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A joint study by SOAS University of London, University of the West of England, University of Greenwich and Greenpeace

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1 Introduction

In July 2022, the European Central Bank (ECB) announced its decisions to design and implement concrete measures to decarbonise its monetary policy framework. These measures target both its corporate bond portfolio, acquired during its unconventional policy interventions, and the collateral rules that govern its normal and unconventional lending to euro area monetary institutions. The ECB primarily aims to better incorporate 'climate-related financial risk in the Eurosystem balance sheet' and, secondary, to 'support the green transition of the economy in line with the EU's climate neutrality objectives'.¹

In this brief, we evaluate the ECB's decarbonisation plans. We acknowledge that the July 2022 announcement puts the ECB at the forefront of monetary decarbonisation efforts in high-income countries, if not worldwide. The ECB's approach has two important ambitions: the ECB appears committed to abandoning the market neutrality logic that has hitherto hardwired a carbon bias into its monetary policy operations, and equally important, the ECB appears to contemplate a strategy that not just incentivises green lending but also penalises dirty lending, both via the tilting of corporate bond holdings (after October 2022) and haircuts and limits on dirty bond collateral.

We provide a systematic evaluation of the July 2022 plans by comparing them with what we term a 'Paris decarbonisation benchmark' for both the corporate bond portfolio and the collateral rules. We map the plans against this benchmark across the overall guiding principle, scope, metrics, tilting/haircut strategy, exclusion of dirty assets and timeline (see Table 1). The mapping is helpful to both evaluate the gap, if any, between the ECB's plans and a Paris-aligned decarbonisation approach, and to provide a framework to further explore the granular detail once it is announced (by October 2022). We also provide a short assessment of the ECB announcements about climate-related disclosures and climate risk assessment and management.

We identify a significant gap between the decarbonisation plans of the ECB and the Paris Agreement. For the corporate bond holdings, this Paris gap arises from the narrow scope of the ECB's plans (reinvestments only) and the exclusion strategy. It could be even more substantive depending on the precise details on the guiding principle, metrics and tilting that the ECB will announce in October. The Paris gap is larger for the collateral rules: the ECB's guiding principle (i.e. the reduction in the Eurosystem risk exposure) is not just at odds with our climate neutrality benchmark, but even on its own terms lacks ambition. This lack of ambition is reflected across all pillars, including the ECB's refusal to exclude high-carbon assets from its collateral framework.

¹See https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220704~4f48a72462.en.html.

²See Schnabel, I. (2021). From market neutrality to market efficiency, 14 June.

Table 1: ECB climate action plans vs a Paris decarbonisation benchmark

	Corporate bond purchases		Collateral framework	
	ECB	Paris decarbonisation benchmark	ECB	Paris decarbonisation benchmark
Guiding principle	Climate neutrality?	Climate neutrality	Risk exposure reduction	Climate neutrality
Scope	Reinvestments only	All holdings	Non-financial corporate debt collateral	All private assets
Metrics	Company climate metrics + sectoral Scope 3 emissions?	Company climate metrics + activity type	Micro risk exposure	Company climate metrics + activity type
Tilting/haircut adjustments	Across and within sectors based on climate footprint?	Across and within sectors based on climate footprint	Risk-based	Across and within sectors based on climate footprint
Exclusion	None	Paris-misaligned high-carbon assets	Only limits on high-carbon assets pledged as collateral	Paris-misaligned high-carbon assets
Timeline	October 2022: reinvestments only	Immediate implementation	By the end of 2022: haircut adjustments 2024: limits on high-carbon assets	Immediate implementation for non-financial corporate assets; ASAP for other private assets

2 Corporate bond holdings

Guiding principle and scope

The ECB QE programme has a carbon bias: the contirbution of the bonds issued by carbon-intensive sectors to the ECB holdings is much higher than the contribution of these sectors to the euro area economic activity.³ Although this bias is well-known and the ECB committed in 2021 to take climate change into account in its corporate bond holdings,⁴ the bias is still present in its holdings.

³See Matikainen, S., Campiglio, E. and Zenghelis, D. (2017). The climate impact of quantitative easing, Policy Paper, Grantham Research Institute on Climate Change and the Environment Centre for Climate Change Economics and Policy, May; Battiston, S. and Monasterolo, I. (2019). How could the ECB's monetary policy support the sustainable finance transition?, University of Zurich et FINEXUS Center; and Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A. and van Lerven, F. (2020). Decarbonising is easy: Beyond market neutrality in the ECB's corporate QE, New Economics Foundation, October.

⁴According to the ECB's 2021 announcement, 'The ECB has already started to take relevant climate change risks into account in its due diligence procedures for its corporate sector asset

As an illustration, on 31 July 2020, 61.53% of the corporate bond holdings of the ECB corresponded to carbon-intensive sectors whose contribution to the euro area gross value added (GVA) was equal to 28.92% (see Table 2)⁵. Two years later, on 17 June 2022, the carbon bias was almost the same: the representation of the carbon-intensive sectors was 58.04% with a contribution to the GVA equal to 31.24% (see Table 2). In addition, the ECB has purchased bonds issued by several fossil fuel companies, such as Eni Spa, Total SE and Royal Dutch Shell PLC despite their very high climate footprint that is completely incompatible with the Paris Agreement.⁶

Table 2: Contribution of carbon-intensive sectors to the ECB list of bonds held under CSPP/PEPP (outstanding amount), euro area GVA, selected dates in 2020 and 2022

	202	0	2022	
	ECB list of bonds (out. amount) (%)	Euro area GVA (%)	ECB list of bonds (out. amount) (%)	Euro area GVA (%)
Carbon-intensive transportation	17.30	12.26	15.98	12.67
Energy-intensive	17.15	13.64	16.82	14.43
Fossil fuel	12.12	1.05	10.50	1.17
Non-renewable utilities	14.96	1.96	14.76	2.97
All carbon-intensive sectors	61.53	28.92	58.04	31.24

Source (2020): ECB (bond ISIN codes, 31 July 2020), Refinitiv Eikon (bond outstanding amount, July 2020; NACE 4-digit codes; TRBC codes), Eurostat, Annual detailed enterprise statistics for industry (GVA [2017]) and authors' calculations

Source (2022): ECB (bond ISIN codes, 17 June 2022), Refinitiv Eikon (bond outstanding amount, June 2022; NACE 4-digit codes; TRBC codes), Eurostat, Annual detailed enterprise statistics for industry (GVA [2019]) and authors' calculations

Note: For GVA, we used the last available annual data at the date of the ECB holdings

To address the carbon bias and contribute to the green transition, the ECB aims to decarbonise its corporate bond holdings by tilting these holdings towards issuers with better climate performance. However, at this stage it is unclear if the tilting will be guided by the market neutrality principle, as has been the case with the greening of the Bank of England's corporate bond purchases.⁷ Since the ECB has

purchases in its monetary policy portfolios'. See https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1 \sim f104919225.en.html

⁵See Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A. and van Lerven, F. (2020). Decarbonising is easy: Beyond market neutrality in the ECB's corporate QE, New Economics Foundation, October. We have used an updated version of our carbon-intensive sector classification. This explains the slightly different figures for 2020 compared to Dafermos et al. (2020).

⁶See also Reclaim Finance (2021). Spreading the fossil fuel pandemic: How the ECB's Covid quantitative easing is supporting oil and gas expansion, October.

⁷See Bank of England (2021). Greening our Corporate Bond Purchase Scheme (CBPS), November.

publicly accepted that market neutrality hardwired a carbon bias into its policy operations,⁸ we expect it to drop it as a guiding principle for decarbonising its corporate bond portfolio.

If the ECB does not abandon the market neutrality principle, this in practice means that it will reallocate holdings within sectors such that it keeps the sectoral allocation of holdings in line with the sectoral allocation in the bond market. In contrast, if the ECB uses climate neutrality as the guided principle for decarbonising its purchases — in line with our Paris decarbonisation benchmark —, it will be in a position to decarbonise its purchases more quickly and address its carbon bias. The climate neutrality principle requires that the representation of issuers in sectors that are inconsistent with Paris-aligned transition pathways (such as the fossil fuel ones) should decline or be eliminated, irrespective of the representation of these sectors in the bond market.

The use of the climate neutrality principle would be consistent with the ECB's legal obligation to support the EU's climate goals and comply with the Paris Agreement.⁹ And since the adoption of the climate neutrality principle would allow the ECB to keep the overall volume of its corporate bond holdings unchanged (to support its primary mandate), there is no reason to stick to the market neutrality principle — an outdated concept in the climate crisis era —and its attendant carbon subsidies.

The scope of the ECB's decarbonisation efforts is unambitious. Even if the ECB decides to follow the climate neutrality principle, the pace of decarbonisation will be significantly limited by its decision to only decarbonise *reinvestments* of the principal from maturing corporate bonds purchased under its schemes. By July 2022, the ECB was holding around €350 billion of corporate bonds issued by euro area companies, of which roughly €30 billion is expected to be reinvested each year. In other words, the scope of ECB climate policies is limited to €30 billion reinvestments, 10% of its overall portfolio of corporate bonds. Should the ECB decide to reduce or eliminate these reinvestments altogether in order to shrink its balance sheet (for quantitative tightening purposes), it would effectively terminate the decarbonisation of its corporate bond holdings.

In contrast, according to our Paris decarbonisation benchmark, the new climate rules should apply to all corporate bond holdings: the ECB should sell bonds of climate laggards without waiting for these bonds to mature, and use the proceeds to buy bonds of companies that engage in green activities and have made progress in decarbonising their operations. By doing so the ECB would

⁸See Schnabel, I. (2021). From market neutrality to market efficiency, 14 June.

⁹Verheyen, R. (2021). Rechtsgutachten zur Implementierung von Klimakriterien bei der Geldpolitik.

¹⁰For the exact holdings and monthly redemptions amount see https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html.

decarbonise its portfolio faster and would accelerate the increase in the cost of borrowing for dirty activities and the decrease in the cost of borrowing for green activities.¹¹ Crucially, It would also send a strong signal to the financial markets that it will no longer support companies that fail to take the climate crisis seriously. This signal could accelerate the green transformation of the financial system, and with it, of the entire economy.

Metrics

The ECB will capture the climate performance of firms by using as reference their greenhouse gas emissions, the carbon emission reduction targets and The ECB should take the following issues into climate-related disclosures. account. First, the indicators about the emissions of companies should reflect not only their current emissions, but also their emission reductions over the last years which capture the progress that companies have made in achieving climate targets. Second, past and future emission reductions should be compared with sector-specific emissions reductions that are essential for achieving the targets of the Paris Agreement. 12 Third, several targets for future emission reductions set by companies might not be credible. Therefore, the weight that will be assigned to emission reduction targets should initially be low (until the credibility of these targets improves).¹³ Fourth, Scope 3 emissions should be included in the evaluation of companies. This is important given that Scope 3 emissions cover a large part of the emissions of carbon-intensive companies.¹⁴ Although there are currently significant gaps in the reporting of these emissions, the ECB should make the reporting of such emissions an eligibility requirement to induce firms to

¹¹For the impact of green QE on the cost of borrowing, emissions and global warming, see Dafermos, Y., Nikolaidi, M. and Galanis, G. (2018). Climate change, financial stability and monetary policy, Ecological Economics, 152, 219-234; Ferrari, A. and Nispi Landi, V. (2020). Whatever it takes to save the planet? Central banks and unconventional green policy, ECB Working Paper 2500; Abiry, R., Ferdinandusse, M., Ludwig, A. and Nerlich, C. (2022). Climate change mitigation: how effective is green quantitative easing?, ECB Working Paper No. 2701.

¹²For some estimates about Paris-aligned emission reduction targets, see UNEP (2019). Emissions Gap Report 2019, UN Environment Programme and UNEP (2020). Sectoral pathways to net zero emissions.

¹³In Dafermos, Y., Gabor, D., Nikolaidi, M. and van Lerven, F. (2022). An Environmental Mandate, now what? Alternatives for Greening the Bank of England's Corporate Bond Purchases, London and Bristol: SOAS University of London; University of Greenwich; University of the West of England, we constructed a Company Climate Index (CCI) on the basis of backward-looking and forward-looking indicators. We used the CCI to allocate firms into four climate buckets.

¹⁴For example, Scope 3 emissions of oil and gas companies account for more than 80% of their total greenhouse gas emissions (see ACT (2021). Sector Methodology: Assessing low-carbon transition – Oil & Gas; CDP (2022). CDP Technical Note: Relevance of Scope 3 Categories by Sector).

improve Scope 3 reporting as soon as possible.¹⁵ It seems that the ECB is currently planning to use Scope 3 emissions at the sectoral level. Although this might be a useful initial step, sector-based Scope 3 emissions should be combined with company-based emissions as soon as possible.¹⁶ Fifth, since overall emissions reporting is still incomplete,¹⁷ the ECB should also consider taking into account other micro indicators that capture the climate performance of firms, such as green capital expenditure.¹⁸

According to our Paris decarbonisation benchmark, the climate footprint of companies (by which we mean the overall climate impact of companies in the past, present and future) cannot be properly captured by relying only on company climate metrics that do not take into account the type of activities that companies engage in. For example, an oil company that has made some progress in reducing its carbon emissions (which can be reflected in company climate metrics) continues to have a climate harming business model as long as oil extraction remains its main activity. This suggests that company climate metrics should be combined with an activities-based approach that makes a distinction between green and carbon-intensive activities. ¹⁹ For this purpose, specific aspects of the EU Taxonomy of sustainable activities and the Climate Policy Relevant Sectors (CPRS) classification can be employed. ²⁰ In particular, the ECB can rely on certain climate mitigation activities of the EU Taxonomy to identify green

¹⁵This would be consistent with the proposed rules of the Securities and Exchange Commission (SEC) that require that companies disclose their emissions from upstream and downstream activities in their value chain. See https://www.sec.gov/news/press-release/2022-46.

¹⁶Note that, according to Papadopoulos, G. (2022). Discrepancies in corporate GHG emissions data and their impact on firm performance assessment, European Commission, JRC130254, there are some inconsistencies between firm-reported and provider-estimated sectoral emissions.

¹⁷See In, S.Y. and Schumacher, K. (2021). Carbonwashing: a new type of carbon data-related ESG greenwashing, Stanford Working Paper, and Papadopoulos, G. (2022). Discrepancies in corporate GHG emissions data and their impact on firm performance assessment, European Commission, JRC130254.

¹⁸See Bressan, G., Monasterolo, I. and Battiston, S. (2022). Sustainable investing and climate transition risk: a portfolio rebalancing approach, The Journal of Portfolio Management.

¹⁹In principle, the disclosure and accurate measure of Scope 3 emissions in the future will allow us to better capture the climate impact of companies related to specific activities. However, even with an accurate reporting of Scope 3 emissions, it will still be useful to use an activity-based approach to capture the future climate mitigation effects of green activities, which cannot be reflected in the contemporary Scope 3 emissions. For example, a renewable energy company has a higher contribution to the achievement of environmental targets than a training company even if they both generate low total emissions compared to their size.

²⁰For the EU Taxonomy, see European Commission (2020). Taxonomy: final report of the Technical Expert Group on Sustainable Finance, Brussels, March. For the CPRS classification see Battiston, S., Mandel, A., Monasterolo, I., Schütze, F. and Visentin, G. (2017). A climate stress-test of the financial system, Nature Climate Change, 7 (4), 283-288 and Alessi, L. and Battiston, S. (2022). Two sides of the same coin: Green Taxonomy alignment versus transition risk in financial portfolios, International Review of Financial Analysis.

activities²¹ and on the CPRS classification to identify carbon-intensive activities.²²

Metrics and tilting

The ECB will use company climate metrics to tilt its holdings. Mirroring the Bank of England, the ECB might create some climate buckets and reallocate holdings towards bond issuers that are in climate buckets with strong climate performance and away from issuers classified into poor performance buckets. Using only company climate metrics allows a best in-class 'light tilting' in line with the market neutrality principle. In contrast, the combination of an activity-based approach with company climate metrics will permit the ECB to move beyond market neutrality by implementing a best in-class and best-in-universe 'strong' tilting approach, in line with our Paris decarbonisation benchmark. Under strong tilting, holdings will be re-allocated towards bond issuers that both (i) perform better according to climate metrics and (ii) engage in activities that are Paris-aligned.

Take, for example, a fossil fuel company in the 'energy and basic resources' sector. If this company has recently made some progress in reducing its emissions and has better climate targets compared to other companies in the same sector, it might be classified as a strong climate performer according to the company climate metrics. As a result, the ECB might increase the holdings of the bonds issued by this company if it uses the light tilting approach. If, in contrast, it uses the strong tilting approach, the incompatibility of the activity of this company with the Paris Agreement will lead to a reduction in the ECB holdings of the bonds of this company.

Exclusion

The ECB does not seem to be willing to exclude specific bonds from its purchases according to climate criteria. Exclusion is, in contrast, a significant part of our Paris decarbonisation benchmark. Through an activities-based approach, exclusions can be easily implemented. For example, the ECB can exclude bonds issued (i) by fossil fuel companies whose activities are inconsistent with Paris-aligned transition pathways²³ and (ii) by other carbon-intensive companies (such as non-renewable utilities) that have a weak climate performance. In order for the value of the ECB holdings to remain unchanged, the ECB can replace

²¹Only clearly 'green' activities of the EU Taxonomy should be used for this purpose, not nuclear, gas or other transition activities that are not Paris-aligned.

²²See Dafermos, Y., Gabor, D., Nikolaidi, M. and van Lerven, F. (2022). An environmental mandate, now what? Alternatives for greening the Bank of England's Corporate Bond Purchases, London and Bristol: SOAS University of London; University of Greenwich; University of the West of England, for an application of both taxonomies in the case of the Bank of England corporate bond purchase scheme.

 $^{^{23}\}mathrm{See}$ IEA (2021). Net zero by 2050: a roadmap for the global energy sector.

these bonds with bonds of companies that engage in green activities or other non-carbon intensive activities.²⁴

Timeline

It is very positive that the ECB will implement the new measures from October 2022. This quick implementation is consistent with the urgency of the climate crisis. But since the climate rules will only apply to reinvestments, it will take a few years until all ECB's holdings are affected. In order for the ECB plans to get closer to our Paris decarbonisation benchmark, the ECB needs to apply the new rules to all holdings this year and not to wait for this to happen through reinvestments.

3 Collateral framework

Guiding principle and scope

The Eurosystem collateral framework determines how banks in the euro area get access to central bank money, which is vital for their daily lending operations, and therefore for the broader economy. The ECB lends to banks against collateral in so-called repo transactions on the basis that collateral protects the Eurosystem from financial losses in case banks are unable to pay back the ECB loans. Collateral can be issued by either Member States (sovereign bonds) or private companies, including carbon-intensive ones.

The ECB applies a specific 'haircut' to each eligible asset in its collateral framework. A haircut establishes the amount of cash that borrowers receive in return for collateral: if an asset has a market value of €1 million on the day it is posted as collateral, and the haircut assigned to it is 10%, the bank receives a loan of €0.9 million. In this example, this effectively means the ECB treats the asset as though it has a value of €0.9 million, even though it has a market value of €1 million. Thus, the higher the haircut, the lower the secured funding that commercial banks can obtain for a given asset. In addition to interest rates, haircuts thus constitute an important element of the overall cost of funding for banks, and influence the rates at which they lend to companies, directly or via capital (bond) markets. Put differently, the haircuts that the ECB applies on corporate bond collateral play an important role in the cost of credit for the corporate issuer. Should the ECB decide to exclude a particular issuer from its eligible collateral list, say for climate reasons, it would send a strong signal to the market that the respective issuer's credit risk and borrowing costs should be significantly higher.

²⁴For more details and an analysis of different options see Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A. and van Lerven, F. (2020). Decarbonising is easy: Beyond market neutrality in the ECB's corporate QE, New Economics Foundation, October.

As it stands, the framework implicitly subsidises carbon-intensive companies because collateral eligibility criteria do not incorporate climate considerations specific to the bond issuer.²⁵ Having accepted the carbon bias of its collateral rules, the principle under which the ECB decides to incorporate such considerations becomes critical. In its July 2022 announcement, the ECB committed to decarbonise collateral rules under the general principle of reducing 'climate-related financial risks in Eurosystem credit operations'. This risk-based principle, absent at least explicitly in the plans for the decarbonisation of the corporate bond portfolio, matters conceptually and in policy terms. It establishes a logic of decarbonisation focused on reducing the exposure of the ECB balance sheet to climate risks, not the climate footprint of the collateral issuers. It dictates the use of risk-based metrics to capture the climate risk exposure and is, in general, a weaker approach than the one governed by the principle of climate neutrality - the latter would establish eligibility criteria and haircuts based on climate performance and activities of the issuer, as detailed above. ²⁶

Risk-based metrics

It is unclear which metrics the ECB will use to capture climate risk exposure. In some cases, the climate footprint of entities might be used as a proxy for transition risks. However, to properly capture climate risks, the ECB might rely on the approaches that it has used for climate stress testing.²⁷ For example, it might assess how bond issuers will be affected financially under different climate scenarios. The application of such approaches to the collateral framework faces, however, limitations.²⁸ First, there are several challenges in quantifying financial risks using scenario analysis. Due to the uncertainty about the implementation of climate policies, there is no objective way of selecting among climate scenarios. Second, the quantification of risks will always be imperfect due to the existence of fundamental uncertainty.²⁹ It is not by chance that the progress that has been

²⁵See Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A. and van Lerven, F. (2021). Greening the Eurosystem collateral framework: how to decarbonise the ECB's monetary policy, New Economics Foundation, March.

²⁶See Dafermos, Y., Gabor D., Nikolaidi, M. and van Lerven, F. (2022). Greening collateral frameworks, INSPIRE Sustainable Central Banking Toolbox, Policy Briefing Paper No. 7. London: Grantham Research Institute on Climate Change and the Environment.

²⁷Alogoskoufis, S., Dunz, N., Emambakhsh, T., Hennig, T., Kaijser, M. et al. (2021). ECB economy-wide climate stress test: Methodology and results, Occasional Paper No. 281, European Central Bank.

²⁸See Dafermos, Y., Gabor, D., Nikolaidi, M. and van Lerven, F. (2022). Greening collateral frameworks, INSPIRE Sustainable Central Banking Toolbox, Policy Briefing Paper No. 7, London: Grantham Research Institute on Climate Change and the Environment.

²⁹See also Chenet, H., Ryan-Collins, J. and van Lerven F. (2022). Developing a precautionary approach to financial policy – from climate to biodiversity, INSPIRE Sustainable Central Banking Toolbox, Policy Briefing Paper No. 02. London: Grantham Research Institute on Climate Change and the Environment.

made in identifying and assessing these risks is still at a very early stage.³⁰ Third, the risks are not exogenous to central bank actions. For example, once the ECB decides to increase the haircut of a bond based on climate criteria, the company that issues this bond will not be in the same financial position as before. This risk endogeneity has not been so far captured by the ECB's approaches to climate risks.

Our Paris decarbonisation benchmark does not rely on risk-based metrics. Instead, it uses climate footprint metrics which do not face these challenges. The climate footprint metrics that can be used for the decarbonisation of the collateral framework can have the features already described in the previous section about the corporate bond holdings: they should rely both on company climate performance indicators and activity-based taxonomies.

Haircuts and exclusion

The value of Eurosystem haircuts on collateral depends on several factors, including the credit quality of the bond issuer (i.e. the credit rating), the remaining time until the repayment of the bond, and the interest rate paid on the asset at regular intervals. The ECB haircuts are not only important for the relationship between central banks and commercial banks. Private financial institutions also lend against collateral and apply their own haircuts, and their eligibility criteria and haircut standards are highly influenced by those set by the Eurosystem. In that sense, the Eurosystem collateral framework has wider implications for the functioning of the financial system – it is a monetary policy lever that influences credit conditions for private companies, including private financial institutions whose bonds are used as collateral to tap ECB liquidity.

The July 2022 announcement clarified that the ECB 'will, as of this year, consider climate change risks when reviewing haircuts applied to corporate bonds used as collateral', while ensuring that overall volume of collateral available remains ample.³¹ This formulation suggests that the decarbonisation of collateral rules, starting with year, will involve both lowering haircuts for issuers with low climate risks, and increasing haircuts for issuers with higher climate risks. Should this be the case, the ECB would be among the first central banks in high income countries to penalise dirty credit creation via higher haircuts on dirty collateral assets. Yet the risk principle guiding these plans opens a gap with the Paris decarbonisation framework that would apply haircuts to all private collateral, and calibrate them on the climate footprint of the assets. Research has already demonstrated that it would be possible for the ECB to align haircuts with a Paris

³⁰See Network for Greening the Financial System [NGFS] (2022). Capturing risk differentials from climate-related risks A Progress Report: Lessons learned from the existing analyses and practices of financial institutions, NGFS Technical Document.

 $^{^{31}}$ See: https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220704~4f48a72462.en.html.

decarbonisation benchmark without impairing the transmission mechanism of monetary policy.³²

Starting in 2024, the ECB also plans to limit the share of assets issued by entities with a high-carbon footprint that can be pledged as collateral by individual counterparties when borrowing from the Eurosystem. This 'limits regime' is groundbreaking because it institutionalises the logic of exclusion, accepting that alignment with Paris priorities means the ECB should not finance bonds issued by companies with a high-carbon footprint. But the limits regime falls short of our decarbonisation benchmark since (i) a proportion of a high-carbon collateral that will be subject to these limits will still be used as collateral and (ii) it is unclear if the limits will apply to all Paris-misaligned high-carbon collateral assets. Again, research has shown that it would be feasible for the ECB to exclude the bonds of all companies that engage in carbon-intensive activities, apart from green bonds, without impairing the transmission mechanism of monetary policy.³³

Timeline

It is positive that the ECB will start considering climate risks in the review of haircuts, without any further delays. Yet the fact that the climate footprint of financial assets will not be directly considered as a determinant of haircuts (but only indirectly through its impact on risks) significantly restricts the benefits of this quick implementation. It is also unclear why the limits on high-carbon assets will only apply after 2024 given that there is already sufficient information about the climate footprint of issuers in order for such limits to be put in place immediately.

4 Other measures

The ECB intends to make sustainability-related disclosures an eligibility criterion in the collateral framework after 2026: marketable assets and credit claims from companies and debtors that do not disclose sustainability-related information in line with the Corporate Sustainability Reporting Directive (CSRD) will not be accepted as collateral. The CSRD is the new legislation about the reporting of environmental and social issues.³⁴ A key advantage of this framework is

³²See Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A. and van Lerven, F. (2021). Greening the Eurosystem collateral framework: how to decarbonise the ECB's monetary policy, New Economics Foundation, March.

³³Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A. and van Lerven, F. (2021). Greening the Eurosystem collateral framework: how to decarbonise the ECB's monetary policy, New Economics Foundation, March.

³⁴See European Commission (2021). Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting, Brussels, 20.04.21.

that it explicitly recognises double materiality: companies have to report not only how sustainability issues affect their business (financial materiality or 'outside-in' perspective), but also how their own operations affect people and the environment (impact materiality or 'inside-out' perspective).

However, the CSRD reporting standards will only be published in 2023 and 2024, and firms will start reporting based on these standards after 2024.³⁵ This means that, despite the urgency of the climate crisis, it will still take a few years until climate-related disclosures become mandatory in the EU. Since the ECB will make disclosure an eligibility criterion only in 2026, it will effectively have no impact on the reporting of climate-related information: by then the vast majority of firms that are relevant for the collateral framework will have reported such information according to the EU legislation. This means that the ECB has missed the opportunity of accelerating the disclosure of this climate-related information by introducing such reporting as an eligibility criterion much earlier than 2026.

The ECB has also announced that it will enhance the tools that it uses for assessing and managing climate-related risks. It will do so by (i) urging rating agencies to be more transparent on how their ratings incorporate climate-related information³⁶ and (ii) setting common standards on how the credit assessment systems of national central banks incorporate climate risks.

Although the incorporation of climate risks into the standard credit assessments is necessary, the approach of the ECB suffers from two limitations. First, it continues to rely too much on the assessments of credit rating agencies. The evaluation of climate risks is not a straightforward task and is reliant on the scenarios that are adopted, the modelling methods that are used and political economy issues. Public authorities like the ECB are, thus, in a better position to drive these assessments by promoting science-based transparent approaches.³⁷ Hence, in the climate crisis era, the national central banks' in-house credit assessment systems need to play a more central role and the reliance on credit rating agencies' evaluations should decline.³⁸

 $^{^{35}} See \ https://www.consilium.europa.eu/en/press/press-releases/2022/06/21/new-rules-on-sustainability-disclosure-provisional-agreement-between-council-and-european-parliament.$

³⁶As has been highlighted in Network for Greening the Financial System [NGFS] (2022). Credit ratings and climate and climate change - challenges for central bank operations, May 2022, there is a lack of transparency on how climate considerations affect the final ratings of credit rating agencies.

³⁷See also Jordan, S. and Bosch, J.S. (2022). The ECB finally adopts green rules of its monetary policy, Positive Money Europe, 13 July.

³⁸For an overview of the in-house assessment systems, see Auria, L., Bingmer, M., Caicedo Graciano, C.M., Charave, C., Gavilá, S., Iannamorelli, A., Levy, A., Maldonado, A., Resch, F., Rossi, A.M. and Sauer, S. (2021). Overview of central banks' in-house credit assessment systems in the euro area, ECB Occasional Paper Series No. 284. For some proposals on how environmental risks can be incorporated into the Eurosystem's in-house credit assessment systems, see Abdelli, S. and Batsaikhan, U. (2022). Driving sustainability from within: The role

Second, the ECB ignores the side effects of risk assessments. Although the assessment of transition risks might urge companies that are responsible for the climate crisis to decarbonise their operations, the evaluation of physical risks can penalise households, companies and countries that are exposed to climate-related events such as wildfires, droughts and floods, even though they might have a low responsibility for the climate crisis. This can happen because financial institutions might reduce their lending to borrowers that are exposed to physical risks, undermining the financing of the climate adaptation efforts of climate vulnerable households, firms and governments. The ECB needs to adjust its monetary policy and financial supervision tools to address these side effects of risk assessment. Risk assessment should not be viewed as a purely technical exercise.

5 Conclusion

Over the last couple of years, the ECB has made progress in aligning its monetary policy framework with the prerequisites of the Paris Agreement. Although this progress is welcome, there are still significant gaps in the development of a decarbonised framework that would be consistent with the climate emergency that our societies are facing.

In this brief, we have argued that the ECB will not be in a position to properly decarbonise its corporate bond purchases if it does not abandon the market neutrality principle and use, instead, climate neutrality as the guiding principle for adjusting its bond holdings. We have also argued that the ECB's decision to confine decarbonisation to reinvestments and to not exclude high-carbon issuers who are not aligned with the prerequisites of the Paris Agreement significantly restricts the potential of its QE programme to contribute to the climate neutral transformation of the financial system. We hope that the detailed plans that the ECB will announce soon about the greening of its corporate bond holdings will be closer to our decarbonisation benchmark and will, therefore, narrow the ECB Paris gap.

In the case of the collateral framework, the gap between the ECB plans and the requirements of the Paris Agreement is even higher. The ECB's exclusive focus on risk exposure does not go far enough. Instead, the ECB should put a climate footprint approach at the core of its plans for decarbonising the collateral framework – it should adjust haircuts based on the greenness and dirtiness of the underlying collateral. Without any further delay, the ECB should also exclude from its collateral framework Paris-misaligned high-carbon assets. Posing limits on the amount of high-carbon assets that can be pledged as collateral would not

of central banks' credit rating in mitigating climate and environmental risks, Positive Money Europe and WWF, February.

be sufficient.

The ECB should also significantly reduce its reliance on credit rating agencies for assessing the climate risks of financial assets and make more progress in developing science-based transparent in-house assessment systems. And it should make climate-related disclosures a mandatory requirement for eligibility in the collateral framework as soon as possible.

Through their cumulative emissions, the euro area countries have a high historical responsibility for the climate crisis facing humanity. As the most powerful euro area financial institution, the ECB needs to play a leading role in achieving a climate neutral financial system as soon as possible. The ECB should, thus, close its Paris gap without further delays.