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**The Power of the Eurosystem to promote environmental
protection**

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Abstract

The misalignment of the Corporate Sector Purchase Programme (CSPP), the latest iteration in the development of the Eurosystem’s unconventional measures of monetary policy, with EU environmental global commitments has stirred a lot of political debate in recent months. Critics of the CSPP typically point to article 3 TEU and to the binding nature of the Paris Agreement on the ECB as the main sources of legal obligations for the Eurosystem. This essay puts forward an additional argument: the Eurosystem is bound by article 11 TFEU, which integrates environmental objectives into the mandate of the Eurosystem and requires it to take those objectives into account when designing and implementing monetary policy. On this basis, the essay provides a critical analysis of the validity of the controversial CSPP and explores the potential implications of article 11 TFEU for monetary policy. The essay concludes that, besides a distinctive source of legal obligations, article 11 TFEU represents an opportunity for the Eurosystem to contribute to improving our embryonic understanding of the relationship between climate change and financial stability.

Keywords: monetary policy, climate change, Eurosystem, ECB, principle of integration.

¹ Lecturer in Commercial Law, University of Glasgow. This essay has benefited from comments received on earlier versions that I presented at the “Law, Finance and Sustainability” Conference, organised by the School of Law at the University of Sheffield in September 2017, and at a seminar at the University of Oslo held in April 2018. I would also like to thank Rosa Greaves, David Ramos, Iain MacNeil, Beate Sjøfjell, Emanuele Campiglio, Luna Romo, and José Manuel Marqués for their useful comments and feedback. All errors are my own.

² The Eurosystem comprises the European Central Bank (“ECB”) and the national central banks (“NCBs”) of the Member States which comprises the core of the European System of Central Banks (“ESCB”).

I. Introduction

On 9 December 2016, The Guardian reported on an analysis by Corporate Europe Observatory, a non-profit research group, that revealed that the Eurosystem, i.e. the central banking system of the euro area,² was purchasing bonds issued by corporations in the oil, gas and automotive industries as part of its Corporate Sector Purchase Programme (“CSPP”), the latest iteration of the Eurosystem’s asset purchase programme (“APP”).³ The revelation came less than a year after the EU had signed the Paris Agreement and questioned the Union’s commitment towards environmental protection and climate change.⁴

The revelation stirred an intense political debate. Only a few days after the revelation, four Members of the European Parliament (“MEPs”) addressed an open letter to Mr Mario Draghi, President of the European Central Bank (“ECB”),⁵ citing the Corporate Europe Observatory report and requesting that the ECB aligned the CSPP with the EU’s environmental global commitments.⁶ Pressure from MEPs started to grow thereafter. Since the revelation, several members of the European Parliament Committee on Economic and Monetary Affairs (“ECON”) have quizzed Mr Draghi on various occasions on the misalignment of the CSPP with the EU’s environmental global commitments and on the role of the ECB in promoting environmental protection.⁷

To these questions, Mr Draghi provided rotund answers: environmental protection falls out of the scope of the ECB’s mandate to promote price stability; it is a political matter and the ECB will support it just as other aims of the EU laid down in article 3 of the Treaty of

² The Eurosystem comprises the European Central Bank (“ECB”) and the national central banks (“NCBs”) of the Member States whose currency is the euro. The European System of Central Banks (“ESCB”) comprises the ECB and the NCBs of all EU Member States whether they have adopted the euro or not. The Eurosystem is responsible for EU monetary policy. See Art. 282(1) of the Treaty on the Functioning of the European Union (“TFEU”). See also Art. 1.1° of the Statute of the ESCB and the ECB (the “Statute”).

³ See Arthur Neslen, ‘ECB’s Quantitative Easing Programme Investing Billions in Fossil Fuels’ *The Guardian* (9 December 2016) <<http://www.theguardian.com/environment/2016/dec/09/ecbs-quantitative-easing-programme-investing-billions-in-fossil-fuels>> accessed 26 August 2017. See also Corporate Europe Observatory, ‘The ECB’s “Quantitative Easing” Funds Multinationals and Climate Change’ (2016) <<https://corporateeurope.org/economy-finance/2016/12/ecb-quantitative-easing-funds-multinationals-and-climate-change>> accessed 26 August 2017.

⁴ The EU signed the Paris Agreement on 22 April 2016. See United Nations, ‘Paris Agreement’ (*Status of Ratification*) <http://unfccc.int/paris_agreement/items/9444.php> accessed 21 December 2017.

⁵ The President of the ECB also chairs the Governing Council of the ECB, which comprises the members of the Executive Board of the ECB and the governors of the NCBs of the Member States whose currency is the euro. See Art. 10.1 Statute. The Governing Council coordinates the CSPP, which is implemented by several NCBs. See n 21.

⁶ See Reinhard Bütikofer and others, ‘Letter to Mr Mario Draghi, President of the ECB’ (16 December 2016) <https://d3n8a8pro7vnm.cloudfront.net/qe4people/pages/112/attachments/original/1481907570/Green_MEPs_letter_to_Draghi_CSPP.pdf?1481907570> accessed 21 December 2017.

⁷ See e.g. the transcripts of the Monetary Dialogues celebrated on 29 May 2017, 25 September 2017, 26 February 2018 and 9 July 2018. All transcripts are available at European Parliament, ‘Monetary Dialogue’ (*European Parliament*) <<http://www.europarl.europa.eu/committees/en/econ/monetary-dialogue.html>> accessed 16 April 2018.

the European Union (“TEU”) as long as it does not contravene the ECB’s mandate to maintain price stability.⁸

This essay challenges the narrow construction of the ECB’s mandate that Mr Draghi has defended in several occasions since the launch of the CSPP. The essay argues that, at a substantive level, the principle of integration laid down in article 11 of the Treaty on the Functioning of the European Union (“TFEU”) incorporates environmental policy objectives into the mandate of the ECB and the NCBs comprised in the Eurosystem, thereby giving them the power to contribute to environmental protection. It also argues that, at a procedural level, article 11 TFEU imposes upon these institutions an obligation to take into account environmental protection when designing and implementing monetary policy. This procedural obligation is particularly important. As I will illustrate below, failure to comply with it could raise serious doubts about the validity of monetary policy measures.

The essay contributes to an incipient literature that explores the potential role for central banks to promote environmental protection.⁹ A large part of this literature is devoted to exploring the economic rationale of “green” central bank policy. Academics, however, have paid relatively less attention to the legal powers of central banks to engage in environmental protection. Some MEPs have argued that the ECB, as an EU institution, is bound by the Paris Agreement.¹⁰ Recently, this was acknowledged by Mr Draghi himself.¹¹ In addition, Mr Draghi has acknowledged that the ECB is bound to support the general economic policies and the aims of the Union, which include ‘the sustainable development of Europe’ and ‘a high level of protection and improvement of the quality of the environment’,¹²

⁸ See Committee on Economic and Monetary Affairs, ‘Transcript of the Monetary Dialogue with Mario Draghi, President of the ECB, Held on 25 September 2017’ 12 <http://www.europarl.europa.eu/cmsdata/128520/Monetary_dialogue_25092017EN.pdf> accessed 21 December 2017.

⁹ For some of the earliest proposals for central banks to support environmental protection, see Andrew Sheng, ‘Central Banks Can and Should Do Their Part in Funding Sustainability’ (CIGI 2015) No. 1 <https://www.cigionline.org/sites/default/files/fixing_climate_paper_no.1_web.pdf>; François Villeroy de Galhau, “Climate Change - the Financial Sector and Pathways to 2°C” - Speech by Mr François Villeroy de Galhau, Governor of the Bank of France, at the Conference COP21, Paris, 30 November 2015’ <<https://www.bis.org/review/r151229f.htm>> accessed 21 December 2017. For more elaborate proposals, see Emanuele Campiglio, ‘Beyond Carbon Pricing: The Role of Banking and Monetary Policy in Financing the Transition to a Low-Carbon Economy’ (2016) 121 *Ecological Economics* 220; Matthias Kroll, ‘Financing the 1.5°C Limit: How Central Banks Can Contribute to Climate Finance by Purchasing Perpetual and Non-Interest-Bearing Green Climate Bonds’ (2016) *Future Finance-Policy Brief* 11/2016 <https://www.worldfuturecouncil.org/file/2015/11/WFC_2016_-Financing-the-Green-Climate-Fund_update-COP22_EN.pdf>; Sini Matikainen, Emanuele Campiglio and Dimitri Zenghelis, ‘The Climate Impact of Quantitative Easing’ (2017) <<http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2017/05/Green-QE-policy-brief.pdf>>; Warwick J McKibbin and others, ‘Climate Change and Monetary Policy: Dealing with Disruption’ (Brookings 2017) <<https://www.brookings.edu/research/climate-change-and-monetary-policy-dealing-with-disruption/>>; Josh Ryan-Collins and Frank Van Lerven, ‘Central Banks, Climate Change and the Transition to a Low-Carbon Economy’ (New Economics Foundation 2017); Ulrich Volz, ‘On the Role of Central Banks in Enhancing Green Finance’ (UNEP 2017) 17/01 <http://wedocs.unep.org/bitstream/handle/20.500.11822/16803/Role_Central_Banks_Green_Finance.pdf?sequence=1&isAllowed=y>.

¹⁰ See e.g. the question raised by MEP Molly Scott-Cato during the Monetary Dialogue held on 25 September 2017 in Committee on Economic and Monetary Affairs, ‘ECON Monetary Dialogue (25 September 2017)’ (n 8) 11.

¹¹ See Committee on Economic and Monetary Affairs, ‘Transcript of the Monetary Dialogue with Mario Draghi, President of the ECB, Held on 26 February 2018’ 15 <<http://www.europarl.europa.eu/cmsdata/140021/1147067EN.pdf>> accessed 16 April 2018.

¹² See Art. 3(3) of the Treaty on European Union (“TEU”).

but subject, always, to their primary objective of price stability.¹³ This essay presents an additional argument based on the principle of integration laid down in article 11 TFEU (ex 6 EC).

The essay proceeds as follows. It first introduces the CSPP. The essay then examines the obligation of the ECB and the NCBs that comprise the Eurosystem to integrate objectives of environmental protection into the design and implementation of monetary policy in the Eurozone. It then builds on this analysis to provide a critical assessment of the validity of the CSPP and it concludes with an exploration of the practical implications for monetary policy.

II. The CSPP: a controversial programme

On 10 March 2016, the Governing Council of the ECB announced that it would expand its asset purchase programme (“APP”) by introducing a new Corporate Sector Purchase Programme (“CSPP”) as part of the single monetary policy and in pursuit of its price stability objective.¹⁴ When the CSPP was launched, the extended APP already included three other programmes: a third covered bond purchase programme (CBPP3), that started in October 2014, an asset-backed securities purchase programme (ABSPP), that started in November 2014, and a public sector purchase programme (PSPP), that started in March 2015. As of 25 July 2018, all these programmes remain in place.

On 1 June 2016, the ECB published the Decision that set the basic framework for the CSPP (the “CSPP Decision”).¹⁵ The first purchases under the programme began a few days later. Like other programmes within the APP, the CSPP aimed to address problems of a prolonged period of low inflation:

Alongside the targeted longer-term refinancing operations [...] these asset purchase programmes are aimed at further enhancing the transmission of monetary policy, facilitating credit provision to the euro area economy, easing borrowing conditions for households and businesses and contributing to returning inflation rates to levels below, but close to, 2 % over the medium term, consistent with the ECB's primary objective of maintaining price stability.¹⁶

Under the CSPP, the Eurosystem purchases eligible corporate bonds from eligible counterparties in the primary and secondary markets.¹⁷ In order to be eligible under the CSPP,

¹³ See n 8. The governor of the Bank of France, Mr François Villeroy de Galhau, has made a similar acknowledgement. See Villeroy de Galhau (n 9). This obligation also binds the NCBs that comprise the Eurosystem. See Arts. 119(2) and 127(1) TFEU, and Art. 2 Statute.

¹⁴ See European Central Bank, ‘ECB Adds Corporate Sector Purchase Programme (CSPP) to the Asset Purchase Programme (APP) and Announces Changes to APP’ (*Press Releases*, 10 March 2016) <https://www.ecb.europa.eu/press/pr/date/2016/html/pr160310_2.en.html> accessed 26 August 2017.

¹⁵ See Decision (EU) 2016/948 of the European Central Bank of 1 June 2016 on the implementation of the corporate sector purchase programme (ECB/2016/16), available at https://www.ecb.europa.eu/ecb/legal/pdf/celex_32016d0016_en_txt.pdf?0240957ff3a5d0b909a9482628799777. The CSPP Decision has been amended twice to introduce minor changes. These can be consulted at <https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html#cspp>. Any references to the CSPP Decision will be to its amended version unless otherwise stated.

¹⁶ CSPP decision, paragraph 2 of the Preamble.

¹⁷ See Art. 1 CSPP Decision. “Public sector corporate bonds”, however, may only be purchased in the secondary markets under certain conditions. For a definition of “public sector corporate bonds” for the purposes of the CSPP, see Art. 3(1) CSPP Decision. Approximately 82.1% of securities held under the CSPP were secondary

corporate bonds must meet the general requirements laid down in Part Four of Guideline (EU) 2015/510 of the ECB of 19 December 2014 on the implementation of the Eurosystem monetary policy framework (ECB/2015/34) (hereinafter, the “General Documentation Guideline”),¹⁸ as well as a series of specific requirements enumerated in Article 2 of the CSPP Decision. In general terms, this latter provision specifies that eligible corporate bonds must have a high credit quality,¹⁹ must have been issued by non-bank corporations established in the euro area, must be denominated in euros, and must have a remaining maturity between 6 months, and 30 years and 364 days at the time of purchase. Moreover, the Eurosystem will generally refrain from purchasing more than 70% of a bond’s issue.²⁰

The CSPP is implemented in a decentralised manner, yet coordinated by the ECB in order to safeguard the singleness of the Eurosystem’s monetary policy.²¹ At the time of writing, the NCBs of six Member States were responsible for purchases under the CSPP on behalf of the Eurosystem.²² These six NCBs will typically enter into outright purchase transactions and then make the purchased corporate bonds available for lending.²³ Nevertheless, the purchasing NCBs will only be able to enter into these transactions with eligible counterparties, as described in Article 6 of the CSPP Decision.²⁴

Originally, the CSPP, as part of the broader APP, was intended to run until the end of March 2017.²⁵ On 8 December 2016, however, the Governing Council of the ECB decided to extend the APP until the end of December 2017 and to reduce the monthly pace of purchases under the APP from €80 billion to €60 billion with effect from April 2017.²⁶ On 26 October 2017, the Governing Council agreed to further extend the APP until the end of September 2018 and to reduce the monthly pace of purchases from €60 billion to €30 billion with effect from January 2018.²⁷ On 14 June 2018, however, the Governing Council agreed to further reduce the monthly pace of the net asset purchases to €15 billion after September 2018, with

market holdings. See ECB, ‘Asset Purchase Programmes’ <<https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html>> accessed 11 March 2016.

¹⁸ See Art. 2.1° CSPP Decision.

¹⁹ The ECB’s Press Release announcing the details of the CSPP specified that ‘[eligible securities would] have a minimum first-best credit assessment of at least credit quality step 3 (rating of BBB- or equivalent) obtained from an external credit assessment institution according to [the General Documentation Guideline.]’ See European Central Bank, ‘ECB Announces Details of the Corporate Sector Purchase Programme (CSPP)’ (*Press Releases*, 21 April 2016) <https://www.ecb.europa.eu/press/pr/date/2016/html/pr160421_1.en.html> accessed 26 August 2017.

²⁰ See Art. 4 CSPP Decision.

²¹ See Preamble CSPP Decision, para 9.

²² The six Member States are: Belgium, Finland, France, Germany, Italy and Spain. Purchases under the CSPP are allocated to each purchasing NCB according to the issuer’s country of incorporation. See Art. 5 CSPP Decision. For specific details about these criteria, see European Central Bank, ‘Corporate Sector Purchase Programme (CSPP) Q&A’ (*Asset purchase programmes*) <<https://www.ecb.europa.eu/mopo/implement/omt/html/cspp-qa.en.html>> accessed 26 August 2017.

²³ See Art. 7 CSPP Decision.

²⁴ In general terms, these will be counterparties that are eligible for the Eurosystem’s monetary policy operations or counterparties that are used by the Eurosystem for the investment of its euro-denominated portfolios.

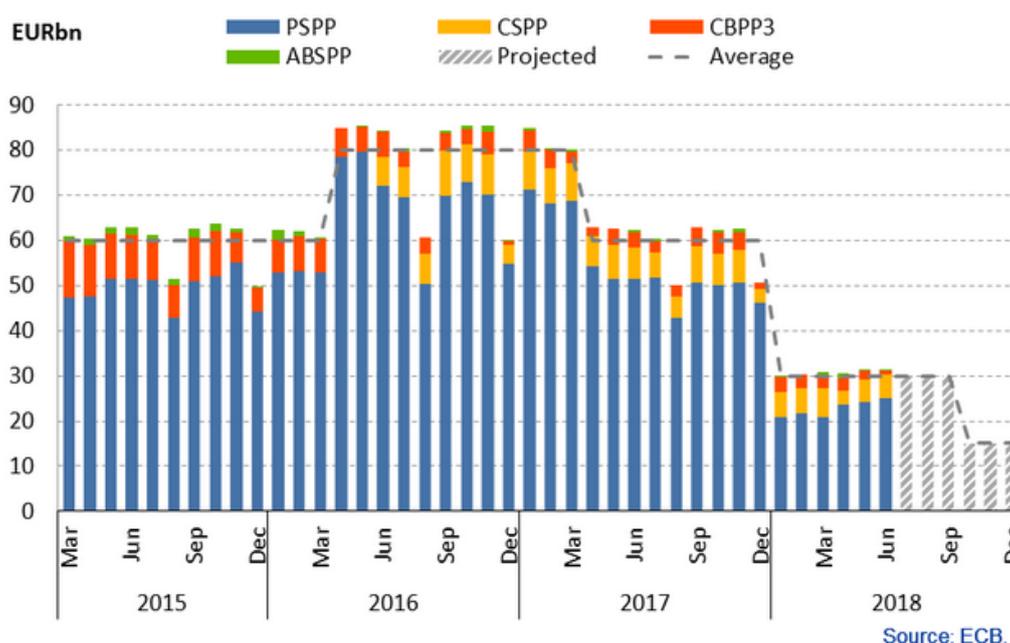
²⁵ See Preamble CSPP Decision, para 4.

²⁶ See European Central Bank, ‘Monetary Policy Decision of 8 December 2016’ <<https://www.ecb.europa.eu/press/pr/date/2016/html/pr161208.en.html>> accessed 26 August 2017.

²⁷ See European Central Bank, ‘Monetary Policy Decision of 26 October 2017’ <<https://www.ecb.europa.eu/press/pr/date/2017/html/ecb.mp171026.en.html>> accessed 7 May 2018.

the expectation to finish all net purchases at the end of December 2018.²⁸ The Governing Council, however, made these plans conditional on ‘incoming data confirming the Governing Council’s medium-term inflation outlook’.²⁹ Chart 1 summarises monthly net purchases under the APP.

Chart 1. APP monthly net purchases by programme³⁰



In June 2018, purchases under the CSPP amounted to €5.5 billion, approximately 17.64% of all purchases under the APP that month.³¹ At the end of June 2018, total holdings of securities purchased under the CSPP amounted to €162 billion, approximately 6.6% of all APP holdings.³² The following chart shows the evolution of purchases under the CSPP.

Chart 2. CSPP aggregate holdings (June 2018)

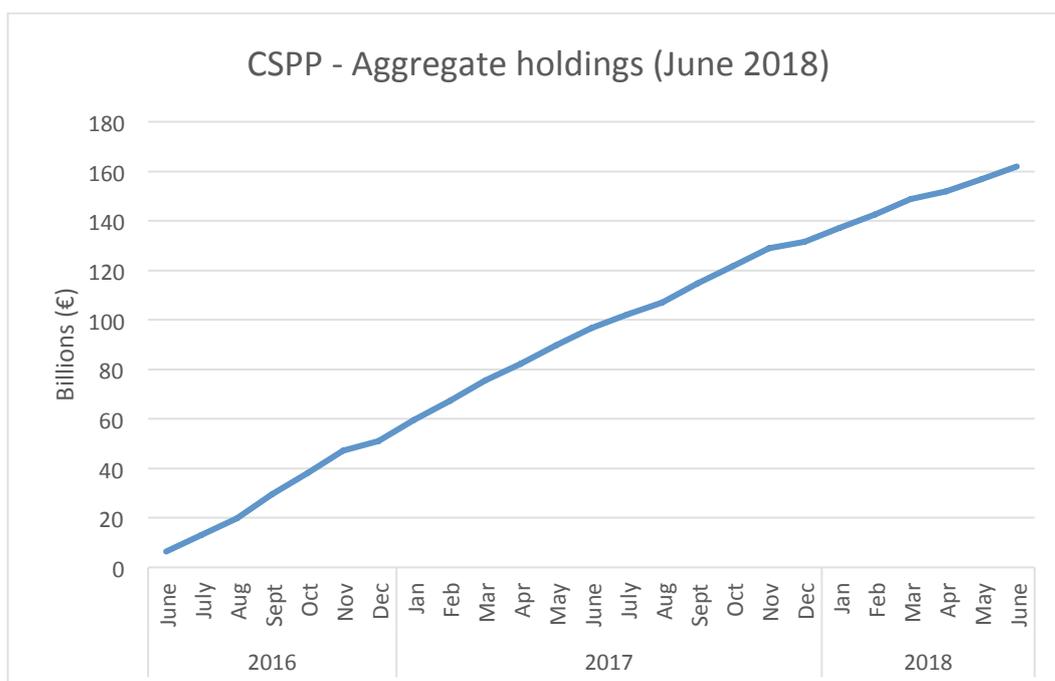
²⁸ See European Central Bank, ‘Monetary Policy Decision of 14 June 2018’ <<https://www.ecb.europa.eu/press/pr/date/2018/html/ecb.mp180614.en.html>> accessed 24 July 2018. It is important to note, however, that the end of net asset purchases will not translate into the end of the CSPP itself. The Governing Council has announced that ‘the Eurosystem will reinvest the principal payments from maturing securities purchased under the APP for an extended period of time after the end of its net asset purchases, and in any case for as long as necessary.’ European Central Bank, ‘Update on Economic and Monetary Developments’ (2017) ECB Economic Bulletin Issue 7/2017 <<https://www.ecb.europa.eu/pub/economic-bulletin/html/eb201707.en.html#IDofBox2>> accessed 24 July 2018.

²⁹ European Central Bank, ‘Monetary Policy Decision of 14 June 2018’ (n 28).

³⁰ Source: ECB (n 17).

³¹ See *ibid.*

³² See *ibid.*



The effectiveness of the CSPP in raising inflation³³ relies on the assumption that, by purchasing bonds issued by non-financial corporations, the programme would strengthen the financing conditions of the real economy, thereby leading to potential increases in investment and consumption that would drive prices up.³⁴ Recent empirical studies on the impact of the CSPP on financing conditions can help us better understand the effectiveness of the CSPP.³⁵ For example, a recent study by economists at the Bank of Spain, one of the purchasing NCBs under the CSPP, has shown that the announcement of the CSPP reduced the yields on bonds issued by Spanish non-financial corporations that were eligible under the CSPP by 44 basis points.^{36, 37} This fall improved the financing conditions of these corporations significantly: it represented 30% of the yield on these assets in the same period.³⁸ The authors also point out that bonds issued by German, French and Italian non-financial corporations that were eligible

³³ Inflation is the rate at which the general level of prices of goods and services rises.

³⁴ See European Central Bank, ‘Box 2. The ECB’s Corporate Sector Purchase Programme: Its Implementation and Impact’ (2017) ECB Economic Bulletin Issue 4/2017 <<https://www.ecb.europa.eu/pub/economic-bulletin/html/eb201704.en.html#IDofBox2>> accessed 7 May 2018.

³⁵ It is important to note, however, that the literature examining the effect of purchases of corporate bonds as a monetary policy measure is very scarce. On the effectiveness of the CBPP, implemented by the Eurosystem between July 2009 and June 2010, see John Beirne and others, ‘The Impact of the Eurosystem’s Covered Bond Purchase Programme on the Primary and Secondary Markets’ (2011) ECB Occasional Paper Series No. 122. On the impact of similar programmes to the CSPP implemented by the Bank of England and the Bank of Japan, see Lena Boneva, Calebe de Roure and Ben Morely, ‘The Impact of the Bank of England’s Corporate Bond Purchase Scheme on Yield Spreads’ (2018) Bank of England Staff Working Paper No. 719; Kenji Sugauma and Yoichi Ueno, ‘The Effects of the Bank of Japan’s Corporate and Government Bond Purchases on Credit Spreads’ (2018) IMES Discussion Paper No. 2018-E-4.

³⁶ A reduction in the yield of a bond translates into more favourable financing conditions for the issuer of the bond. Basis points are another way of referring to percentages. 100 basis points equals 1%.

³⁷ See Oscar Arce, Ricardo Gimeno and Sergio Mayordomo, ‘The Effects of the Eurosystem’s Corporate Sector Purchase Programme on Spanish Companies’ (2018) 1/2018 2.

³⁸ See *ibid.*

under the CSPP also experienced significant, yet lower, falls: 28, 37 and 42 basis points, respectively.³⁹

The same study also documents an indirect effect on ineligible bonds. Yields in these assets dropped 46 basis points around the announcement of the CSPP, which represented 10% of their average value at that time.⁴⁰

In one recent study, economists at the ECB observed similar effects on the yields of eligible and ineligible bonds across the eurozone.⁴¹ In addition, a different study from the ECB has evidenced that the CSPP has had a positive effect in the financing conditions of non-financial corporations as a result of the reduction of corporate bond spreads since the announcement of the programme.⁴² However, analyses of similar programmes implemented by the Bank of England and the Bank of Japan cast some doubt on the reliability of credit spreads as indication of an improvement in the financing conditions of non-financial corporations.⁴³

According to the recent studies conducted at the Bank of Spain and the ECB, the announcement of the CSPP has also prompted non-financial corporations to increase their levels of bond finance.⁴⁴ At least in the case of Spanish issuers, non-financial corporations with access to bond markets mainly used the funds raised in these favourable market conditions to reduce their bank credit, thereby modifying the structure of their liabilities.⁴⁵

³⁹ See *ibid.*

⁴⁰ See *ibid.* The authors suggest that this may be the effect of investors seeking higher yields in the bond market. Nevertheless, Matikainen et al have argued that some ineligible assets may be imperfect substitutes for eligible assets under the CSPP, which reduces the potential indirect effect on the formers' yields. Moreover, the relatively small size of the corporate bond market in the EU and the globalisation of financial markets may lead investors to shift their investments abroad. See Matikainen, Campiglio and Zenghelis (n 9) 9.

⁴¹ See Nordine Abidi and Ixart Miquel-Flores, 'Who Benefits from the Corporate QE? A Regression Discontinuity Design Approach' (2018) Working Paper Series No 2145. Using a sample of around 1,300 bonds across 15 countries in the euro area, they illustrate that the announcement of the CSPP may have reduced bond yields through the liquidity channel and as a result of portfolio rebalancing effects. See also European Central Bank, 'Economic Bulletin Issue No. 5/2016 (August 2016)' (2016) 22–23.

⁴² See Roberto A De Santis and others, 'The Impact of the Corporate Sector Purchase Programme on Corporate Bond Markets and the Financing of Euro Area Non-Financial Corporations' [2018] ECB Economic Bulletin 66, 68–72.

⁴³ A recent study by the Bank of England has found the announcement of the homologue of the CSPP to have a very similar impact on credit spreads of eligible and ineligible bonds denominated in sterling, the difference being only between 2.2 and 5.3 basis points. When compared with credit spreads of ineligible bonds denominated in US dollars and euros, the announcement of the programme reduced credit spreads of eligible bonds by 13 to 14 basis points. See Boneva, de Roure and Morely (n 35). Another study by economists at the ECB found the announcement of the CSPP to actually broaden spreads for eligible corporate bonds, thus undermining their liquidity, although they also document a reduction of these spreads once purchases started. See Abidi and Miquel-Flores (n 41). A recent study by economists at the Bank of Japan on the effectiveness of the Japanese homologue of the CSPP has found the programme to have a considerable effect on corporate bond spreads, which is in line with the findings of the ECB. See Suganuma and Ueno (n 35). The conclusions from these studies suggest that the evidence on the positive impact of the CSPP and similar programmes on corporate bond spreads is, at least, ambiguous.

⁴⁴ Arce et al show that, in the six months that followed the announcement of the CSPP, the number of new issuers in the bond market doubled the number of new issuers in the six months that preceded the announcement. They also document an increase in the overall propensity of existing issuers to issue bonds. See Arce, Gimeno and Mayordomo (n 37) 2–3. A recent study by the ECB has observed similar effects in other Eurozone countries. See De Santis and others (n 42) 72–75.

⁴⁵ See Arce, Gimeno and Mayordomo (n 37) 3.

The Bank of Spain study also documents indirect effects on aggregate bank credit. According to this study, banks increased their lending to companies that did not have access to the bond market in order to compensate the reduction of credit that had resulted from the decisions of bond issuers to restructure their debt. In particular, banks increased their lending to large corporations, possibly in an attempt to preserve the banks' risk profile.⁴⁶ The authors suggest that these indirect effects on aggregate bank lending may have been driven, to a large extent, by targeted longer-term refinancing operations (TLTROs).⁴⁷ Unlike firms issuing bonds, firms that rely on bank lending used a considerable amount of the funds raised to finance real investments.⁴⁸

On 9 December 2016, The Guardian reported on an analysis by Corporate Europe Observatory which revealed that some of the corporate bonds that the Eurosystem had purchased under the CSPP had been issued by corporations in the oil, gas and automotive industries.⁴⁹ Although the precise effect of the CSPP on the financing conditions of eligible bonds was unknown at the time, the revelation stirred a political debate that continues to this day.⁵⁰ Today, however, the recent empirical studies of the effectiveness of the CSPP described above provide us with a better understanding of the potential impact of the CSPP on the environment. In essence, non-financial corporations whose assets are eligible for purchase under the CSPP enjoy a greater improvement in their financing conditions than non-financial corporations whose assets are not eligible for purchase. At the time of writing, new data released by the ECB about the CSPP⁵¹ confirms that, as of the end of September 2017, 49% of eligible bonds under the CSPP were in the utilities (17%), infrastructure (14%), automotive (10%) and energy (8%) sectors.⁵² Corporations in these industries are among the

⁴⁶ More specifically, 'on average, for each euro of decline in credit to firms that issued bonds following announcement of the CSPP, €0.48 were reallocated to large corporations, €0.15 to medium-sized firms and €0.15 to small and micro firms.' *ibid* 3–4.

⁴⁷ TLTROs are Eurosystem operations that provide banks with long-term funding at attractive conditions 'in order to further ease private sector credit conditions and stimulate bank lending to the real economy'. See European Central Bank, 'Targeted Longer-Term Refinancing Operations (TLTROs)' (*European Central Bank*) <<https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html>> accessed 17 April 2018. The terms of the TLTRO-II, which was announced on the same date as the CSPP, specify that the interest rate that will be applied to banks under this programme will be a decreasing function of the volume of new credit that they grant. Arce et al estimate that a bank that had availed itself of TLTRO funds before the announcement of the CSPP would increase its lending to other firms 16% on average, while other banks would only do so by 8%. See Arce, Gimeno and Mayordomo (n 37) 4. De Santis et al also provide evidence of an increase in bank lending to CSPP-ineligible firms but they acknowledge the difficulty of attributing this increase to the CSPP alone. See De Santis and others (n 42) 75–78.

⁴⁸ See Arce, Gimeno and Mayordomo (n 37) 4–5.

⁴⁹ See n 3. A recent study has evidenced that the Bank of England has also bought bonds from corporations in the oil, gas and utilities industries under a programme of similar characteristics and with similar objectives to those of the CSPP, the Corporate Bond Purchase Programme. For a detailed analysis, see Matikainen, Campiglio and Zenghelis (n 9) 13–19.

⁵⁰ See the Introduction to this essay.

⁵¹ See European Central Bank, 'Additional Information on Asset Purchase Programme' (*European Central Bank*) <<https://www.ecb.europa.eu/press/pr/date/2017/html/ecb.pr171026.en.html>> accessed 16 April 2018.

⁵² See "Breakdown of CSPP portfolio by sector, rating and country of risk", available at ECB (n 17). The same data reveal that the actual composition of the CSPP portfolio is very similar: 45% of the bonds held in the CSPP portfolio on the same date had been issued by corporations in the utilities (16%), infrastructure (12%), automotive (10%) and energy (7%) sectors. These data, however, do not provide information about holdings from individual issuers.

largest emitters of CO₂ and other greenhouse gases,⁵³ which are one of the main drivers of climate change.⁵⁴ By reducing the cost of finance for these corporations, the CSPP is effectively facilitating and prolonging their contribution to climate change.

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? So far, the attempts to bind the Eurosystem to such an obligation rely on two arguments: one, that the ECB is bound by the Paris Agreement as an EU institution,⁵⁵ and two, that under article 3 (ex 2) TEU, the Eurosystem is bound to support the general economic policies and the aims of the Union, which include ‘the sustainable development of Europe’ and ‘a high level of protection and improvement of the quality of the environment’,⁵⁶ but subject, always, to its primary objective of price stability.⁵⁷ This essay introduces an additional argument that relies on article 11 TFEU. Section III develops the argument and Sections IV and V explore its potential implications for policy-making in the Eurosystem.

III. The obligation of the ECB to integrate environmental protection

According to 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.’ This provision is said to consecrate a “principle of integration”.⁵⁸ It has a long history, tracing its origins to the Single European Act, which introduced Article 130r(2) in the Treaty establishing the European Economic Community (EEC) in 1987. The Treaty of Amsterdam then made the principle of integration an independent general principle in Article 6 of the Treaty of the European Community (EC), which preceded article 11 TFEU.⁵⁹

⁵³ The world’s 250 largest publicly traded emitters are a group of businesses in the oil, gas, utility, automotive, aircraft, manufacturing, steel, mining and cement sectors. Together, these 250 companies are responsible for a third of global annual emissions of greenhouse gases. See Thomson Reuters, ‘GLOBAL 250 GREENHOUSE GAS EMITTERS - A New Business Logic’ (2017) 2 <<https://blogs.thomsonreuters.com/sustainability/2017/10/30/release-global-250-greenhouse-gas-emitters-new-business-logic/>>.

⁵⁴ According to the Intergovernmental Panel on Climate Change (PCC), the leading international body for the assessment of climate change, over the last 15 years, among the well-mixed greenhouse gases, CO₂ has been the dominant contributor to global warming. See Intergovernmental Panel on Climate Change, ‘Climate Change 2013 - The Physical Science Basis’ (2014) Fifth Assessment Report 53 <<https://www.ipcc.ch/report/ar5/index.shtml>>.

⁵⁵ See nn 10 and 11. The same argument could be made of the NCBs that comprise the Eurosystem and the ESCB because all EU Member States are signatories of, and have ratified, the Paris Agreement. See United Nations (n 4).

⁵⁶ See Art. 3(3) of the Treaty on European Union (TEU).

⁵⁷ See n 8.

⁵⁸ See David Langlet and Said Mahmoudi, *EU Environmental Law and Policy* (Oxford University Press 2016) 41, 58–61. See also the Opinion of Advocate General (“AG”) Bot delivered on 8 May 2013 in Joined Cases C-204/12 to C-208/12, *Essent Belgium NV v Vlaamse Reguleringsinstantie voor de Elektriciteits- en Gasmarkt*, EU:C:2013:294, para 97.

⁵⁹ The principle is also included in Art. 37 the EU Charter of Fundamental Rights (the “EU Charter”) albeit with a more conservative yet more concrete wording. It reads: ‘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.’

The principle of integration has been described as a “horizontal” or a “cross-sectional” clause that applies to *all* policies of the Union.⁶⁰ This makes the principle of integration binding on all relevant EU institutions as well as Member States responsible for the advancement of the Union’s policies.⁶¹ In the words of Advocate General (“AG”) Jacobs, ‘[The principle of integration] is not merely programmatic; it imposes *legal obligations*.’⁶²

The precise meaning of the word “integration” in article 11 TFEU, however, is open to interpretation. The EU Treaties do not provide any clarity as to the meaning of the term but the case law of the Court of Justice of the European Union (“CJEU”) has shed some light on its interpretation. The CJEU has consistently affirmed that “integrating” environmental protection requirements in other Union policies and activities, as laid down in article 11 TFEU, means incorporating the objectives of the EU environmental policy, which are laid down in article 191 TFEU (ex 174 EC), to the list of objectives that is specific to any given Union policy.⁶³ The CJEU has confirmed this interpretation in relation to the common agricultural policy,⁶⁴ the common transport policy,⁶⁵ the internal market policy,⁶⁶ and the

⁶⁰ See e.g. Opinion of AG Kokott in C-298/12, *Confédération paysanne*, EU:C:2013:319, para 30. In relation to Art. 6 EC, the precursor of Art. 11 TFEU, see *inter alia* the Opinion of AG Geelhoed in Case C-161/04, *Austria v Parliament and Council*, EU:C:2006:66, para 60, and his Opinion in Case C-178/03, *Commission v Parliament*, EU:C:2005:312, para 32. Such a broad interpretation of the scope of application of the principle of integration is grounded in the interpretation that the Court of Justice of the European Union (“CJEU”) had made of Art. 130r(2) of the EC Treaty, the precursor of Art. 6 EC. See e.g. C-62/88, *Greece v Council*, EU:C:1990:153, para 20. The EU Treaties confer such horizontal nature to a few other matters besides environmental protection, e.g. gender equality, non-discrimination, and public health. See e.g. Opinion of AG Mazák in C-440/05, *Commission v Council*, EU:C:2007:393, para 96. This “horizontal dimension” stems from the social purpose of the EU project. See, by analogy, case C-201/15, *AGET Iraklis*, EU:C:2016:972, para 77.

⁶¹ See e.g. Beate Sjøfjell, ‘The Legal Significance of Article 11 TFEU for EU Institutions and Member States’ in Beate Sjøfjell and Anja Wiesbrock (eds), *The greening of European business under EU law: taking article 11 TFEU seriously* (Paperback edition, Routledge 2017).

⁶² (Emphasis added.) Opinion of AG Jacobs in C-379/98, *PreussenElektra*, EU:C:2000:585, para 231. For other opinions supporting the characterisation of the principle of integration as a source of obligations, see Opinion of AG Trstenjak in C-428/07, *Horvath*, EU:C:2009:47, para 55, and Opinion of AG Cosmas in C-321/95, *Greenpeace council and others v Commission*, EU:C:1997:421, para 62. Academic commentators have also adhered to this interpretation. See e.g. Martin Wasmeier, ‘Integration of Environmental Protection as a General Rule for Interpreting Community Law, The’ (2001) 38 *Common Market Law Review* 159, 160; André Nollkaemper, ‘Three Conceptions of the Integration Principle in International Environmental Law’ in Andrea Lenschow (ed), *Environmental policy integration: Greening sectoral policies in Europe* (Earthscan 2002) 28–29.

⁶³ See e.g. the cases mentioned in nn 64-67. According to Art. 191(1) TFEU, the EU environmental policy shall contribute to the following objectives: i) preserving, protecting and improving the quality of the environment, ii) protecting human health, iii) prudent and rational utilisation of natural resources, and iv) promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change. In this sense, the principle of integration is a rule of reference rather than an autonomous principle, ie a rule with autonomous normative meaning. See Nollkaemper (n 62) 26–27.

⁶⁴ See e.g. C-428/07, *Horvath*, EU:C:2009:458, para 29, and those cited therein.

⁶⁵ See e.g. C-440/05, *Commission v Council*, EU:C:2007:625, para 60, and those cited therein.

⁶⁶ See e.g. C-320/03, *Commission v Austria*, EU:C:2005:684, para 73, and the Opinion of AG Geelhoed in the same case, EU:C:2005:459, para 105. The General Court has adopted the same interpretation in the context of the EU rules on State aid. See e.g. T-210/02, *British Aggregates v Commission*, EU:T:2012:110, para 117.

common commercial policy,⁶⁷ among others. There is no reason why the CJEU would not uphold a similar interpretation in relation to monetary policy.⁶⁸

In this sense, the CJEU seems to attribute a “substantive” dimension to the principle of integration: the principle will confer upon a given competent authority the power to promote horizontal objectives of environmental protection along the more specific objectives of a different Union policy.

Nevertheless, although the CJEU has emphasized the “fundamental nature” of horizontal objectives of environmental protection,⁶⁹ it has also affirmed that such fundamental nature does not result in an absolute priority over more specific objectives of other Union policies.⁷⁰ An absolute priority of environmental protection would be untenable for several reasons. First, nothing in the wording of article 11 TFEU suggests such absolute priority.⁷¹ Second, article 3 TEU includes environmental protection as one of several aims of the Union. *A priori*, these goals are at the same level of normative priority and the principle of integration does not alter that.⁷² An absolute priority of environmental protection could actually jeopardise the efficacy of all the other aims enumerated in article 3 TEU.⁷³ Lastly, an absolute priority would seem contrary to the very principle of “sustainable development”, which article 11 TFEU itself links to the principle of integration. Indeed, “[t]he core idea of “sustainable development” is that environmental protection, economic growth and social development are mutually compatible, rather than conflicting, objectives.”⁷⁴

⁶⁷ See e.g. Case C-62/88, *Greece v Council*, paras 15-19, and Case C-281/01, *Commission v Council*, EU:C:2002:761, paras 39-43. See also the Opinion of AG Geelhoed in Case C-178/03, *Commission v Parliament and Council*, para 32.

⁶⁸ Article 130 TFEU consecrates the independence of the ECB and the NCBs ‘from Union institutions, bodies, offices or agencies, from any government of a Member State or from any other body.’ The application of article 11 TFEU to the ECB and the NCBs in the Eurosystem, however, does not interfere with their independence. Its application does not result from instructions or guidance received from the political bodies enumerated in article 130 TFEU. It results from the exclusive competence that the ECB and the NCBs in the Eurosystem have over monetary policy. See article 127(2) TFEU. Other EU institutions whose independence from political powers is also protected under the Treaties, like the CJEU, are also subject to article 11 TFEU. See e.g. Sjøfjell (n 61) 62–64. The European Parliament has also argued that the ECB’s independence would not be affected by the binding nature of the Paris Agreement. See Committee on Economic and Monetary Affairs, ‘Report on Sustainable Finance’ (2018) A8-0164/2018 para 23.

⁶⁹ See e.g. Case C-176/03, *Commission v Council*, EU:C:2005:542, para 42.

⁷⁰ Indeed, the European Court of Justice (“ECJ”) has affirmed that the principle of integration ‘[is] intended to confer powers on the Community to undertake specific action on environmental matters, while leaving *intact* its powers under other provisions of the Treaty, even if the measures in question pursue at the same time one of the objectives of environmental protection (see Case C-405/92 *Mondiet* [1993] ECR I-6133, paragraph 26).’ C-336/00 *Huber*, EU:C:2002:509, para 33. (Emphasis added.) See also Case C-62/88 *Greece v Council*, paras 19 and 20.

⁷¹ The case law of the ECJ seems to support this interpretation. See n 69.

⁷² In support of this view, see Wasmeier (n 62) 163. In addition, the same normative priority would have to be predicated of other integration principles that have been introduced in the TFEU, thereby questioning the absolute priority of any one of them. Jans has described the erosion of the prominence of the environmental integration principle that results from the proliferation of other integration principles as the “minestrone effect”. See Jan H Jans, ‘Stop the Integration Principle?’ (2009) 33 *Fordham International Law Journal* 1533, 1546–47.

⁷³ See e.g. the Opinion of AG Kokott in case C-304/01, *Spain v Commission*, EU:C:2003:619, paras 68-69.

⁷⁴ (Emphasis omitted.) Andrea Lenschow, ‘Greening the European Union: An Introduction’ in Andrea Lenschow (ed), *Environmental policy integration: Greening sectoral policies in Europe* (Earthscan 2002) 5. See also Sjøfjell (n 61) 55.

But in addition to this substantive dimension, article 11 TFEU also encapsulates a “procedural” dimension. Indeed, article 11 TFEU is often described as a requirement for competent authorities to “take into account” environmental objectives when designing and implementing common policies.⁷⁵ For example, in his Opinion in case C-161/04, *Austria v Parliament and Council*, AG Geelhoed interpreted the principle of integration in the following terms: ‘At most it is to be regarded as an obligation on the part of the Community institutions to take due account of ecological interests in policy areas outside that of environmental protection *stricto sensu*.’⁷⁶ In the same Opinion, AG Geelhoed provided a rather lenient standard of compliance with the procedural obligation to “take into account” environmental protection: ‘It is only where ecological interests manifestly have not been taken into account or where they have been completely disregarded that Article 6 EC may serve as the standard for reviewing the validity of Community legislation.’⁷⁷

In Case T-229/04, *Sweden v Commission*, however, the General Court (then the Court of First Instance) adopted a stricter standard of compliance: it annulled Commission Directive 2003/112/EC because the Commission had failed to actively engage with the scientific studies that it had used to prepare the controversial Directive. The controversial Directive had included paraquat, an active substance used in plant protection products, in the list of authorized active substances under Annex I of Council Directive 91/414/EC of 15 July. The Commission had relied on an evaluation report that stated that there was no indication that paraquat was neurotoxic. Among other things, the Kingdom of Sweden argued that the evaluation report did not contain any assessment of the literature concerning possible links between paraquat and Parkinson’s disease.⁷⁸ The General Court confirmed this allegation and concluded that the Commission’s evaluation report had not complied with the relevant procedural requirements. The Kingdom of Sweden further alleged that the Commission’s decision to adopt the controversial Directive had been based on a misinterpretation of several field studies and technical assessments that indicated the potential problems that exposure to paraquat could have on humans.⁷⁹ It also alleged that the decision had been based on dossiers that contained gaps concerning the harmful effects of paraquat on the health of specific animal species.⁸⁰ The General Court accepted both claims and concluded that the scientific dossiers that the Commission had evaluated did not contain enough evidence to support the decisions taken and annulled Directive 2003/112/EC.⁸¹

⁷⁵ See e.g. the Opinion of AG Kokott in Case C-298/12, *Confédération paysanne*, para 30; the Opinion of AG Bot in Case C-204/12, *Essent Belgium*, para 97; and the Opinion of AG Geelhoed in case C-161/04 *Austria v Parliament and Council*, para 44.

⁷⁶ Opinion of AG Geelhoed in case C-161/04, *Austria v Parliament and Council*, para 59. (Emphasis added.) See also the Opinion of AG Kokott in case C-304/01, *Spain v Commission*, EU:C:2003:619, para 69. In this latter case, the Court followed the Opinion of the AG but it framed the discussion exclusively in terms of non-discrimination. See case C-304/01, *Spain v Commission*, EU:C:2004:495, paras 39-43.

⁷⁷ Opinion of AG Geelhoed in case C-161/04, *Austria v Parliament and Council*, para 59. See also the Opinion of AG Kokott in case C-304/01, *Spain v Commission*, EU:C:2003:619, para 69. In this latter case, the Court followed the Opinion of the AG but it framed the discussion exclusively in terms of non-discrimination. See case C-304/01, *Spain v Commission*, EU:C:2004:495, paras 39-43.

⁷⁸ See Case T-229/04, *Sweden v Commission*, EU:T:2007:217, paras 83-88, and 102-10. The Kingdom of Sweden also argued that the European Commission, despite having taken into consideration other scientific studies relating to different effects of paraquat in the preparation of Commission Directive 2003/112/EC, had breached certain procedural obligations. See *ibid.*, paras 89-93, and 111-26.

⁷⁹ See *ibid.*, paras 139-55.

⁸⁰ See *ibid.*, paras 192-201.

⁸¹ See *ibid.*, paras 172-86 and 229-43.

The question of which standard of compliance ought to prevail remains open. Unfortunately, in Case C-161/04, *Austria v Parliament and Council*, the Republic of Austria withdrew its application almost six months after the publication of the Opinion of the AG and before the ECJ had the opportunity to issue a judgment on the matter. In addition, the decision of the General Court in *Sweden v Commission* is the only precedent where the CJEU has applied the stricter standard to annul the act of an EU institution. We will need to wait for the CJEU to provide further clarification on which standard ought to prevail. Nevertheless, as I shall describe in Section IV, in policy areas where EU institutions enjoy ample discretion, such as monetary policy, the CJEU typically adopts a rather accommodating approach to the limits of that discretion. This would suggest that, in the specific case of the CSPP, the Court might be more inclined to adopt a lenient standard of compliance with article 11 TFEU.

In short, the ECB and the NCBs that comprise the Eurosystem are responsible for the design and implementation of monetary policy in the Eurozone and are therefore bound by the principle of integration laid down in article 11 TFEU. In light of the analysis presented above, the application of article 11 TFEU to the Eurosystem has implications at two levels. At a more substantive level, the principle of integration incorporates horizontal objectives of environmental protection into the mandates of the ECB and the NCBs that comprise the Eurosystem. Although the maintenance of price stability will remain their primary objective, they should be able to support environmental protection just as they support the general economic policies of the Union.⁸² At a more procedural level, it imposes an obligation on the Eurosystem to “take into account” those horizontal objectives of environmental protection when designing and implementing measures of monetary policy. The precise scope of this obligation will need to be determined based on the specific facts of the case; but, importantly, a complete disregard of environmental protection concerns could serve as a standard for reviewing the validity of monetary policy measures.

IV. The validity of the CSPP: a critical assessment

In Section II, I described how purchasing bonds issued by non-financial corporations in the oil, gas and automotive industries under the CSPP would reduce the cost of finance for these corporations, effectively facilitating and prolonging their emission of greenhouse gases and aggravating climate change. This negative impact represents an evident conflict with the EU objective of ‘work[ing] for the sustainable development of Europe’⁸³ and with the more specific environmental objective of ‘preserving, protecting and improving the quality of the environment’.⁸⁴ As such, it also represents a potential breach of the principle of integration. This section explores how a conflict between price stability and environmental protection might affect the validity of the CSPP.

⁸² See Arts. 119(2) (ex 4 EC), 127(1) (ex 105 EC) and 282(2) (introduced by Lisbon) TFEU. In *Gauweiler*, the ECJ acknowledged the capacity of the ECB to integrate policy objectives other than those specific to monetary policy. In this particular case, the ECB had made the implementation of a specific programme of monetary policy conditional upon full compliance with the macroeconomic adjustment programmes that the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM) had outlined for certain Member States. See Case C-62/14, *Gauweiler and others*, EU:C:2015:400, paras 57-59.

⁸³ Art. 3(3) TEU.

⁸⁴ Art. 191(1) TFEU.

When an EU institution faces two conflicting objectives, finding a balance between the two is an exercise of political discretion.⁸⁵ That political discretion, however, is not unbounded. The exercise of that political discretion ‘is subject to a judicial review restricted to verifying that the measure in question is not vitiated by a manifest error or a misuse of powers and that the competent authority did not clearly exceed the bounds of its discretion’.⁸⁶ Some of those bounds to political discretion include the principles of proportionality and non-discrimination.⁸⁷ The principle of non-discrimination is not directly relevant for our purposes.⁸⁸ Thus, in the remainder of this section, I will focus my analysis on the principle of proportionality.

Proportionality is the cornerstone of principles of administrative legality in EU law.⁸⁹ The principle is now consecrated in article 5(4) TEU (ex 5 EC), albeit in very general terms.⁹⁰ In the absence of an explicit, detailed definition of this principle in the EU Treaties, it has been the task of the CJEU to provide such definition. It is clear from the case law of the CJEU that, in order to comply with the principle of proportionality, a specific measure needs to meet, at least, two tests:⁹¹ first, the measure must be suitable or appropriate to achieve the objective pursued (the “suitability test”); and second, the measure must be necessary to achieve that objective, i.e. the competent authority could not have attained the same objective with less onerous measures (the “necessity test”).⁹²

It is important to note, however, that when EU institutions exercise their discretion in a policy area that entails political, economic and social choices that require complex assessments, the CJEU has normally regarded the principle of proportionality as a rather lenient limit to that political discretion.⁹³ Monetary policy is one of those areas. For example, in *Gauweiler*, the German Constitutional Court requested the ECJ to issue a preliminary ruling on the validity of a programme under which the ECB had expressed its intention to

⁸⁵ See e.g. the Opinion of AG Geelhoed in Case C-161/04, *Austria v Parliament and Council*, para 50.

⁸⁶ Case T-141/00 (Joined Cases T-74/00, T-76/00, T-83/00, T-84/00, T-85/00, T-132/00, T-137/00, T-141/00), *Trenker v Commission*, EU:T:2002:283, para 201, and the case law cited therein. See also the Opinion of AG Kokott in case C-304/01, *Spain v Commission*, para 59 and the caselaw cited therein.

⁸⁷ See e.g. Case T-141/00, *Trenker v Commission*, para 186. In this case, the General Court also referred to the prevalence of the protection of human health and the environment over economic interests as another limitation of political discretion. The reference to “economic interests” is to those of individual market participants, e.g. pharmaceutical companies, not economic *policy* interests.

⁸⁸ The principle of non-discrimination would become a relevant limit to the exercise of political discretion if, for example, the CSPP Decision excluded specific issuers from the eligibility criteria under the CSPP. At the time of writing, that was not the case.

⁸⁹ For an extensive list of academic work exploring the importance of the principle of proportionality in EU administrative law, see Paul Craig, *EU Administrative Law* (Oxford University Press 2012) 590.

⁹⁰ In particular, its first paragraph reads: ‘Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties.’

⁹¹ There has been greater uncertainty about the applicability of a third element: the proportionality *stricto sensu*, i.e. whether the burden imposed on an affected party is disproportionate to the desired objective. Craig suggests that the EU courts ‘will generally [make reference to this aspect of the proportionality inquiry] when the applicant presents arguments directed specifically to it.’ Craig (n 89) 592. For a thorough discussion, see *ibid* 601–04.

⁹² See, for all, Case C-331/88, *Fedesa and Others*, EU:C:1990:391, para 13; Case C-101/98, *UDL*, EU:C:1999:615, para 30; and Joined Cases C-27/00 and C-122/00, *Omega Air and Others*, EU:C:2002:161, para 62.

⁹³ See e.g. Case C-491/01, *British American Tobacco (Investments) and Imperial Tobacco*, EU:C:2002:741, para 123. For a general analysis of the Court’s case law, see Craig (n 89) 592–604.

purchase government bonds on secondary markets (the “OMT programme”) as an exercise of its competence on monetary policy.⁹⁴ Indeed, when examining the validity of the OMT programme, the ECJ, sitting in a Grand Chamber, acknowledged that the European System of Central Banks (ESCB)⁹⁵ enjoys ‘a broad discretion’ when designing and implementing monetary policy measures because ‘[it] is required [...] to make choices of a technical nature and to undertake forecasts and complex assessments’.⁹⁶

Nevertheless, in *Gauweiler*, the ECJ also emphasized the fundamental importance of reviewing the ESCB’s compliance with certain procedural guarantees. In particular, ‘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.’⁹⁷ According to the ECJ, compliance with these procedural guarantees is essential ‘to enable the persons concerned to ascertain the reasons for the measure and to enable the Court to exercise its power of review’.⁹⁸

Albeit a recent development in the case law of the CJEU, this view of procedural guarantees as solid limits to the exercise of political discretion in relation to the need to protect monetary and/or financial stability is not new. For example, the European Court of Human Rights (ECtHR) has repeatedly emphasized the fundamental nature of the right to a fair trial as a strict limit to that discretion.⁹⁹ More recently, in the context of the resolution of Banco Popular, the Appeal Panel of the Single Resolution Board (SRB)¹⁰⁰ has confirmed that the right of access to documents, another procedural guarantee, plays an instrumental role in the protection of the fundamental rights of investors affected by the implementation of the decision of the SRB to put Banco Popular into resolution.¹⁰¹

Like the procedural guarantees in *Gauweiler* and posterior cases, the procedural obligation under article 11 TFEU also plays an instrumental role to enable the CJEU to exercise its power of review. In particular, that procedural obligation has an instrumental value for the principle of proportionality. Under the necessity test, in the presence of two potentially conflicting objectives, the analysis of the CJEU will revolve around the potential onerous impact of the controversial measure on one of the objectives; in this case, environmental protection. Only if the Eurosystem takes into account environmental

⁹⁴ For a detailed analysis of the decision, see Marco Lamandini, David Ramos and Javier Solana, ‘The European Central Bank (ECB) as a Catalyst for Change in EU Law. Part 1: The ECB’s Mandates’ (2016) 23 *Columbia Journal of European Law* 6–19.

⁹⁵ See n 2.

⁹⁶ See C-62/14, *Gauweiler*, para 68 and the caselaw cited therein.

⁹⁷ See *ibid.*, para 69.

⁹⁸ *Ibid.*, para 70.

⁹⁹ See e.g. ECtHR, *Credit and Industrial Bank v the Czech Republic*, Appl. No. 29010/95, judgment of 21 October 2003; and ECtHR, *Capital Bank AD v Bulgaria*, Appl. No. 49429/99, judgment of 24 November 2005. For a detailed analysis of the potential role of due process rights as effective limits to political discretion in the context of banking and financial crises, see Ramos and Solana, ‘Fundamental rights: a limit to bail-in?’ (forthcoming 2018).

¹⁰⁰ The SRB is the new EU bank resolution authority. Art. 85 of Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 (the “Single Resolution Mechanism Regulation”) requires the SRB to establish an Appeal Panel for the purposes of deciding on appeals against its decisions.

¹⁰¹ See the decisions of the Appeal Panel of the SRB in cases 38/17 to 43/17. These decisions are available at <https://srb.europa.eu/en/content/cases/tags/171>. For a detailed analysis of these decisions and their role as limits to political discretion in the context of banking and financial crises, see Ramos and Solana, ‘Fundamental rights: a limit to bail-in?’ (forthcoming 2018).

objectives when designing and implementing the CSPP, and only if it includes those objectives expressly among the reasons for its decisions,¹⁰² will the CJEU be able to examine the necessity of the CSPP.¹⁰³ Otherwise, it is impossible to determine what the Eurosystem knew or did not know about the environmental impact of the CSPP. Indeed, at a fundamental level, justifying the necessity of a measure requires any relevant competent authority to understand its potential onerous effects *before* its adoption.

In a recent testimony before the European Parliament, Mr. Draghi acknowledged that the ECB had not taken into consideration the impact that the CSPP would have on climate change.¹⁰⁴ Under a lenient standard of compliance, the CJEU would stand ready to examine the validity of any decision that ‘completely disregards’ environmental concerns.¹⁰⁵ Although Mr. Draghi did not give many details in his testimony, it is safe to assume that the ECB completely disregarded environmental protection when designing and implementing the CSPP.¹⁰⁶ This casts a serious doubt on the validity of the CSPP and could lead the Court to conclude that the ECB and the NCBs that implemented the programme manifestly exceeded their discretion.: not only would such disregard prevent the CJEU from assessing the proportionality of the programme, but it could also lead the Court to conclude that the

¹⁰² See n 97 and accompanying text. See also Case T-141/00, *Trenker v Commission*, para 200 and the case law cited therein. More generally, Art. 41(2)(c) of the EU Charter of Fundamental Rights consecrates the obligation of the administration to give reasons for its decisions as a fundamental principle to guarantee effective judicial protection.

¹⁰³ The CJEU would probably be reluctant to examine the suitability of a controversial measure of monetary policy given the broad level of discretion that the Eurosystem enjoys when designing and implementing monetary policy. Indeed, in *Gauweiler*, for example, the ECJ did not question the ECB’s argument about the suitability of the OMT programme to safeguard the monetary policy transmission mechanism and the singleness of the monetary policy, the stated objectives of the OMT programme. See Case C-62/14, *Gauweiler*, paras 72-80. The court’s reluctance to question the ECB’s argument may have also been grounded on the court’s lack of expertise to assess the relevant factors. See Gráinne de Búrca, ‘The Principle of Proportionality and Its Application in EC Law’ (1993) 13 Yearbook of European Law 105, 111. The same lack of expertise may also discourage the court from examining the necessity of a controversial measure. Nevertheless, there are other factors that can influence the court’s approach to proportionality, e.g. the importance of the interests at stake, that could prompt the Court to examine a controversial measure under the necessity test. See *ibid.* In *Gauweiler*, the ECJ did scrutinise the OMT programme under the necessity test, but it concluded that the programme had not gone “manifestly beyond” what was necessary to achieve those objectives based on a questionable analysis of the programme’s limitations. See C-62/14 *Gauweiler*, paras 81-90. For a critical analysis of the ECJ’s reasoning, see Lamandini, Ramos and Solana (n 94) 14–17. The OMT programme, however, did not confront two different policy objectives. In its preliminary questions, the German Constitutional Court asked the ECJ to determine (i) whether the OMT decision fell outside of the scope of the ECB’s monetary policy mandate (Arts. 119 and 127 TFEU), and (ii) whether that decision violated the prohibition of monetary financing (Art. 123 TFEU). See Case C-62/14, *Gauweiler*, para 10.

¹⁰⁴ In response to a question from MEP Neena Gill on whether the ECB had undertaken an ‘analysis of the climate impact of its quantitative easing programme’, Mr. Draghi responded: ‘To my knowledge, we don’t have an analysis of the impact of our programme or of climate change considerations in our programme, but I can certainly say that we will look into this and see what’s the effect.’ Committee on Economic and Monetary Affairs, ‘Transcript of the Monetary Dialogue with Mario Draghi, President of the ECB, Held on 9 July 2018’ 18 <http://www.europarl.europa.eu/cmsdata/151460/Monetary%20dialogue%2009.07.2018_EN.pdf> accessed 23 July 2018.

¹⁰⁵ See n 77.

¹⁰⁶ Indeed, he expressed the ECB’s intention to look into the impact of the APP in the future. See quote in previous footnote.

programme was vitiated by a “manifest error”. In addition, these doubts expose the ECB and the NCBs that comprise the Eurosystem to the risk of litigation.¹⁰⁷

Under this light, the principle of integration laid down in article 11 TFEU puts environmental protection concerns among the ‘relevant elements’ that the Eurosystem must ‘examine carefully and impartially’, in the words of the ECJ, when designing and implementing new measures of monetary policy.¹⁰⁸ It is important to note, however, that such careful and impartial examination may not lead the Eurosystem to change the design or the implementation of the CSPP.¹⁰⁹ That will remain an exercise of political discretion. Nevertheless, the importance of this procedural obligation must not be underestimated. By introducing empirical research on the environmental impact of monetary policy into the decision-making process of the Eurosystem, the principle of integration can raise awareness of the need to promote environmental protection among central bankers.¹¹⁰ In so doing, the principle of integration is making a negative environmental impact more difficult to justify. Moreover, in addition to facilitating judicial review by the CJEU, the obligation of the Eurosystem to justify how it has taken into account environmental protection in the design and implementation of its monetary policy would facilitate political accountability¹¹¹ and the examination of any potential liability.¹¹² Together, all these factors create an opportunity for political change within the Eurosystem.

At a time when the political momentum for more sustainable financial markets is growing,¹¹³ a direct channel to the Eurosystem’s decision-making process offers some room

¹⁰⁷ The judicial review of the CSPP raises many procedural questions, e.g. what the actual object of judicial review might be: the CSPP Decision or the acts of the purchasing NCBs that implement that Decision; the application of any relevant procedural requirements such as time bars; jurisdiction; and, importantly, legal standing. A detailed analysis of these questions is beyond the scope of this essay. Nevertheless, it is important to note that, given the decentralised implementation of the CSPP, both the ECB and the NCBs within the Eurosystem, particularly those that are responsible for the implementation of the CSPP through market purchases, would, in principle, be vulnerable to litigation. Effectively, purchasing NCBs are acting as agents of the Eurosystem in the implementation of the monetary policy in the Eurozone.

¹⁰⁸ See n 97.

¹⁰⁹ Particularly if the CJEU continues to regard the principle of proportionality as a rather lenient limit to political discretion in the context of monetary policy. See n 96. Wasmeier, however, has argued that the necessity of a controversial measure which leads to greater environmental degradation ‘is conceivable only in exceptional situations and only on a temporary basis’. In the absence of such an exceptional justification, he advocates for a neutral approach that gives preference to an interpretation of EU law that has ‘useful, or at least no harmful, effects on the environment’. See Wasmeier (n 62) 163. Whether environmental protection concerns could make the CJEU change its approach to proportionality as a rather lenient limit to political discretion in the context of monetary policy is still an open question.

¹¹⁰ In recent years, central bankers have become increasingly aware of their potential role in environmental protection. See e.g. Banque de France, ‘First Meeting of the Central Banks and Supervisors Network for Greening the Financial System (NGFS) on January 24th in Paris’ (26 January 2018) <<https://www.banque-france.fr/en/communique-de-presse/first-meeting-central-banks-and-supervisors-network-greening-financial-system-ngfs-january-24th>> accessed 7 May 2018.

¹¹¹ For example, in the Monetary Dialogues with the European Parliament. Although MEPs do not feel that Monetary Dialogues made a big difference in the management of the euro crisis, they do feel that Monetary Dialogues informed and engaged them and their constituencies in debates of monetary policy. See Stefan Collignon and Sebastian Diessner, ‘The ECB’s Monetary Dialogue with the European Parliament: Efficiency and Accountability during the Euro Crisis?’ (2016) 54 *Journal of Common Market Studies* 1296.

¹¹² For example, non-contractual liability pursuant to Arts. 268 (ex 235 EC) and 340.3° (ex 288 EC) TFEU.

¹¹³ For example, the European Commission has expressed a strong commitment to developing more sustainable financial markets with the recent publication of its Action Plan on Sustainable Finance. See European Commission, ‘Action Plan: Financing Sustainable Growth’ (2018) COM(2018) 97 final.

for optimism. For that, the principle of integration should be praised. Nevertheless, our understanding of the potential impact of monetary policy on climate change is still embryonic.¹¹⁴ In this sense, compliance with article 11 TFEU is not an easy task for the Eurosystem. In the next Section, I will explore how the Eurosystem might, in practice, take into account environmental protection in the CSPP, and I will also examine the possible implications of such compliance for the Eurosystem's monetary policy more broadly.

V. Taking environmental protection into account: policy implications

At first sight, perhaps the most evident way for the Eurosystem to take into account horizontal objectives of environmental protection when designing the CSPP would be to expressly include “green assets” within the list of eligible assets under the programme. Yet, in addition to a series of practical problems,¹¹⁵ making an express reference to the eligibility of green assets under the programme would not demonstrate that horizontal objectives of environmental protection have been taken into account in the design and implementation of the CSPP, as required under article 11 TFEU. Indeed, although there is no express reference to green assets under the CSPP Decision, Mr Draghi himself has confirmed that the current eligibility criteria do include assets of that nature.¹¹⁶ Their sheer eligibility tells us nothing about the necessity to purchase assets from corporations that contribute to the emission of greenhouse gases, for example.

A direct exclusion of “brown assets” from the list of eligible assets under the CSPP could provide clearer evidence that the Eurosystem has taken environmental protection into account in its decision-making process, but it would face even more acute practical problems than the inclusion of green assets.¹¹⁷ More importantly, however, a strict exclusion of brown assets from the CSPP could effectively make environmental protection the primary objective of monetary policy in the Eurozone, trumping price stability.¹¹⁸ That is not the function of the

¹¹⁴ For examples of early attempts, see Matikainen, Campiglio and Zenghelis (n 9); McKibbin and others (n 9).

¹¹⁵ For example, there is considerable scepticism about the standards of green finance products at the moment. That is one of the reasons why the European Commission has made the development of a “green taxonomy” one of its priorities. See European Commission (n 113) 4–5. For an overview of practical problems, see Emanuele Campiglio and others, ‘Climate Change Challenges for Central Banks and Financial Regulators’ (2018) 8 *Nature Climate Change* 462, 465.

¹¹⁶ See Committee on Economic and Monetary Affairs, ‘Transcript of the Monetary Dialogue with Mario Draghi, President of the ECB, Held on 29 May 2017’ 20 <http://www.europarl.europa.eu/cmsdata/121502/Monetary_dialogue_29052017EN.pdf> accessed 21 December 2017.

¹¹⁷ Unlike the case of a green taxonomy, the European Commission has not expressed its intention to develop a taxonomy of brown assets. A “brown taxonomy” was not present either in the final report that the High-Level Expert Group on Sustainable Finance (HLEG) prepared to inform the Commission's Action Plan. See High-Level Expert Group on Sustainable Finance, ‘Financing a Sustainable European Economy (Final Report 2018)’ (2018). Moreover, unlike with “green” financial assets, there seem to be no noticeable private initiatives aiming to develop classifications of brown financial assets. In addition, whether it is issuer- or issue-focused, a “brown taxonomy” may fail to capture the diversity of projects for which a polluting company may decide to raise funds in the bond market, which may include projects that aim to smooth the transition to a low-carbon economy. Lastly, a direct exclusion of brown assets may not prevent a relatively smaller yet positive effect on the yields of these assets. See the analysis of the effect of the CSPP presented in Section II.

¹¹⁸ If a direct exclusion of brown assets led to only green assets being eligible, this could compromise the effectiveness of monetary policy. As of 31st March 2018, the total volume of green bonds issued in Europe within the last eight years (€122 billion) was lower than the total volume of purchases under the CSPP (€162

principle of integration,¹¹⁹ and such an outcome would clearly be contrary to the EU Treaties.¹²⁰

A more effective way of taking these horizontal objectives into account would be to include them within other eligibility criteria of the CSPP. For example, the General Council of the ECB could introduce environmental concerns into the credit quality requirements that any marketable debt instrument must meet in order to be eligible under the Eurosystem monetary policy framework.¹²¹

Climate risks can have a direct impact on the credit risk of companies in carbon-intensive sectors. For example, the transition to a low-carbon economy poses a serious challenge to the long-term viability of these companies.¹²² Their inability to ensure their long-term viability could potentially increase the default risk of their existing long-term debt products. In addition, the inability of these companies to ensure the sustainability of their operations in the long-term might hinder their ability to raise new long-term finance today. If the sense of urgency to transition to a low-carbon economy were to increase, a sudden, widespread and uncoordinated attempt from investors to divest in these companies could cause the prices of their assets to depreciate abruptly, putting these companies into serious financial difficulties.¹²³ While such a virulent reaction could potentially alleviate climate concerns it could have a serious effect on financial stability.¹²⁴ Together, all these factors make the connection between climate risk and credit risk highly relevant.¹²⁵

billion). See Climate Bonds Initiative, ‘The Green Bond Market in Europe’ (2018). In addition, restricting eligibility to such a small pool of assets would significantly reduce the possibilities of diversification, thereby increasing the financial risk of the CSPP portfolio.

¹¹⁹ See my analysis in Section III.

¹²⁰ Art. 127(1) TFEU clearly makes price stability the primary objective of the ESCB.

¹²¹ See Arts. 71 and 82 to 88 of the General Documentation Guideline. These credit quality requirements also determine the eligibility of assets under the CSPP. See Art. 2 CSPP Decision. Changing the credit quality requirements regulated in the General Documentation Guideline would have an impact on other monetary policy measures apart from the CSPP.

¹²² A transition to a low-carbon economy could leave a large proportion of the world’s proven reserves of oil, gas and coal “stranded”, i.e. ‘literally unburnable without expensive carbon capture technology’. Mark Carney, ‘Breaking the Tragedy of the Horizon – Climate Change and Financial Stability’ (2015) 11 <<https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability>> accessed 4 May 2018. Unless companies that are currently exploiting these resources are able to design and implement a sustainable business plan in a low-carbon economy, their long-term viability will be seriously compromised.

¹²³ A direct exclusion of “brown assets” from the list of eligible assets under the CSPP, as discussed earlier in this Section, could further aggravate the impact of transition risks on financial stability if such exclusion were to act as a “wake up call” for investors, who might interpret the central bank’s decision as a sign of the need for a swift transition.

¹²⁴ In this sense, ‘success is failure[:] too rapid a movement towards a low-carbon economy could materially damage financial stability’. Mark Carney, ‘A Transition in Thinking and Action (Speech)’ (2018) 2 <<https://www.bankofengland.co.uk/climate-change>>. Carbon intensive businesses risk facing considerable losses because their activities and market value are still partly dependent on the assumption that stranded assets will be extracted. Market participants’ inability to price-in the risk of these stranded assets remaining in the ground may result in over-valuations of these companies, i.e. a “carbon bubble”. See Ryan-Collins and Van Lerven (n 9) 6, 10. According to Mr Carney, companies in the natural resource and extraction sectors account for around one third of equity and fixed income assets globally. See Carney (n 122) 11. Given the relatively large presence of these businesses in financial markets, the exposure of investors to those losses, including insurance companies, is ‘potentially huge’. *ibid.*

¹²⁵ Some central banks and financial supervisory authorities have started considering the idea of developing “climate stress tests” to better understand the potential impact of climate change on credit risk and financial

The rules applicable to the assessment of the credit quality of eligible assets are included in the Eurosystem credit assessment framework (ECAF), which is laid down in articles 119 to 126 of the General Documentation Guideline. According to articles 59(5) and 119(1), there are four accepted credit assessment sources: i) external credit assessment institutions (ECAIs), i.e. ‘credit rating agencies whose ratings are considered suitable by the Eurosystem for the specific purpose of its monetary policy operations’;¹²⁶ ii) NCBs’ in-house credit assessment systems (ICASs),¹²⁷ counterparties’ internal rating-based (IRB) systems,¹²⁸ and third-party rating tool (RT) providers.¹²⁹

According to article 82(1)(a) of the General Documentation Guideline:

With the exception of [asset-backed securities], all marketable assets must have a credit assessment provided by at least one accepted ECAI system, expressed in the form of a public credit rating, in compliance with, as a minimum, credit quality step 3 in the Eurosystem’s harmonised rating scale.¹³⁰

Moreover, according to Article 84 of the General Documentation Guideline, if there are multiple ratings, the Eurosystem will only take into account the first-best.

According to Matikainen et al, at the end of May 2017, two of the four ECAIs were beginning to incorporate climate risk into their credit assessments.¹³¹ At the time of writing, however, the development of comprehensive and reliable assessments still remained a challenge.¹³² If credit quality requirements under the General Documentation Guideline were to reflect the exposure of issuers to transition risks and other climate risks, we might see the

stability more broadly. See e.g. Joint Committee of the European supervisory Authorities, ‘Joint Committee Report on Risks and Vulnerabilities in the EU Financial System’ (2018) JC 2018 07 15 <<https://esas-joint-committee.europa.eu/Publications/Reports/Joint%20Committee%20Risk%20Report.pdf>> accessed 7 May 2018; Leslie Hook, ‘Central Bank Chiefs Sound Warning on Climate Change’ *Financial Times* (9 April 2018) <<https://www.ft.com/content/888616d6-3b07-11e8-b7e0-52972418fec4>> accessed 17 May 2018. Mr Draghi himself has welcomed the pricing and supervision of climate-related risk. See Committee on Economic and Monetary Affairs, ‘ECON Monetary Dialogue (26 February 2018)’ (n 11) 15. For an early attempt to define a climate stress test methodology, see Stefano Battiston and others, ‘A Climate Stress-Test of the Financial System’ (2017) 7 *Nature Climate Change* 283.

¹²⁶ European Central Bank, ‘Eurosystem Credit Assessment Framework (ECAF)’ <<https://www.ecb.europa.eu/paym/coll/risk/ecaf/html/index.en.html>> accessed 3 May 2018. At the time of writing, there were four accepted ECAIs: DBRS, FitchRatings, Moody’s and Standard & Poor’s.

¹²⁷ For a detailed list of accepted ICASs, see *ibid*.

¹²⁸ IRB systems are excluded from the CSPP, however. See Art. 2(3) CSPP Decision.

¹²⁹ For a detailed list of accepted RTs, see European Central Bank, ‘Eurosystem Credit Assessment Framework (ECAF)’ (n 126).

¹³⁰ The Eurosystem harmonised rating scale is a mapping exercise that the Eurosystem does in order to ensure the comparability of the individual rating scales and grades used by each ECAI. For an updated version of the scale, see *ibid*.

¹³¹ See Matikainen, Campiglio and Zenghelis (n 9) 20. In parallel to the incorporation of climate risks to their credit risk assessment methodologies, credit rating agencies are being called upon to take into account environmental, social and governance considerations. See European Commission (n 113) 7–8. In China, financial regulators are also encouraging banks and other financial institutions to incorporate environmental risks into their credit risk assessments. See e.g. People’s Bank of China and others, ‘Guidelines for Establishing the Green Financial System’ <<http://www.pbc.gov.cn/english/130721/3133045/index.html>> accessed 24 July 2018.

¹³² See Campiglio and others (n 115) 466–67. This also hinders financial supervision. See Frank Elderson, ‘From Mission to Supervision: Putting Sustainable Prosperity on the Agenda of the Dutch Central Bank’ (*Grantham Research Institute on climate change and the environment*) <<http://www.lse.ac.uk/GranthamInstitute/news/from-mission-to-supervision-putting-sustainable-prosperity-on-the-agenda-of-the-dutch-central-bank/>> accessed 25 July 2018.

credit ratings of certain eligible assets being downgraded, which could, eventually, translate into their ineligibility under the Eurosystem monetary policy framework, including the CSPP. More importantly for our purposes, however, if the Eurosystem were to use credit assessment information that reflects climate risks, it would be effectively taking into account the environmental impact of eligible assets as reflected in the relevant credit ratings. Thus, in principle, using climate-sensitive credit assessment information could ensure the Eurosystem's compliance with the procedural obligation laid down in article 11 TFEU.

In order to monitor climate-sensitive credit assessment information produced by the accepted ECAIs,¹³³ the Eurosystem will need to acquire the relevant expertise and to develop an adequate methodology to assess the impact that climate risks can have on credit risk. This will inevitably require a considerable investment in time and financial resources. Nevertheless, developing that expertise presents important economies of scope that could make it a very attractive investment for the Eurosystem. In particular, if climate risks can aggravate the credit risk of assets held in the Eurosystem balance sheet, that internal expertise could support the Eurosystem in the consideration of applying a series of risk control measures to minimise the financial risk of its monetary policy operations.¹³⁴ For example, that internal expertise could support the Eurosystem in the consideration of marking down the valuation of downgraded assets,¹³⁵ introducing limits in relation to issuers, debtors and guarantors of eligible assets that are particularly vulnerable to climate risks,¹³⁶ or introducing supplementary haircuts to reflect the vulnerability of specific assets to climate risks (“climate haircuts”).¹³⁷ Given the size of the current CSPP portfolio, diligence would dictate that the ECB starts taking these risks into consideration today.

In recent years, some central banks, particularly in developing economies, have started to use their policy tools to support environmental protection.¹³⁸ Building on these pioneering experiences, there have been several proposals for the ECB and other central banks in developed economies to take a more proactive role in the fight against climate change.¹³⁹ In addition to ensuring the validity of current and future monetary policy measures

¹³³ See e.g. Art. 129, paras (3) and (5) General Documentation Guideline.

¹³⁴ If ECAIs incorporate transition risks and other climate-related risks into their credit assessment methodologies, potential downgrades in credit ratings could have a direct effect on valuation haircuts for marketable assets. See Arts. 128(1)(a) and 130(1)(c) General Documentation Guideline. Nevertheless, because the ECAIs methodology is still under-developed, the Eurosystem may want to consider the adoption of additional risk control measures. See also Art. 4(2) CSPP Decision.

¹³⁵ See Art. 128(1)(d) General Documentation Guideline.

¹³⁶ See e.g. Arts. 128(2) and 129(2)(b) General Documentation Guideline.

¹³⁷ See Arts. 128(2) and 129(2)(c) General Documentation Guideline.

¹³⁸ The primary response from central banks to address the impact of climate risks on financial stability has been to encourage companies and financial institutions to disclose their exposure to those climate risks on a voluntary basis. See Task Force on Climate-related Financial Disclosures, ‘Final Report: Recommendations of the Task Force on Climate-Related Financial Disclosures (June 2017)’ (2017) <<https://www.fsb-tcfd.org/publications/final-recommendations-report/>> accessed 7 May 2018. Nevertheless, central banks in certain developing countries are being particularly active, using, for example, reserve requirements, differentiated capital requirements and even softer guidance to incentivise bank lending to low-carbon projects. See Campiglio (n 9) 226. For a comprehensive overview of these and other “green” central banking initiatives, see Frank Van Lerven, ‘Green Central Banking in Emerging Market and Developing Country Economies’ (New Economics Foundation 2017) <<http://neweconomics.org/2017/10/green-central-banking-emerging-market-developing-country-economies/>> accessed 21 December 2017.

¹³⁹ Some of these proposals include the use of macroprudential policy tools to disincentivise loans carrying carbon-risk or to encourage low-carbon investments, the use of credit allocation policies to guide lending and

and protecting its own balance sheet, developing the necessary expertise to understand the relationship between climate change and credit risk could help the Eurosystem evaluate some of these proposals more confidently, e.g. using capital requirements to discourage loans carrying carbon risk.¹⁴⁰ And perhaps more importantly, developing that expertise would allow the Eurosystem to contribute to improving our embryonic understanding of the relationship between climate change and credit risk and of the impact of monetary policy on climate change.

VI. Conclusion

The principle of integration laid down in article 11 TFEU imposes a procedural obligation on the ESCB to 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 the specific context of the monetary policy of the Eurozone, that obligation binds the ECB and the NCBs that comprise the Eurosystem. A recent testimony by Mr Draghi before the European Parliament suggests that, so far, the ECB has failed to comply with this obligation. This exposes the ECB to the risk of litigation, which could seek to challenge the validity of the CSPP and could undermine the effectiveness of the programme. Other measures of monetary policy could attract similar legal actions.

But regarding that principle of integration only as a source of procedural obligations is to undermine its potential to contribute to the fight against climate change. In addition to avoiding potential litigation, taking into account environmental protection in the design and implementation of monetary policy measures such as the CSPP could raise awareness among central bankers about the environmental impact of monetary policy. Such awareness could lead to a political change that could prompt the Eurosystem to take a more proactive role in environmental protection. Importantly, at a substantive level, article 11 TFEU integrates these objectives into the mandate of the ESCB, thereby conferring upon its members the legitimacy they would require to adopt such proactive roles.

investment towards prioritised low-carbon sectors, or the redesign of central banks' unconventional monetary policy measures to increase the proportion of green assets on their balance sheets. For an overview of these policy recommendations, see Ryan-Collins and Van Lerven (n 9) 9–12. See also Matikainen, Campiglio and Zenghelis (n 9) 19–23.

¹⁴⁰ Regulatory capital requirements aim to improve the solvency of banks. They are determined on the basis of the credit risk of the banks' assets. For an overview of some of the challenges that climate-aligned financial regulation would face, see Campiglio and others (n 115) 464–65.