcbs/publ/d328.htm>).

340 *The embrace of the horizon: Forcefully moving with the changing tide for climate action in financial sector policies*, speech by Frank Elderson, Chair of the Central Banks and Supervisors Network for Greening the Financial System, Member of the Executive Board and Vice-Chair of the Supervisory Board of the ECB, at The Green Swan Conference – Coordinating finance on climate, Frankfurt am Main, 3 June 2021, at: www.bankingsupervision.europa.eu/press/speeches/date/2021/html/ssm.sp210603~e0388eab0d.en.html.

341 Ivano Alogna, Christine Bakker and Jean- Pierre Gauci's edited volume *Climate Change Litigation: Global Perspectives* ([2021] Brill Nijhoff) provides an excellent overview of climate litigation across the globe.

342 See Chapter 11 of this book, by de Wit and Mills, on climate litigation.

main targets, central bank have come into the picture as well. A striking example concerns the proceedings started by environmental charity Client Earth³⁴³ against the Belgian central bank³⁴⁴ for ‘failing to meet environmental, climate, and human rights requirements when purchasing bonds from fossil fuel and other greenhouse-gas intensive companies’ in the context of the ECB’s CSPP.³⁴⁵ Their argument is based on violation of Article 11 TFEU (the environmental integration provision)³⁴⁶ and Article 37 of the Charter of Fundamental Rights of the European Union³⁴⁷ through the purchase of purchasing bonds from fossil fuel and other greenhouse gas-intensive companies. The plaintiff seeks a preliminary ruling from the CJEU on the issue. This could mean that a similar case to *Weiss* ensues: an NCB implied in litigation on its execution of Eurosystem-wide operations.³⁴⁸ Although this litigation concerns monetary policy, not prudential supervision, it is a clear example of the risk of climate-related litigation facing central banks which may encompass all of their activities and policies.

An overview of climate litigations can be found at a website³⁴⁹ co-hosted by the Sabin Center for Climate Change Law at Columbia Law School.³⁵⁰ It contains two databases of climate change litigation, one for US climate change litigation and one for non-US cases. **8.146**

BOX 8.3 PRUDENTIAL PROVISIONS RELATING TO CLIMATE CHANGE AND ESG

Article 501c Capital Requirements Regulation (CRR2)³⁵¹

Prudential treatment of exposures related to environmental and/or social objectives

EBA, after consulting the ESRB, shall assess, on the basis of available data and the findings

343 See www.clientearth.org/.

344 *Banque Nationale de Belgique/Nationale Bank van België/Belgische Nationalbank*; www.nbb.be/en.

345 *ClientEarth v Belgian National Bank*, reported at: <http://climatecasechart.com/climate-change-litigation/non-us-case/clientearth-v-belgian-national-bank/>.

346 See section G above.

347 This reads as follows: ‘Article 37 Environmental protection: 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.’

348 The difference being that in *Weiss* the plaintiffs relied on exceeding of the ECB’s mandate and violation of the national constitution, whereas in *ClientEarth v BNB* the claims rest on violation of EU environmental law.

349 See: <http://climatecasechart.com/>.

350 See: <https://climate.law.columbia.edu/>.

351 From: Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012, [2013] OJ L 176/1, as amended.

of the Commission High-Level Expert Group on Sustainable Finance, whether a dedicated prudential treatment of exposures related to assets or activities associated substantially with environmental and/or social objectives would be justified. In particular, EBA shall assess:

- (a) methodologies for the assessment of the effective riskiness of exposures related to assets and activities associated substantially with environmental and/or social objectives compared to the riskiness of other exposure;
- (b) the development of appropriate criteria for the assessment of physical risks and transition risks, including the risks related to the depreciation of assets due to regulatory changes;
- (c) the potential effects of a dedicated prudential treatment of exposures related to assets and activities which are associated substantially with environmental and/or social objectives on financial stability and bank lending in the Union.

EBA shall submit a report on its findings to the European Parliament, to the Council and to the Commission by 28 June 2025.

On the basis of that report, the Commission shall, if appropriate, submit to the European Parliament and to the Council a legislative proposal.

Article 98(8) Capital Requirements Directive (CRD5)³⁵²

Technical criteria for the supervisory review and evaluation

8. EBA shall assess the potential inclusion in the review and evaluation performed by competent authorities of environmental, social and governance risks (ESG risks).

For the purposes of the first subparagraph, EBA's assessment shall comprise at least the following:

- (a) the development of a uniform definition of ESG risks, including physical risks and transition risks; the latter shall comprise the risks related to the depreciation of assets due to regulatory changes;
- (b) the development of appropriate qualitative and quantitative criteria for the assessment of the impact of ESG risks on the financial stability of institutions in the short, medium and long term; such criteria shall include stress testing processes and scenario analyses to assess the impact of ESG risks under scenarios with different severities;
- (c) the arrangements, processes, mechanisms and strategies to be implemented by the institutions to identify, assess and manage ESG risks;
- (d) the analysis methods and tools to assess the impact of ESG risks on lending and financial intermediation activities of institutions.

EBA shall submit a report on its findings to the Commission, the European Parliament and to the Council by 28 June 2021.

On the basis of the outcome of its report, EBA may, if appropriate, issue guidelines, in accordance with Article 16 of Regulation (EU) No 1093/2010, regarding the uniform inclusion

352 From: Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC, [2013] OJ L 176/338, as amended.

of ESG risks in the Supervisory Review and Evaluation Process performed by competent authorities.

Article 449a CRR³⁵³

Disclosure of environmental, social and governance risks (ESG risks)

From 28 June 2022, large institutions which have issued securities that are admitted to trading on a regulated market of any Member State, as defined in point (21) of Article 4(1) of Directive 2014/65/EU, shall disclose information on ESG risks, including physical risks and transition risks, as defined in the report referred to in Article 98(8) of Directive 2013/36/EU.

The information referred to in the first paragraph shall be disclosed on an annual basis for the first year and biannually thereafter.

N. OTHER TASKS: PAYMENTS

A brief word on other tasks to end this exploration of the ECB's mandate in the context of climate change. Among the ECB's other tasks, most³⁵⁴ are not relevant in this perspective; however the issue of euro banknotes³⁵⁵ and the oversight function over the payment systems are. (The ECB's wider financial stability remit,³⁵⁶ beyond prudential supervision,³⁵⁷ is not discussed here, as the concerns and mandate issues relevant for the 'specific tasks' in the context of the Single Supervisory Mechanism (SSM) are applicable there as well.) **8.147**

Banknotes made of cotton are an area in which environmental and climate concerns are primary. In the *2020 Update of the ECB's Environmental Statement*,³⁵⁸ the ECB makes clear how it assesses and addresses these issues. Manufacturers need to provide ISO certificates on the quality management, environmental management and health and safety aspects of the banknote production. Certified organic cotton is said to be used for more than half of **8.148**

353 From: Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012, [2013] OJ L 176/1, as amended.

354 Its advisory function: consultation on national and Union legislation in its fields of competence (Article 127(4) TFEU; Article 4 ESCB Statute); and its external reserves and forex functions: to conduct foreign-exchange operations consistent with the provisions of Article 219 of that Treaty; and to hold and manage the official foreign reserves of the Member States (Article 127(2), second and third indent, TFEU, Article 3.1, second and third indent, ESCB Statute).

355 Article 128(1) TFEU, Article 16 ESCB Statute.

356 Set out in Article 127(5) TFEU and Article 25.1 ESCB Statute and relevant in the context of the ESRB.

357 Pursuant to Article 127(6) TFEU and Article 25.2 ESCB Statute.

358 At: www.ecb.europa.eu/ecb/climate/green/html/ecb.environmentalstatement202010~d0c3d15950.en.html. See also section 6.7 (bank notes) of the *ECB Environmental statement 2022* at: www.ecb.europa.eu/ecb/climate/green/html/ecb.environmentalstatement202207~dedabd566b.en.html#toc37.

the banknotes produced, with a 100 per cent target. There is no legal argument against taking environmental and climate considerations fully into account under the responsibility of the ECB to issue banknotes.³⁵⁹

8.149 With respect to the oversight of payment systems,³⁶⁰ the instruction ‘to promote the smooth operation of payment systems’ has been taken to consist in the oversight by the Eurosystem of national payment systems and the provision of the TARGET³⁶¹ infrastructure payment services for settling financial transactions.³⁶² This is not the place to discuss the validity of this somewhat limited approach to the widely drawn mandate.³⁶³ However, the impact of climate change and the transition to a CO₂-free economy do lend themselves to the following considerations.

8.150 Any further development of payment systems infrastructure and oversight may wish to take into account elements of the climate change challenge. The efficacy and efficiency of payment systems oversight may contribute to their environmental soundness.³⁶⁴ The potential introduction of a Central Bank Digital Currency (CBDC)³⁶⁵ raises issues of energy consumption of blockchain technology. Whatever the choices made in these areas,³⁶⁶ from a legal perspective there is clarity on the inclusion of climate and environmental considerations in this part of the mandate as well. Here, as well as in respect of monetary policy and prudential supervision, the secondary mandate and the additional supporting elements adduced provide valid legal grounds for the inclusion of climate change considerations in the implementation of the ECB’s tasks. Again, the conclusion is not that the ECB is *permitted* to include climate change but that it is *mandated* to do so.

359 The authorization of bank notes’ issuance is an exclusive ECB competence; the issue of the notes themselves is reserved for the ECB and NCBs. Euro coins are issued by the Member States, with the ECB authorizing their volume (Article 128(2) TFEU).

360 Article 127(2), fourth indent, TFEU and Article 3.1, fourth indent, ESCB Statute.

361 TARGET stands for Trans-European Automated Real-time Gross settlement Express Transfer system.

362 These are: a real-time gross settlement (RTGS) system (TARGET2), a securities settlement platform (T2S) and a TARGET Instant Payment Settlement (TIPS) for instant payments in euro. See: www.ecb.europa.eu/paym/target/html/index.en.html.

363 One may question the approach of continuing with national payments systems instead of building an EU-wide system. This has legal and political ramifications and may be attributed to the choice of a decentralised model for the central banking system of the monetary union. This decentralized approach does nothing to instil a sense of coherence and irreversibility of the adoption of the single currency; it has been a source of divisive debate based on perceived credit channelled in a book-keeping system for cross-border transactions.

364 An environmentally inspired study may research whether less partitioning of the payments systems and more interaction across borders in the internal market would result in a lower environmental impact.

365 Christine Lagarde and Fabio Panetta, *Key objectives of the digital euro*, THE ECB BLOG, 13 July 2022, at: www.ecb.europa.eu/press/blog/date/2022/html/ecb.blog220713~34e21c3240.en.html.

366 See the Commission’s proposal for a regulation on the establishment of the digital euro (COM/2023/369 final), at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0369>.

O. CONCLUDING REMARKS

Having reflected on the history of the interpretation of the European Central Bank's mandate, and discussed the international developments concerning climate change in the area of central banking and financial sector supervision (NGFS, TCFD, BIS), this chapter concludes as follows. The ECB's primary mandate of maintaining price stability is predominant, in the core provisions (Article 127(2) and 119(3) TFEU) and in the rules on exchange-rate policy (Article 219(1) and (2) TFEU). The ECB's secondary mandate (to support the general economic policies in the Union with a view to contributing to the achievement of the objectives of Article 127(2) TFEU) clearly supports an interpretation of its remit which takes climate change, and biodiversity loss, fully into account, since the economic policies in the EU and the EU's Climate Law make the direction of the Union's policy makers crystal clear. Similarly, the Union's objectives (Article 3 TEU) explicitly include climate change-related objectives: sustainable development; balanced economic growth; a high level of protection and improvement of the quality of the environment; solidarity between generations; protection of human rights, in particular the rights of the child; protection of the Union's citizens and sustainable development of the Earth. **8.151**

Beyond these strong arguments to read the mandate as not only *permitting* but *requiring* the ECB to take full account of climate change and biodiversity loss, additional arguments can be derived from the integration provisions (Articles 11 and 7 TFEU) and from the binding nature of the Paris Agreement (Article 216(2) TFEU). The EU's Charter of Fundamental Rights provides an additional legal argument (Article 37) for my preferred reading of the ECB's mandate. Whereas these legal arguments suffice, recourse to the primary mandate alone would be sufficient since the ever clearer consequences of climate change for price stability, and for financial stability, lead me – together with others – to conclude that there is a legal *requirement* to fully integrate climate change and biodiversity loss in the monetary policy operations of the ECB, not a mere *authorization* to do so. **8.152**

The open market principle (Articles 127(1) and 119(2) TFEU) does not form an obstacle to this reading. On the contrary, it requires the ECB to support well-functioning markets – from which the current price setting of financial and other products is currently far. There is no 'market neutrality principle' under EU law (even though central banks may have acted in accordance with this rule). An emergency situation reading of the mandate, and a focus on **8.153**

the relationship between climate stability and primate stability, may further buttress this interpretation.

- 8.154** This reading may have consequences for a variety of operations of the ECB, from investing its own funds in green assets to reassessing and redirecting asset purchasing programmes for climate impact and requiring proof of ‘green-ness’ for collateral. All this presupposes the existence of a robust green taxonomy, which the EU has adopted and is fast developing, hiccups in the realization and diverse policy stances – notably on nuclear and gas – notwithstanding. Other elements of change may include taking a longer-term perspective in the price stability objective and incorporating climate and biodiversity variables in research, analysis³⁶⁷ and policy-making. The results of the ECB’s monetary policy strategy review and an overview of the actions already undertaken before and since show that the euro area’s central banking system has firmly integrated work towards climate resilience and incorporation of climate change response into its activities. There is scope for widening the climate considerations into other elements of monetary policy.
- 8.155** The ECB’s activities include prudential supervision, where the same legal grounds apply as in monetary policy. However, in this area, the legislative norms play a dominant role. Due to their – thus far – very limited integration of climate change and biodiversity loss into banking laws, the ECB will have to rely on the risk element inherent in any prudential standards in including climate change in its supervisory activities. It has done so already, *inter alia* with the adoption of its *Guide on Climate-related and Environmental Risks* and the implementation of a wide-ranging climate change stress test.
- 8.156** As to other ECB tasks, the promotion of the smooth operation of payment systems and the issue of banknotes seem most relevant from the perspective of climate change. The oversight of payments systems and the possible introduction of a CBDC both provide opportunities to include environmental soundness. It is concluded, on the basis of the same arguments as prevail in the context of monetary policy, that the ECB is legally bound to do so.
- 8.157** It is too early to provide an assessment of what has been undertaken thus far. As indicated, there is uncertainty about the exact scope of the taxonomy,

367 On central banks’ analysis and climate mitigation scenarios, see the contribution assessing the NGFS’s scenarios: Irene Monasterolo, Maria J. Nieto and Edo Schets, *The good, the bad and the hot house world: conceptual underpinnings of the NGFS scenarios and suggestions for improvement*, 6 September 2022, at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4211384.

also since the full-scale Russian invasion of Ukraine.³⁶⁸ And there are clear blank spots still in the ECB's climate action: unconventional monetary policy instruments³⁶⁹ are only partially covered and 'green TLTROs' are hardly mentioned, while greening the foreign reserve portfolio of the Eurosystem seems not yet to have been contemplated either. Yet, recently realized movements on climate change, as well as the conclusions of the monetary policy strategy review, the climate action plan and the matters undertaken during the first year of its implementation, show a deep commitment and indicate a willingness to embrace the full rigour of the ECB's legal obligation in respect of climate change and biodiversity loss.

P. RECENT DEVELOPMENTS

1. Practice and Critique of ECB Decarbonizing

The ECB published details on decarbonizing its corporate bond holdings:³⁷⁰ it **8.158** will rely on scores for companies' greenhouse gas (GHG) emissions to 'tilt its purchases towards issuers with a better climate performance'. In view of the changes in monetary policy in the face of the steep rise in inflation, there have been no new purchases under the CSPP since June 2022 and, since March 2023, the Eurosystem only partially reinvests the principal payments from maturing CSPP securities.³⁷¹ An in-depth explanation of the tilting approach and of possible greening of monetary policy instruments was given by ECB executive director Isabel Schnabel.³⁷² The ECB's greening record has been assessed very critically in a Greenpeace-supported report.³⁷³ Disclosure of the

368 The full war unleashed by Russia in February 2022 has made investors re-appreciate the 'ESG' requirements, sometimes considering investment in defence equipment to fall within the 'S'. This does not affect the 'E'.

369 Acknowledging that these are on the retreat: quantitative easing is no longer part of the policy tools in view of high inflation figures – as of July 2022, no net purchases, only reinvestments of redemptions, are undertaken. Source: www.ecb.europa.eu/mopo/implement/app/html/index.en.html. See the ECB's Press Release, Monetary policy decisions, 21 July 2022, at: www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220721~53e5bdd317.en.html.

370 *ECB provides details on how it aims to decarbonise its corporate bond holdings*, press release, 19 September 2022, at: www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220919~fae53c59bd.en.html. See, also, the FAQs, at: www.ecb.europa.eu/mopo/implement/app/html/ecb.faq_cspp_climate_change.en.html, and the explainer at: www.ecb.europa.eu/ecb/educational/explainers/html/decarbonising_corporate_bond_holdings.en.html.

371 See: www.ecb.europa.eu/mopo/implement/app/html/index.en.html#cspp.

372 *Monetary policy tightening and the green transition*, speech by Isabel Schnabel at the International Symposium on Central Bank Independence, Sveriges Riksbank, Stockholm, 10 January 2023, at: www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230110~21c89bef1b.en.html.

373 Yannis Dafermos, Daniela Gabor, Maria Nikolaidi, Jakub Gogolewski and Mauricio Vargas (2023), *Broken promises: the ECB's widening Paris gap*, SOAS University of London; University of Greenwich; University of the West of England; Greenpeace; at: www.greenpeace.de/publikationen/EZB_Report%20_Broken_promises.pdf.

ECB's own CSPP and PEPP portfolios and non-monetary policy portfolio (own funds and staff pension fund)³⁷⁴ showed 'a decarbonization path' for Eurosystem bond holdings. In further application of norms with which the banks are expected to conform, the ECB stress-tested its own balance sheet for climate-related risks.³⁷⁵ Eurosystem in-house credit rating assessment systems now also include climate-risk evaluations.³⁷⁶

2. Beyond Climate: Biodiversity

8.159 In a series of speeches, ECB Executive Director Frank Elderson explained that, beyond climate change, 'nature-related risks, including those associated with biodiversity loss' have macroeconomic implications and need to be addressed as 'a source of risk for individual financial institutions and for financial stability'.³⁷⁷ Emphasising the 'E' in the ECB's *Guide on Climate-related and Environmental Risks: Supervisory Expectations relating to Risk Management and Disclosure*,³⁷⁸ Elderson emphasized the need to look beyond climate-related metrics, such as GHG emissions, and include other metrics.³⁷⁹ In a clear indication of where the ECB wishes banks to head, in terms of taking biodiversity-related risks into account, Elderson gave an interview to the *Financial Times*³⁸⁰ in which he set out the economic and, hence, financial-sector risks of biodiversity loss.³⁸¹

374 *Climate-related financial disclosures of the Eurosystem's corporate sector holdings for monetary policy purposes and Climate-related financial disclosures of the ECB's non-monetary policy portfolios*, 23 March 2023 at: www.ecb.europa.eu/pub/pdf/other/ecb.climate_related_financial_disclosures_eurosystem_corporate_sector_holdings_monetary_policy_purposes2023~9eae8df8d9.en.pdf and www.ecb.europa.eu/pub/pdf/other/ecb.climate_related_financial_disclosures_ECB_non_monetary_policy_portfolios2023~9199143410.en.pdf.

375 Maximilian Germann, Piotr Kusmierczyk and Christelle Puyo, *Results of the 2022 climate risk stress test of the Eurosystem balance sheet*, ECB Economic Bulletin, Issue 2/2023, at: https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbox202302_06~0e721fa2e8.en.html.

376 Julia K rding and Florian Resch, *Common minimum standards for incorporating climate change risks into in-house credit assessment systems in the Eurosystem*, Economic Bulletin Issue 6, 2022, at: www.ecb.europa.eu/pub/economic-bulletin/focus/2022/html/ecb.ebbox202206_06~d7f88f706f.en.html.

377 *Natura finis magistra – acknowledging nature-related risks to make finance thrive*, speech by Frank Elderson at De Nederlandsche Bank/Official Monetary and Financial Institutions Forum conference on 'Moving beyond climate: integrating biodiversity into financial markets' at Artis Zoo in Amsterdam, 29 September 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220929_2~d6497c36da.en.html.

378 See n 328.

379 'Even if the current focus of the ongoing work is still on climate-related risks, our ever-evolving understanding of the materiality of environmental risks and their transmission channels implies that these risks ultimately need to be taken into consideration in everything we do.'

380 Interview with the *Financial Times* conducted by Martin Arnold on 1 June 2023, published 8 June 2023, at: www.ecb.europa.eu/press/inter/date/2023/html/ecb.in230608~7247c0aaca.en.html. See also *The economy and banks need nature to survive*, THE ECB BLOG, Frank Elderson, 8 June 2023, at: www.ecb.europa.eu/press/blog/date/2023/html/ecb.blog230608~5cfff7c349.en.html.

381 'What I'm saying is that biodiversity and nature-related services generally are relevant for the economy. This is not some kind of a flower power, tree-hugging exercise. This is core economics. This is core financial stability, core macroprudential, core price stability.' Ibid.

Elderson announced the publication of an inventory of biodiversity-related losses in September 2023, revealing that ‘75% of bank loans are to firms that depend on ecosystem services’.³⁸² This interview is also revealing about the manner in which the prudential supervisory authority elaborates norms: based on statutory requirements to take risk into account,³⁸³ it formulates supervisory expectations, requires banks to self-report on these and then conducts thematic reviews among the credit institutions, which may ultimately face specific measures.³⁸⁴

In this chapter, climate change is understood to encompass climate change and loss of biodiversity, as both developments produce risks for central banks and for the financial system, beyond threatening our economies and the survival of mankind on our planet. For more on this issue, see the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.³⁸⁵ **8.160**

3. Further Developments of Green Parameters

In January 2023 the ECB published statistical indicators on climate change.³⁸⁶ **8.161**
The significance of climate-related disclosure requirements was underscored in a joint statement with the ESAs.³⁸⁷

382 ‘Ecosystem services’ are defined as ‘outputs, conditions, or processes of natural systems that directly or indirectly benefit humans or enhance social welfare’; see www.britannica.com/science/ecosystem-services. In his ECB blog, Elderson gave the following example of services provided by nature: ‘food, drinking water, timber and minerals; protection against natural hazards; or carbon uptake and storage by vegetation.’

383 Notably, Article 76 (bank’s ‘management body [needs to] approve [] and periodically review [] the strategies and policies for taking up, managing, monitoring and mitigating the risks the institution is or might be exposed to, including those posed by the macroeconomic environment in which it operates in relation to the status of the business cycle’) and Article 74 (internal governance, including ‘effective processes to identify, manage, monitor and report the risks they are or might be exposed to’) CRD.

384 Such as SREP decisions or even sanctions (fines, periodic penalty payments): Article 1 of Council Regulation (EC) No 2532/98 of 23 November 1998 concerning the powers of the European Central Bank to impose sanctions, [1998] OJ L 318/4, as amended by Council Regulation (EU) 2015/159 of 27 January 2015, [2015] OJ L 27/1.

385 www.ipbes.net/.

386 *Towards climate-related statistical indicators*, at: www.ecb.europa.eu/pub/pdf/other/ecb.climate_change_indicators202301-47c4bbbc92.en.pdf.

387 *Joint ESAs–ECB Statement on disclosure on climate change for structured finance products*, 13 March 2023, at: www.ecb.europa.eu/pub/pdf/other/ecb.ESA_ECB_joint_statement~c1f96d353b.en.pdf?02fb3e782ccd745be3f3505071bf6d97.

8.162 The EU's green taxonomy developed further, with a new batch of delegated acts³⁸⁸ under the Taxonomy Regulation³⁸⁹ which fill in technical criteria for the economic activities substantially contributing to one or more of the objectives of the Taxonomy Regulation and a proposal for an ESG rating providers regulation.³⁹⁰ Earlier, the CSFRD³⁹¹ entered into force. A consultation was held on a first batch of European sustainability reporting standards (ESRS).³⁹² A delegated act setting out these ESRS³⁹³ was adopted by the Commission on 31 July 2023, watering down some of the mandatory requirements from earlier proposed texts with a 'materiality test'; this permits companies to exclude from disclosure items not deemed material, that is, not relevant in their particular circumstances, while identifying these non-material data points.³⁹⁴ Such standards, and the requirement for corporates to disclose their climate and environmental risk exposure, assist the ECB in decarbonizing its assets and serve the C&E risk supervision of credit institutions by the SSM.

4. ECB Subject to the EU Climate Law?

8.163 The ECB's relationship with the EU Climate Law³⁹⁵ was set out in another speech by Frank Elderson.³⁹⁶ Elderson's inclination to the view that the ECB is not a 'relevant Union institution' in the sense of Article 2(2) of Regulation 2021/1119 as the central bank is a policy taker (not maker), and that Commission oversight of the central bank's climate actions would undermine its independence and circumvent Treaty provisions on amending the central

388 EU Taxonomy Delegated Acts: the Environmental Delegated Act, at: https://finance.ec.europa.eu/system/files/2023-06/taxonomy-regulation-delegated-act-2022-environmental_en_0.pdf, and amendments to the Climate Delegated Act, at: https://finance.ec.europa.eu/system/files/2023-06/taxonomy-regulation-delegated-act-2022-climate_en_1.pdf.

389 See Christos V. Gortsos and Dimitrios Kyriazis, *The Taxonomy Regulation and Its Implementation*, EBI Working Paper Series 2023 – no. 136, 08/03/2023, at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4381950.

390 Proposal for a Regulation of the European Parliament and of the Council on the transparency and integrity of Environmental, Social and Governance (ESG) rating activities, COM(2023) 314 final, 13 June 2023, at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0314>.

391 See text accompanying n 309. Under the CSRD (see n 238), companies need to disclose for the first time in annual reports published in 2025.

392 https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13765-European-sustainability-reporting-standards-first-set_en.

393 Commission Delegated Regulation (EU) .../... of 31.7.2023 supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standards, Brussels, 31.7.2023 C(2023) 5303 final, at: https://ec.europa.eu/finance/docs/level-2-measures/csr-delegated-act-2023-5303_en.pdf.

394 European Commission, Questions and Answers on the Adoption of European Sustainability Reporting Standards, 31 July 2023, at: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_4043.

395 See David Brinkman's Chapter 7 in this book.

396 *The European Climate Law and the European Central Bank*, speech by Frank Elderson, Lustrum Symposium organised by Dutch Financial Law Association, Amsterdam, 1 December 2022, at: www.ecb.europa.eu/press/key/date/2022/html/ecb.sp221201_1~435e6ea81a.en.html.

bank's objectives, is not shared by this author. I would consider the Commission competent to take stock of what the institutions do in terms of compliance with the Climate Law, and to assess whether they have fulfilled the requirement to 'take the necessary measures [...] to enable the collective achievement of the climate-neutrality objective set'.³⁹⁷ The Commission's review of 'the consistency of Union measures with the climate-neutrality objective'³⁹⁸ or with 'ensuring progress on adaptation [to climate change]'³⁹⁹ should, in my perspective, also cover the ECB. Of course, the Commission cannot prescribe what the ECB is to do, just as it cannot impose on the Council and Parliament specific legislation in line with what it considers needed, or on the equally independent Court, as each have their own competences under the Treaty. Thus, when the Commission takes 'the necessary measures in accordance with the Treaties',⁴⁰⁰ the ECB's independence guarantees that it sets monetary policy itself, yet the ECB would be required to explain any inconsistency that the Commission may have identified in climate-relevant aspects of ECB policy. I gladly note Elderson's view, expressed in the aforementioned speech,⁴⁰¹ that ECB policies and activities, while perhaps not covered by the Climate Law, still need to be consistent with it.⁴⁰²

5. Further Perspectives

The global work on climate-risk assessment has been inventoried in a speech at the IMF.⁴⁰³ On the legal front, an academic proposal that the specification of the ECB's secondary objectives should take place via high-level coordination with the EU's political institutions should be mentioned,⁴⁰⁴ as well as more publications on the ECB's green mandate⁴⁰⁵ and on central banks and the **8.164**

397 Article 2(2) European Climate Law.

398 Article 6(2)(a) European Climate Law.

399 Article 6(2)(b) European Climate Law.

400 Article 6(3) European Climate Law.

401 *The European Climate Law and the European Central Bank*, n 26.

402 Based on the consistency provisions: Articles 11 and 7 TFEU, discussed under G. INTEGRATION PROVISIONS.

403 *Policy-makers as policy takers – accounting for climate-related and environmental factors in banking supervision and monetary policy*, speech by Frank Elderson at the Peterson Institute for International Economics, Washington DC, 21 April 2023, at: www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230421~489cd977e0.en.html.

404 Jens van 't Klooster and Nik de Boer, 'What to do with the ECB's secondary mandate' (2023) *JCMS*, vol. 61, no. 3, 730–46, DOI: 10.1111/jcms.1340.

405 Pieterjan Heynen, 'The ECB going green: Impact on the interrelationship between monetary policy and banking supervision' (2022) *Maastricht Journal of European and Comparative Law*, vol. 29, no. 6, 667–84, and Pieterjan Heynen, *Greening the ECB: Issues and Developments*, Bank- en Financieel Recht/Droit Bancaire et Financier; Vol. 2022; issue 3; pp. 179–89. Earlier: Zsa Zsa Knödler, *Greening monetary policy measures: The Eurosystem's obligations with regards to the transition towards a low carbon economy*, European Banking Institute

greening of finance.⁴⁰⁶ The inspiration to include climate change and biodiversity loss into central banking was, again, eloquently presented by Frank Elderson,⁴⁰⁷ and the ECB's intention to enforce its supervisory expectations as regards banks' preparedness for climate change and biodiversity loss firmly underlined,⁴⁰⁸ even with a reference to imposing periodic penalties.⁴⁰⁹

Working Paper Series 2021 – no. 100, posted: 11 August 2021, at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3902039#.

- 406 David Ramos Muñoz, Antonio Cabrales and Ángel Sanchez, *Central banks and climate change. Fit, opportunity and suitability in the law and beyond*, EBI Working Paper Series 2022 – no. 119, 10/03/2022, at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4054908; Omer Faruk Tekdogan, 'Green central banking: a new role for the central banks in the financial system', *Journal of Central Banking Law and Institutions* (2023), vol. 2, no. 2, 301–26.
- 407 *Beacons of hope to navigate the spring tide of urgency: from Terschelling to Frankfurt to Paris*, speech by Frank Elderson at the *Springtij* Forum, Terschelling, 20 September 2023, at: www.bankingsupervision.europa.eu/press/speeches/date/2023/html/ssm.sp230920_2~4036e4a9eb.en.html.
- 408 See Frank Elderson's *Interview with Market News International*, 27 September 2023, at: www.bankingsupervision.europa.eu/press/interviews/date/2023/html/ssm.in230927~af5bdc7426.en.html. See, also: ECB steps up climate work with focus on green transition, climate and nature-related risks, press release, 30 January 2024, at <https://www.ecb.europa.eu/press/pr/date/2024/html/ecb.pr240130~afa3d90e07.en.html>.
- 409 Which the ECB can impose thanks to the Council Regulation (EC) No 2532/98 of 23 November 1998 concerning the powers of the European Central Bank to impose sanctions, [1998] OJ L 318/4, as amended upon the activation of its prudential supervisory task by Council Regulation (EU) 2015/159 of 27 January 2015 amending Regulation (EC) No 2532/98 concerning the powers of the European Central Bank to impose sanctions, [2015] OJ L 27/1; this legal act added 'periodic penalty payments' to the ECB's arsenal of instruments.