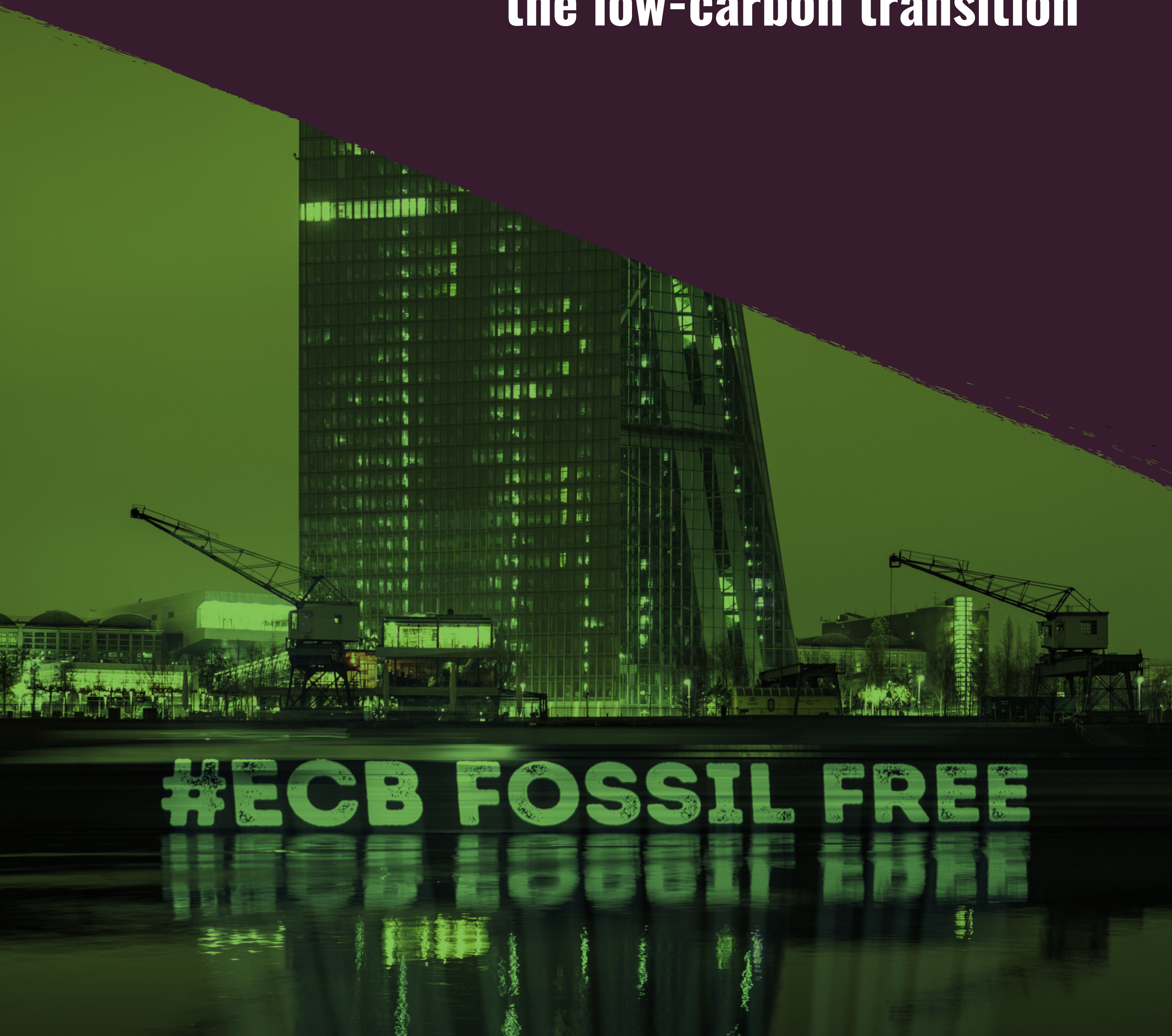
CLIMATE ROADMAP:
now what? Next steps for the ECB to support the low-carbon transition



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Core principles the ECB should follow when designing its monetary and prudential policy

1.

Act on its legal obligation to support the EU's general economic policies, as outlined in its secondary mandate.

2.

Follow EU policymakers by recognising and enacting the double materiality principle.

3.

Implement immediate impactful actions to align all its operations with a 1.5°C trajectory by adopting a precautionary approach and using existing data.

4.

Work for society, by improving engagement with citizens and increasing democratic accountability.

Key Recommendations

1.

Replace 'market neutrality' with a new benchmark aligned with the EU environmental policies and commitments.

- **Recommendation 1:** Adopt a fit-for-purpose benchmark to guide its operations that adheres to the ECB's duties under the EU Treaties and the Paris Agreement and targets the realignment of the financial system accordingly.
- **Recommendation 2:** Take into account the priorities and expectations of European residents in designing its operational benchmarks, such as through regular public consultations, making 'ECB listens' events a permanent feature, and establishing regular forums for dialogue with civil society.

2.

Fully decarbonise the collateral framework and asset purchases.

- **Recommendation 1:** Decarbonise quantitative easing (QE) programmes and the collateral framework in line with the precautionary approach to climate risks.
- **Recommendation 2:** Increase support towards bond issuances from the European Investment Bank and NextGenerationEU to ramp up green investment and lock in a low-carbon future.

3.

Adjust its refinancing operations.

- **Recommendation 1:** Decarbonise the existing targeted long-term refinancing operations (TLTRO), by linking the interest rate to the exposure of participating bank's overall portfolio to climate risks and alignment with climate goals and intermediate transition targets, and by excluding harmful activities from eligibility.
- **Recommendation 2:** Establish a pilot green TLTRO providing cheap financing to banks to encourage desirable types of lending, starting with targeted support for loans and mortgages that finance energy-efficient building renovations, to drive the EU's Green Deal agenda.

4.

Integrate climate risks into the Bank's own internal credit ratings for collateral and asset purchases.

- **Recommendation 1:** Take responsibility to set public standards and develop ambitious own minimum standards and ratings incorporating climate and nature-related risks.
- **Recommendation 2:** Introduce these standards into the Eurosystem Collateral Assessment Framework (ECAF).

5.

Support development and implementation of prudential measures to align financial flows with 1.5°C.

- **Recommendation 1:** Support the introduction of the Pillar I capital requirements and macroprudential requirements for climate-related financial risks.
- **Recommendation 2:** Introduce supervisory add-ons (Pillar II requirements) based on the results of the supervisory assessment and scenario analyses/ stress testing in cases where: i) banks are not able to demonstrate adequate processes and organisation to manage climate-related financial risks; ii) Pillar I capital requirements do not cover climate-related financial risks (also until such Pillar I requirements are introduced); and iii) stress tests reveal capital shortfall to cover climate-related financial risks.
- **Recommendation 3:** Require the supervised entities to submit and implement net-zero alignment plans, subject to robust standards and validation.

Introduction

In July 2021, the European Central Bank (ECB) concluded its 18-month monetary policy strategy review, the first since 2003. Looking at its mandate as enshrined in the EU Treaties, responding to pressure from civil society[1,2] and to mounting scientific evidence of the threat posed by climate breakdown,[3] the ECB recognised that it must integrate climate considerations into its operations. The Bank outlined a detailed roadmap of its climate-related actions, signifying a major shift in its thinking. However, while welcome, the roadmap fails to deliver the ambition and urgency essential if the ECB is to fully integrate climate risks and impacts to its operations and support the low-carbon transition.

When designing the policies to fulfil its primary, secondary, and financial stability mandate, the ECB should be clear: “There can be no price stability, no financial stability, and no job security on a burning planet in social turmoil.”[4]

If anything, the current energy price crisis, which has lifted inflation to record high levels since the creation of the euro, has only reinforced the urgency for the ECB to act forcefully in support of the EU’s energy transition. Indeed, expanding the supply of domestic renewable energy would greatly reduce the EU’s exposure to volatile imported energy prices, such as gas and oil.[5] In this context, we argue for caution when it comes to the Bank’s potential response to a prolonged rise in energy prices, as alluded to by Isabel Schnabel in a recent speech.[6] Before doing so, the ECB should carefully evaluate the impact of such a move on the cost of energy transition investments, which are more sensitive to capital cost than amortised fossil fuels assets.

In the face of the climate and energy crisis, it is time for the ECB to acknowledge the inadequacy of its current policy toolkit and explore ways to reconcile price stability and support for the low-carbon transition.
The Bank must recognise that voluntary, market-led approaches are not sufficient to redirect capital flows away from harmful investments that will eventually lead to an environmental, social, and economic catastrophe. It must use its powers to steer European finance towards mandatory alignment with international and European climate and environmental goals. Therefore, the Bank should be guided by a core set of principles to guide its policy decisions. We also put forward 5 sets of recommendations that the ECB can implement to align its policies to the transition pathway.

Principles for action

1. Act on its legal obligation to support the EU's general economic policies, as outlined in its secondary mandate

The ECB's climate roadmap is designed to better integrate the impact of climate in its price stability mandate. It does not propose any measures to actively contribute to EU climate objectives. The ECB must therefore go beyond this limited roadmap and act on its secondary mandate to support EU economic policies that aim at a high level of protection and improve the quality of the environment. Recognising these obligations, the Bank should take a proactive approach in steering financial flows towards the activities that comply with these criteria.[7] If needed, the European Parliament and other EU institutions could provide the ECB with further specifications on which EU priorities the Bank should focus on under its secondary mandate.

As the ECB Executive Board Member Frank Elderson highlighted,[8] the Bank's secondary objective, defined in Article 127(1) of the Treaty on the Functioning of the European Union (TFEU), is a duty, not an option. Without prejudice to price stability, it requires the ECB to "support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 TEU". As the secondary objective is both binding and supportive, the ECB should follow it while coordinating with the competent EU institutions.[9] Particularly, it should mirror the prioritisation of general economic policies as reflected by the legislative work of the European Parliament and the Council as well as the directions and guidelines issued by the European Council under Article 15(1) TEU and Article 121(2) TFEU.[10] Doing so implies adopting new measures that have not been taken under the primary objective, with the secondary objective constituting a distinct legal basis for action.[11]

- The ECB should adopt new and more forceful measures that go beyond the measures announced so far under its price stability objective and are appropriate to support the EU's economic policies geared towards climate neutrality, as expressed in the EU Climate Law[12] and the European Council's[13] conclusions.
- The ECB should report yearly to the European Parliament on how it has incorporated the EU's general economic policies in its recent decisions.
- If necessary, the ECB should consult with EU institutions to clarify and specify for which EU general economic policies the Bank's support would be most beneficial.

2. Follow EU policymakers in recognising and enacting the double materiality principle

The ECB must align with the EU Sustainable Finance strategy, which emphasises the double materiality principle (outside-in/financial materiality and inside-out/environmental and social materiality),[14] thus recognising that "Investment decisions and financial advice might cause, contribute to or be directly linked to negative material effects on environment and society."[15] As observed by Frank Elderson, the EU Treaties explicitly require environmental protection to be "integrated into the definition and implementation of all EU policies and activities, which include actions taken by the ECB".[16]

However, the ECB's approach, laid out in its climate roadmap, focuses almost entirely on the climate-related risks to finance, and sidelines the risks that finance poses to climate. It largely ignores the lead set by EU policymakers and disregards its environmental obligations under the EU Treaties. This could be interpreted as a breach of its secondary mandate and leave it exposed to litigation risk.[17]

Furthermore, this one-sided approach undermines the ECB's ambitions to mitigate climate-related risks. Indeed, by failing to act directly to curb harmful finance that goes to activities resulting in massive environmental damage, the Bank effectively contributes to a further build-up of climate and nature-related risks. Therefore, the ECB's failure to act on climate risks is undermining its price stability mandate, with its ability to control inflation likely to be significantly undermined, too.[18]

- To fulfil both its primary and secondary mandates, the ECB needs to proactively steer the transition to the Paris-aligned financial system, notably through supporting green investments (eg via a green TLTRO) and curbing finance to harmful activities.

3. Implement immediate impactful actions to align all its operations with a 1.5°C trajectory by adopting a precautionary approach and using existing data

Given the urgency of the climate crisis and the EU target of 55% reduction in greenhouse gas emissions (GHGs) by 2030 compared to 1990 levels,[19,20] the ECB must act much faster than proposed in its roadmap, which envisions many of the measures not being implemented until 2023–24 at the earliest. To combat the rapid build-up of climate-related risks, the ECB needs to take early preventive action, following the precautionary principle enshrined in Article 191 of TFEU. It aims at ensuring a higher level of environmental protection through preventive decision-taking in the case of risks. Such risks have been clearly identified by the Intergovernmental Panel on Climate Change (IPCC) and are already materialising.[21] The ECB itself has stressed the need to address the climate-related risks mounting with the climate crisis and confirmed that there are clear benefits of acting early.[22]

Climate risks are characterised by radical uncertainty, which makes them impossible to accurately predict. The ECB must therefore adopt a precautionary approach, which stresses that a lack of perfect information must not be an excuse for inaction,[23] as championed by De Nederlandsche Bank,[24] underlined by the Network for Greening the Financial System (NGFS),[25] and recognised by the White House Executive Order.[26] Moving away from the risk perspective also recognises the ECB as a universal owner of financial assets in the Eurozone. With a large and diversified portfolio, the ECB needs to apply a proactive approach, influencing credit allocation to assist the transition to a Paris-aligned economy.[27,28,29]

Using existing data, the ECB can, and must, begin by excluding the most polluting companies from its programmes, notably those companies financing or developing any new fossil fuel exploration and production projects.[30] As data and methodologies improve, it can fine-tune its approach, echoing and improving the approach taken by the Bank of England.[31]

As Frank Elderson emphasised: “There are risks to acting on the basis of partial data, but in the case of climate change, the risks of inaction are far greater.”[32]

- The ECB should act at a pace commensurate with the urgency of the climate crisis. Guided by science, it should begin by excluding activities that pose the most risk to finance and to the climate, notably companies that develop new fossil fuel production projects, from its operations including asset purchases, collateral framework, and TLTROs.
- In its supervisory capacity, the ECB should also support precautionary actions to introduce prudential capital requirements (Pillar I) for the fossil fuel exposures of supervised entities. Supervisory measures (Pillar II) alone will not be sufficient to ensure the resilience of the banking sector, and the current progress on managing climate-related financial risks remains insufficient.[33] In its supervisory assessment 2021, the ECB concluded: “If institutions continue at this pace, many will not align their practices with the supervisory expectations and may not be able to soundly, effectively and comprehensively manage climate-related and environmental risks in the near future.”[34]
- Lastly, as required by the EU Treaties, the ECB must go further than climate and urgently begin to consider its duties in tackling broader environmental risks, such as biodiversity loss.[35]

4. Work for society, by improving engagement with citizens and increasing democratic accountability

The current ECB accountability framework presents several shortcomings and issues related to integrity and transparency.[36] The Bank needs to fully acknowledge these pitfalls and take measures to enhance its accountability to the European Parliament, as well as to increase democratic engagement and transparency.

Building on the ‘ECB Listens’ events, the ECB needs to seek greater engagement with civil society, citizens, and external experts by establishing a regular process of public consultation on its policy changes. As per its climate roadmap, for instance, the ECB plans on developing proposals to adapt the Corporate Sector Purchase Programme (CSPP) framework to include climate change considerations. The ECB could follow the example of the Bank of England, which between 21 May and 2 July 2021 held a consultation on options for greening its Corporate Bond Purchase Scheme in which several organisations and experts took part.[37] Consulting the public before developing a new policy also translates into a stronger legitimacy basis for the policy itself.

In full respect of its independence, the ECB should consider societal needs and priorities when deciding the structural elements of its policy. While first and foremost aiming at price stability, benchmarks and targets set by the ECB should work for, and not against the goals of society and the wellbeing of people. Guidance on these priorities should come from the interpretation of the ECB’s secondary mandate in coordination with the European Parliament and the Council.[38]

The ECB also needs to strengthen reporting on the measures it takes and on the progress being made. It should build on the climate stress-testing of the Eurozone and its financial institutions and monitor how aligned EU financial institutions and flows are with the Paris Agreement and 1.5°C. The ECB should report annually to the EU Parliament, including on actions it is taking if the financial transition targets are not being met.

- The ECB needs to account for the priorities and expectations of European residents by designing its policies in an open, consultative manner, with enhanced transparency and accountability to the public.
- The ECB should open a dialogue with the elected representatives in the European Parliament to improve its accountability mechanisms, as recently proposed by the European Parliament’s ECON Committee.[39]

Delivering on the principles: first steps to take in 2022

1. Replace 'market neutrality' with a new benchmark aligned with the EU environmental policies and commitments

Market neutrality drives the ECB to support the biggest EU carbon emitters as well as companies involved in arms manufacturing or condemned for fraud.[40] Amid the Covid crisis, more than 170,000 Europeans[41] called on the ECB to stop purchasing assets from fossil fuel companies but – by ignoring their call and refusing to even slightly deviate from so-called market neutrality – the Bank continued to buy more bonds from oil and gas majors.[42]

The ECB acknowledges[43,44] that the market neutrality approach leads to a carbon bias and could amplify market failures.[45] By following this misguided approach,[46] the Bank also quietly accumulates climate-related risks in its monetary portfolios and contributes to their build-up in the European financial system. Furthermore, adhering to market neutrality clearly disregards the ECB's secondary mandate[47] that calls on it to operate in a way that is compatible with the EU objectives and – when possible and while ensuring price stability – to contribute to them.

Maintaining the market neutrality approach would defy the ECB's interpretation of its mandate in light of climate change. It could also expose the bank to legal challenges for failing to uphold the EU Treaties. This principle was conceived in a world where environmental and climate harm were not considered, and it cannot stand in the way of tackling the climate emergency. The ECB must develop a new benchmark that aligns with the EU objectives and the goal of the Paris Agreement to limit global warming to 1.5° C.

In developing the new benchmark, the ECB must not decide for itself or to suit financial institutions but should engage with civil society and external experts through an open public process and invite and respond to the feedback it receives from the elected policymakers in the European Parliament. Only in that way can the ECB ensure the democratic legitimacy of its policy choices.

- **Recommendation 1:** Adopt a fit-for-purpose benchmark to guide its operations that adheres to the ECB's duties under the EU Treaties and the Paris Agreement and targets the realignment of the financial system accordingly.
- **Recommendation 2:** Take into account the priorities and expectations of European residents in designing its operational benchmarks by strengthening the democratic engagement with, and accountability to the citizens and the European Parliament.

2. Fully decarbonise the collateral framework and asset purchases

[48]The ECB's collateral framework and asset purchase programmes are, besides their direct impacts, powerful signalling tools that affect financial market prices and capital allocation more widely. As part of its Strategy Review, the ECB committed to reviewing and adjusting the collateral framework and the CSPP under the roadmap of climate-change-related actions.[49] In taking these steps, the ECB started considering the carbon bias in its corporate bond purchases as identified by researchers.[50] However, the Bank fell short of recognising a similar carbon bias in its collateral framework.[51] It merely outlined a plan to "review collateral valuation and risk control framework to ensure that climate change risks are reflected", with potential adjustments subject to that review possibly taking until the end of 2024 to be implemented.

These first steps by the ECB are welcome, but it must now ensure they lead to concrete results and are implemented on a timescale appropriate for addressing the climate emergency.

Regarding its approach to the CSPP, the ECB must adopt a fit-for-purpose benchmark to replace the flawed concept of market neutrality[52] and adjust its purchases to be consistent with the low-carbon transition under the Paris Agreement.[53] In devising this new approach, the ECB needs to ensure that it targets 'real' outcomes – reductions in emissions and related metrics – and not merely the Bank's exposure to climate risks. The ECB could in several respects improve on[54] the recently announced plans by the Bank of England to green its Corporate Bond Purchase Scheme.[55] In particular, the ECB must reject the 'carrots first, sticks later' approach and the continuing adherence to market neutrality, which means the Bank of England's current approach will not substantially reduce the emissions intensity of its portfolio, and could even lead to some carbon-intensive firms receiving better treatment than environmentally friendly ones.[56]

To deliver a robust approach, the ECB should first and foremost: i) target total absolute emission reductions associated with its holdings on all scopes, including Scope 3 emissions; ii) tilt away from polluting companies without delay and exclude companies developing new coal, oil, and gas production projects or thermal coal projects; and iii) lead by example by adopting an accelerated pathway to green the CSPP, aiming for steeper emission reductions and earlier net-zero alignment to use the signalling power of the scheme in influencing markets to adjust.

The ECB must also align its other purchase schemes – the asset-backed securities purchase programme (ABSPP) and the covered bond purchase programme (CBPP3) – with the EU climate goals. To do so, the Bank could use the climate footprint of the financial institutions that issue them, as it is already planning to derive indicators that measure the climate footprint of financial institutions' portfolios.[57,58]

Regarding the collateral framework, the ECB needs to go beyond the pure risk approach indicated in its climate roadmap. It should ensure consistency with EU policy goals and the Paris Agreement, as well as its indicated approach to the CSPP. The Bank must recognise that its current rules – which disproportionately favour fossil fuel and other carbon-intensive companies relative to their contribution to EU employment and Gross Value Added – go directly contrary to the EU's policy goals.[59] To address this, the Bank needs to revise the framework by i) climate-adjusting the haircuts on bonds it accepts according to their climate footprint and ii) adjusting its eligibility criteria. The latter should be a combination of negative screening – excluding bonds issued by the most carbon-intensive firms and companies at odds with the transition,[60] and positive screening – including more bonds of issuers and activities conducive to net-zero transition.[61]

- **Recommendation 1:** Decarbonise QE programmes and the collateral framework in line with the precautionary approach to climate risks.
- **Recommendation 2:** Increase support towards bond issuances from the European Investment Bank and NextGenerationEU to ramp up green investment and lock in a low-carbon future.

3. Adjust its refinancing operations

The ECB needs to go beyond the narrow scope of tools to be climate-adjusted presented in its Strategy Review. This must include influencing the banking system, particularly by integrating climate risks in, and decarbonising, its refinancing operations[62] (notably the TLTROs). This should lead towards climate-aligned refinancing operations (CAROs)[63] and include setting up a green TLTRO pilot supporting housing retrofits in the EU.[64,65]

Targeted refinancing operations are key instruments for central banks to stimulate the issuance of credit during periods of crisis to specific segments of the real economy by lowering the cost of funding for banks. The ECB TLTROs represent an effective mechanism of transmission of monetary policy by encouraging and favouring bank lending to households and non-financial corporations for a longer term than in the regular refinancing operations.[66]

Currently, the ECB is providing cheap funding to banks without any environmental criteria attached, funnelling credit towards activities that may be worsening the climate and ecological emergency. Although data on the allocation of TLTROs funds is not disclosed by the ECB, research shows that bank loans worth billions of euro still flow to coal and gas plants.[67] This way, TLTROs may be conflicting with the EU Green Deal, and therefore breaching the ECB secondary mandate.[68] The ECB must comply with its legal obligations and with the Paris Agreement that binds all EU institutions, and align its refinancing operations with supporting the general economic policies of the EU.

To achieve its inflation target without neglecting its full mandate, the ECB could adjust the TLTROs facility in several ways. In the current context of rising inflation mostly driven by skyrocketing energy prices, the ECB could use this programme to address inflation by penalising dirty lending without jeopardising the investments necessary to realise the low-carbon transition. To this end, the ECB could adjust its interest rate according to the borrowing bank's exposure to climate risks: the riskier the bank's portfolio, the higher the interest rate. In this way, investments in activities exposed to climate-related financial risks are discouraged and the ECB would not risk acting against its duty to preserve financial stability.[69] Alternatively, refinancing operations can be indirectly decarbonised by excluding dirty assets from the pool of assets eligible for such operations, or by introducing additional haircuts that account for environmental risks.[70]

Another complementary approach would be to offer preferential treatment to the financing of green projects, such as energy efficiency home renovation or renewable energy (e.g. recent green lending programmes by the Bank of Japan,[71] the Bank of Korea,[72] and the People's Bank of China).[73] This can be done by offering a green discount rate under the TLTRO programme, proportional to commercial banks' portfolio of green loans. The ECB could lower the interest rate of the TLTROs, which currently ranges between -1% and 0%, for the volume of loans compliant with green purposes, hence encouraging banks to increase their funding to sustainable business models.[74] The ECB could rely on the EU Taxonomy Regulation[75] and upcoming legislation on the Energy Performance of Buildings Directive (EPBD) and the review of the Mortgage Credit Directive to identify what classifies as such and therefore contributes to

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62 Refinancing operations provide banks with liquidity of different frequency and maturity. Main refinancing operations (MROs) consist of liquidity-providing operations with frequency and maturity of one week, while regular Longer-term refinancing operarations (LTROs) have a maturity of three months and are conducted on a monthly basis. Recently, non-reguar longer-term operations with a maturity of more than three months have been introduced. In this paper, we focus on Targeted Longer-Term Refinancing Operations, which the ECB has made available since 2014. They offer financing to credit institutions for periods up to four years at very attractive rates ranging from -0.5% to as low as -1.0%, dependent on commercial banks meeting lending targets. By providing cheap funding to banks if they meet specified lending criteria, the ECB is encouraging bank lending to the real economy.

the EU environmental objectives until an EU-level green mortgage standard is developed.

- Recommendation 1: Decarbonise the existing TLTRO programmes by linking the interest rate to the exposure of a bank's overall portfolio to climate risks and to its alignment with the transition goals, and by excluding harmful activities from eligibility.
- Recommendation 2: Establish a pilot green TLTRO to drive the EU's Green Deal agenda, starting with targeted support for loans and mortgages that finance a buildings green renovation programme.

4. Integrate climate risks into the ECB's internal credit ratings for collateral and asset purchases

In its climate roadmap, the ECB committed to assess the way rating agencies incorporate climate change risks into Credit Rating Agencies (CRAs) and to develop minimum standards for in-house credit ratings, as well as introducing climate change-related requirements, if warranted.

The ECB should not wait and see what private CRAs will – or won't – do. It should lead by example, by developing its own ratings and ambitious minimum standards and mandate the CRAs to follow them.[76] The ECB should also provide support and technical advice to the EU and national regulators on prudential measures necessary to tackle those risks, such as through implementing prudential capital requirements for climate-related financial risks and climate systemic risk buffers.[77]

The Eurosystem provides credit to financial institutions and non-financial corporations only against adequate collateral, which consists of different kinds of financial assets as defined by eligibility criteria.[78] Credit institutions pledge collaterals as a form of insurance towards their lender (in this instance the Eurosystem). Should they be unable to repay their debts, the Eurosystem can sell those assets – the collateral – to recoup its losses.[79] Identifying and managing the risks associated with the assets eligible as collateral is key to minimising risks within the Eurosystem balance sheet and in the wider market. Given the systemic nature that climate change poses to individual companies and financial institutions, as well as to the whole economy and financial system, climate and environmental criteria should be taken into account when rating credit.

The Eurosystem assesses the adequacy of collateral through the Eurosystem Collateral Assessment Framework (ECAF), which draws on three sources: the in-house credit assessment systems (ICASs), the internal ratings-based (IRB) system, and the external credit assessment institutions (ECAIs). The latter mainly provide ratings for marketable assets, whereas ICASs and the IRB system assess non-marketable assets, which, in the form of credit claims, represent one-third of the outstanding collateral in the Eurosystem.

Given the recent expansion of eligibility for credit claims and the sheer proportion of private assets that they represent in the collateral framework, we encourage the ECB to develop ambitious standards and enhanced methodologies to integrate climate and environmental risk assessment into the ICASs to assess the health of small and medium enterprises (SMEs) and non-financial corporations (NFCs). For this, the ECB should also build its own database and risk indicators, as currently SMEs and NFCs rely on various ESG providers, which may provide unreliable metrics and data, as well as suffer from conflicts of interest.[80]

Given the neutral nature of credit assessment by the national central banks (NCBs), which they provide at no charge, the weight of the climate-updated ICASs within the ECAF should increase. Their methodology should become the main source to inform ECAIs, the IRB system, and other market participant ratings. This would allow the Eurosystem to reduce reliance on ECAIs and private ESG ratings providers, as recommended by the Financial Stability Forum following the Great Financial Crisis.[81]

- Recommendation 1: Take responsibility for setting public standards and develop minimum standards and ratings incorporating climate- and nature-related risks.
- Recommendation 2: Introduce these standards to all sources informing the Eurosystem Collateral Assessment Framework.

5. Support development and implementation of prudential measures to align financial flows with 1.5°C[82]

In its capacity as a supervisor and a member of the NGFS, the ECB should support and, in line with its supervisory mandate, contribute to the development and implementation of measures to incorporate climate-related financial risks into banks' prudential rules.

In the ongoing review of the Capital Requirements Regulation and Capital Requirements Directive (CRR/

CRD), the ECB should signal its support for the implementation of additional Pillar I capital requirements to reflect climate-related financial risks associated with the financing of fossil fuel assets and activities to ensure the resilience of the banking system to climate-related financial risks. In particular, risk weights for assets and activities associated with the exploration and exploitation of new fossil fuel reserves and the expansion of existing ones should be increased, which is consistent with the risk profile of such activities.[83] Such capital requirements can be summarised as a **One-for-One rule for stability**: Every euro/dollar/pound, etc., of financing provided in relation to any new fossil fuel reserves, must be matched by one euro/dollar/pound of the institution's own funds, to be held liable.

In line with the results of the ECB economy-wide climate stress test (scenario exercise), which showed "there are clear benefits to acting early" in terms of costs to the banking system and economy overall,[84] the measures should be implemented without further delay, i.e., within the current CRR/CRD review. Further, as per the European Commissioń s call for advice to the European Banking Authority (EBA), the European Systemic Risk Board (ESRB), and the ECB in its macroprudential capacity,[85] the ECB should contribute to designing appropriate macroprudential tools to prevent and mitigate financial stability risks arising from climate change.[86] The ECB should then support the implementation of such tools in the 2022 review of the EU macroprudential framework.

The ECB also needs to use its supervisory powers to ensure robust implementation of the Pillar II prudential measures[87,88,89] to mitigate climate-related financial risks of the supervised financial institutions. This includes i) ensuring that financial institutions consider climate-related financial risks in their business strategies, governance and risk management, and capital and liquidity adequacy assessment to the degree possible given the existing data and methodological limitations;[90] ii) based on the results of the Supervisory Review and Evaluation Process (SREP), including stress testing, imposing additional supervisory capital requirements to cover institutions´ climate-related financial risks not captured under Pillar I; and iii) in accordance with the double materiality principle and a precautionary approach to climate risks, ensuring that financial institutions consider the climate impact of their activity and align with a 1.5°C trajectory.

- Recommendation 1: Support the introduction of the Pillar I capital requirements and macroprudential requirements for climate-related financial risk.
- Recommendation 2: Introduce supervisory add-ons (Pillar II requirements) on the results of the supervisory assessment and stress testing in cases where: i) banks are not able to demonstrate adequate processes and organisation to manage climate-related financial risks; ii) Pillar I capital requirements do not cover climate-related financial risks (also until such Pillar I requirements are introduced); and iii) stress test reveal capital shortfall to cover climate-related financial risks.
- Recommendation 3: Require supervised entities to submit and implement net-zero alignment plans, subject to robust standards and validation.

Conclusion

The roadmap of the climate-related actions that the ECB announced last summer as part of its Strategy Review was a welcome shift in recognising that central banks have responsibilities to act on climate change. The ECB's plans, however, fall far short, offering an approach focused on protecting the financial sector, and the Bank's balance sheet, from climate risks, rather than on precautionary action to tackle those risks and protect the environment and society as a whole. Essentially, "rather than fighting climate change, the ECB seeks to flee from its consequences."[91] The current energy crisis, driven predominantly by spiking gas prices, has painfully underscored the urgency of the move away from volatile fossil fuels. With inflation on the rise and the cost-of-living squeeze hitting millions, the ECB must act decisively within its mandate to support EU governments in delivering an orderly green transition. By using its policies to shift financial flows away from fossil assets and towards essential green investments, the ECB can play a key supporting role in both ensuring resilience to future energy shocks and tackling the climate emergency.

ENDNOTES

1 Van Lerven, F. (2020). The ECB and climate change: outlining a vision for success. London: New Economics Foundation, Positive Money Europe, 350.org. Retrieved from https://neweconomics.org/2020/04/the-ecb-and-climate-change

2 350.org. (2020). People not Polluters. Petition to the ECB. Retrieved from https://350.org/people-not-polluters/

3 Masson-Delmotte, V., Zhai, P., Pirani A., Connors, S.L., Péan, C., … Zhou. B. (eds.) (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC: Cambridge University Press. Retrieved from https://www.ipcc.ch/assessment-report/ar6/

4 Chatterji, A. & Barmes, D. (2021). Central banks can't ignore the big issues at Jackson Hole. Green Central Banking. Retrieved from https://greencentralbanking.com/2021/08/25/opinion-central-banks-cant-ignore-the-big-issues-at-jackson-hole/

5 Jourdan, S. & van Tilburg, R. (2022). The ECB can help fix the energy price crisis: Play the long game. Energy Monitor. Retrieved from https://www.energymonitor.ai/finance/banking/the-ecb-can-help-fix-the-energy-price-crisis-play-the-long-game

6 Schnabel, I. (2021). Looking through higher energy prices? Monetary policy and the green transition. Remarks at a panel on Climate and the Financial System at the American Finance Association 2022 Virtual Annual Meeting. Retrieved from https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220108~0425a24eb7.en.html

7 van Tilburg, R. & Simi , A. (2021). Legally Green: Climate Change and the ECB Mandate. Utretcht: Sustainable Finance Lab. Retrieved from https://sustainablefinancelab.nl/wp-content/uploads/sites/334/2021/07/Legally-Green.pdf

8 Elderson, F. (2021). Greening Monetary Policy. ECB blog. Retrieved from https://www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210213~7e26af8606.en.html

9 de Boer, N. & van 't Klooster, J. (2021). The EU's neglected secondary mandate. Brussels: Positive Money Europe. Retrieved from http://www.positivemoney.eu/wp-content/uploads/2021/10/The-ECBs-neglected-secondary-mandate_v6.0.pdf

10 Ioannidis et al. (2021). ECB Occasional Paper, Climate Change and Monetary Policy in the Euro Area. Retrieved from https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op271~36775d43c8.en.pdf?c29941b5e2dbeb3168b6e48f362a2b87

11 Ibid.

12 European Council. (2021). European climate law: Council and Parliament reach provisional agreement. Retrieved from https://www.consilium.europa.eu/en/press/press-releases/2021/05/05/european-climate-law-council-and-parliament-reach-provisional-agreement/

13 European Council. (2021). European Council, 20-21 June 2019. Retrieved from https://www.consilium.europa.eu/en/meetings/european-council/2019/06/20-21/

14 European Commission. (2019). Guidelines on reporting climate-related information. Retrieved from https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines_en.pdf

15 European Commission. (n.d.). Regulation on sustainability-related disclosure in the financial services sector. Retrieved from https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/sustainability-related-disclosure-financial-services-sector_en [accessed 22 February 2022].

16 Elderson, F. (2021). Greening monetary policy. ECB blog. Retrieved from https://www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210213~7e26af8606.en.html

17 van Tilburg, R. & Simi , A. (2021). Legally Green: Climate Change and the Ecb Mandate. Utrecht: Sustainable Finance Lab. Retrieved from https://sustainablefinancelab.nl/wp-content/uploads/sites/334/2021/07/Legally-Green.pdf

18 Dafermos, Y., Kriwoluzky, A., Vargas, M., Volz, U., & Wittich, J. (2021). The Price of Hesitation: How the Climate Crisis Threatens Price Stability and What the ECB Must Do about It. Hamburg, Berlin and London: Greenpeace Germany; German Institute for Economic Research; and SOAS, University of London. Retrieved from https://greencentralbanking.com/research/price-of-hesitation-climate-crisis-ecb-price-stability/

19 European Commission. (n.d.). 2030 Climate Target Plan. Brussels: EU Commission. Retrieved from https://ec.europa.eu/clima/eu-action/european-green-deal/2030-climate-target-plan_en [accessed 22 February 2022].

20 EU Commission. (2021). 2050 long-term strategy. Brussels: EU Commission. Retrieved from https://ec.europa.eu/clima/eu-action/climate-strategies-targets/2050-long-term-strategy_en

21 Masson-Delmotte, V., Zhai, P., Pirani A., Connors, S.L., Péan, C., … Zhou. B. (eds.) (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC: Cambridge University Press. Retrieved from https://www.ipcc.ch/assessment-report/ar6/

22 Alogoskoufis, S., Dunz, N., Emambakhsh, T., Hennig, T, Kaijser, M.,…Salleo, C. (2021). ECB economy-wide climate stress test: Methodology and results. ECB Occasional Paper Series, No. 281, September 2021. Retrieved from https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op281~05a7735b1c.en.pdf

23 Chenet, H., Ryan-Collins, J. & van Lerven, F. (2021). Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy. ScienceDirect. Retrieved from https://www.sciencedirect.com/science/article/pii/S092180092100015X

24 De Nederlandsche Bank. (2021). Climate Disclosure. Retrieved from https://www.dnb.nl/media/geubhers/web_131565_jvsl_eng_h4-verantwoording.pdf

25 NGFS. (2021). Adapting central bank operations to a hotter world. Reviewing some options. Retrieved from https://www.ngfs.net/en/adapting-central-bank-operations-hotter-world-reviewing-some-options

26 White House. (2021). A Roadmap to build a Climate-resilient Economy. Retrieved from https://www.whitehouse.gov/wp-content/uploads/2021/10/Climate-Finance-Report.pdf
27 van Tilburg, R. & Simi , A. (2021). Every avenue available: Lessons from monetary history for the road ahead for central banks to help prevent climate change. Utrecht: Sustainable Finance Lab. Retrieved from https://sustainablefinancelab.nl/en/every-avenue-available-lessons-from-monetary-history-for-tackling-climate-change/
28 van Tilburg, R. & Simi , A. (2021). Legally green: Climate change and the ECB Mandate. Retrieved from Retrieved from https://sustainablefinancelab.nl/wp-content/uploads/sites/334/2021/07/Legally-Green.pdf
29 Chenet, H., Couppey-Soubeyran, J., & Kalinowski, W. (2021). The ECB at a time for decisions. Retrieved from https://www.veblen-institute.org/The-ECB-at-a-time-for-decisions-1-2.html
30 IEA. (2021). Net Zero by 2050—A Roadmap for the Global Energy Sector. Retrieved from https://www.iea.org/reports/net-zero-by-2050
31 The Bank of England adopted the approach of using available data now and committed to tightening its requirements with time and as better metrics become available. Bank of England. (2021). Greening our Corporate Bond Purchase Scheme (CBPS). Retrieved from https://www.bankofengland.co.uk/markets/greening-the-corporate-bond-purchase-scheme
32 Elderson, F. (2021), Patchy data is a good start: from Kuznets and Clark to supervisors and climate. Retrieved from https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210616~44c5a95300.en.html
33 Symon, J. (2021). A silver bullet against green swans. Brussels: Finance Watch. Retrieved from https://www.finance-watch.org/publication/report-a-silver-bullet-against-green-swans-incorporating-climate-risk-into-prudential-rules/
34 ECB. (2021). The state of climate and enviro
nmental risk management in the banking sector, Report on the supervisory review of banks' approaches to manage climate and environmental risks, November 2021. Retrieved from https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202111guideonclimate-relatedandenvironmentalrisks~4b25454055.en.pdf
35 Convention on Biological Diversity. (2021). What's new. Retrieved from https://www.cbd.int/convention/
36 Braun, B. (2017). Two Sides of the Same Coin? Independence and Accountability of the European Central Bank. Berlin: Transparency International EU.
37 Bank of England. (2021). Options for greening the Bank of England's Corporate Bond Purchase Scheme. Retrieved from https://www.bankofengland.co.uk/paper/2021/options-for-greening-the-bank-of-englands-corporate-bond-purchase-scheme
38 de Boer, N. & van 't Klooster, J. (2021). The EU's neglected secondary mandate. Utrecht: Positive Money Europe. Retrieved from http://www.positivemoney.eu/wp-content/uploads/2021/10/The-ECBs-neglected-secondary-mandate_v6.0.pdf
39 Del Vasto, A. (2021). European Parliament pushes Lagarde to discuss new accountability regime. Utrecht: Positive Money Europe. Retrieved from https://www.positivemoney.eu/2021/11/european-parliament-lagarde-accountability/
40 Schreiber, P. (2020). Quantitative easing: the ECB's dirty secret. Paris: Reclaim Finance. Retrieved from https://reclaimfinance.org/site/en/2020/05/17/quantitative-easing-climate-the-ecbs-dirty-secret/
41 Sumofus. (2020). ECB stop funding the climate crisis. Retrieved from https://actions.sumofus.org/a/european-central-bank-stop-funding-the-climate-crisis
42 Reclaim Finance. (2021). Spreading the fossil fuel pandemic. Paris: Reclaim Finance. Retrieved from https://reclaimfinance.org/site/en/2021/10/28/infected-by-oil-and-gas-giants-a-short-story-of-ecbs-covid-asset-purchases/
43 Schnabel, I. (2021). From market neutrality to market efficiency. Retrieved from https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210614~162bd7c253.en.html
44 Schnabel, I. (2021). From green neglect to green dominance. Retrieved from https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210303_1~f3df48854e.en.html
45 Koranyi, B. (2021). ECB needs to rethink market neutrality in green asset buys: Knot. Retrieved from https://www.nasdaq.com/articles/ecb-needs-to-rethink-market-neutrality-in-green-asset-buys%3A-knot-2021-02-11
46 Jourdan, S. & Del Vasto, A. (2021). Why the ECB should go beyond market neutrality. Utrecht: Positive Money Europe. Retrieved from http://www.positivemoney.eu/wp-content/uploads/2021/02/Briefing-Market-Neutrality.pdf
47 de Boer, N. & van 't Klooster, J. (2021). The EU's neglected secondary mandate. Utrecht: Positive Money Europe. Retrieved from http://www.positivemoney.eu/wp-content/uploads/2021/10/The-ECBs-neglected-secondary-mandate_v6.0.pdf
48
49 ECB. (2021). Detailed roadmap of climate change-related actions. Retrieved from https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1_annex~f84ab35968.en.pdf
50 Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A., & van Lerven, F. (2020). Decarbonising is easy. Beyond market neutrality in the ECB's corporate QE. London: New Economics Foundation. Retrieved from https://neweconomics.org/2020/10/decarbonising-is-easy
51 Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A., & van Lerven, F. (2021). Greening the Eurosystem collateral framework. London: New Economics Foundation. Retrieved from https://neweconomics.org/2021/03/greening-the-eurosystem-collateral-framework
52 Colesanti Senni, C., & Monnin, P. (2020). Central Bank Market Neutrality is a Myth. Zurich: Council on Economic Policies. Retrieved from https://www.cepweb.org/central-bank-market-neutrality-is-a-myth/
53 Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A., & van Lerven, F. (2020). Decarbonising is easy. Beyond market neutrality in the ECB's corporate QE. London: New Economics
Foundation. Retrieved from https://neweconomics.org/2020/10/decarbonising-is-easy
54 Reclaim Finance. (2021). Bank of England lets big polluters slip through the net. Paris: Reclaim Finance. Retrieved from https://reclaimfinance.org/site/en/2021/11/23/bank-of-england-lets-big-polluters-slip-through-the-net/
55 Bank of England. (2021). Greening our Corporate Bond Purchase Scheme (CBPS). London: Bank of England. Retrieved from https://www.bankofengland.co.uk/markets/greening-the-corporate-bond-purchase-scheme
56 Dafermos, Y., Gabor, D., Nikolaidi, M., & 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. Retrieved from https://eprints.soas.ac.uk/36190/
57 Dafermos, Y., Kriwoluzky, A., Vargas, M., Volz, U., & Wittich, J. (2021). The Price of Hesitation: How the Climate Crisis Threatens Price Stability and What the ECB Must Do about It. Retrieved from https://eprints.soas.ac.uk/35496/

58 Batsaikhan, U. (2021). A race against time: The implications of the ECB climate action plan. Utrecht: Positive Money Europe. Retrieved from https://www.positivemoney.eu/2021/08/implications-ecb-climate-action-plan/
59 Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A., & van Lerven, F. (2021). Greening the Eurosystem collateral framework. London: New Economics Foundation. Retrieved from https://neweconomics.org/2021/03/greening-the-eurosystem-collateral-framework
60 An exception could be made for green bonds issued to raise funds dedicated to a low-carbon transition by those firms.
61 Dafermos, Y., Kriwoluzky, A., Vargas, M., Volz, U., & Wittich, J. (2021). The Price of Hesitation: How the Climate Crisis Threatens Price Stability and What the ECB Must Do about It. Retrieved from https://eprints.soas.ac.uk/35496/
62 Refinancing operations provide banks with liquidity of different frequency and maturity. Main refinancing operations (MROs) consist of liquidity-providing operations with frequency and maturity of one week, while regular Longer-term refinancing operarations (LTROs) have a maturity of three months and are conducted on a monthly basis. Recently, non-reguar longer-term operations with a maturity of more than three months have been introduced. In this paper, we focus on Targeted Longer-Term Refinancing Operations, which the ECB has made available since 2014. They offer financing to credit institutions for periods up to four years at very attractive rates ranging from -0.5% to as low as -1.0%, dependent on commercial banks meeting lending targets. By providing cheap funding to banks if they meet specified lending criteria, the ECB is encouraging bank lending to the real economy.
63 Böser, F. & Colesanti Senni, C. (2021). CAROs: Climate risk adjusted refinancing operations, Economics Working Paper Series, No. 21/354. Zurich: ETH Zurich, CER-ETH - Center of Economic Research. Retrieved from https://www.econstor.eu/bitstream/10419/235040/1/176080519X.pdf
64 Batsaikhan, U. & Jourdan, S. (2021). Money looking for a home. How to make the European Central Bank's negative interest rates pay for building renovations. Utrecht: Positive Money Europe. Retrieved from http://www.positivemoney.eu/wp-content/uploads/2021/02/2021_Building-Renovation-TLTROs.pdf
65 Van t' Klooster, J. & van Tolburg, R. (2020). Targeting a sustainable recovery with Green TLTROs. Utrecht: Positive Money Europe. Retrieved from https://www.positivemoney.eu/2020/09/green-tltros/
66 Banks using TLTROs decreased interest rates by 20bps [Benetton, M. & Fantino, D. (2018). Competition and the pass-through of unconventional monetary policy: evidence from TLTROs. Temi di discussione (Economic working papers) 1187, Bank of Italy, Economic Research and International Relations Area. Retrieved from https://ideas.repec.org/p/bdi/wptemi/td_1187_18.html], increased lending to firms by more than 20% [Laine, O-M. (2021). The Effect of Targeted Monetary Policy on Bank Lending. Journal of Banking and Financial Economics, 1. 25-43. Retrieved from 10.7172/2353-6845.jbfe.2021.1.], while higher TLTROs borrowing is associated with easing in credit standards [Andreeva, D.C. & Garcia-Posada, M. (2020). The impact of the ECB's targeted long-term refinancing operations on banks' lending policies: the role of competition. ECB Working Papers Series. Retrieved from https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2364~12a4540091.en.pdf].
67 Kirsch, A., Opeña Disterhoft, J., Marr, G., McCully, P., Breech, R.,…. Rees, C. (2021). Banking on Climate Chaos. Fossil Fuel Finance Report 2021. Retrieved from https://www.ran.org/wp-content/uploads/2021/03/Banking-on-Climate-Chaos-2021.pdf
68 As per the ECB own analysis of its mandate, there is an obligation to support the EU general economic policies "in a way that further promotes the achievement of the objectives of the Union" and to "not support general economic policies in the Union that are incompatible with the Union's objectives".
69 Böser, F. & Colesanti Senni, C. (2021). Emission-based Interest Rates and the Transition to a Low-carbon Economy. Retrieved from https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/421404/WP-20-337.pdf?sequence=1&isAllowed=y
70 Dikau, S., Robins, N., & Volz, V. (2020). INSPIRE, A toolbox of Sustainable Crisis Response Measures for Central Banks and Supervisors. Retrieved from https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/11/INSPIRE-toolbox_-2nd-Edition-1.pdf
71 Caswell G. (2021). Bank of Japan to launch climate lending facility. Green Central Banking. Retrieved from https://greencentralbanking.com/2021/06/21/bank-of-japan-to-launch-climate-lending-facility/
72 Caswell G. (2021). Climate protests and a new Korean green lending programme. Retrieved from https://greencentralbanking.com/2021/10/29/climate-protests-korean-green-lending-programme/
73 Clarke, D. (2021), PBoC boosts support for green lending. Green Central Banking. Retrieved from https://greencentralbanking.com/2021/11/26/pboc-boosts-support-for-green-lending/;
74 A detailed proposal on greening TLTROs and a pilot project to decarbonise Europe's building stock by scaling up renovation loans through this facility has been elaborated.
75 Setting criteria to distinguish environmentally harmful activities from sustainable ones is inherently political and falls outside the scope of competence of the ECB. However, we support a science-based Taxonomy Regulation detached from political interests and that aims solely at redirecting financial flows away from all fossil fuels and towards the low-carbon transition.
76 For a detailed proposal refer to Abdelli, M. and Batsaikhan, U. (2022) Driving sustainability from within: The role of central banks' credit rating in mitigating climate and environmental risks', https://www.positivemoney.eu/2022/02/central-banks-cred-it-rating-climate/
77 Monnin, P. (2021). Systemic risk buffers—The missing piece in the prudential response to climate risks. Retrieved from https://www.cepweb.org/systemic-risk-buffers-the-missing-piece-in-the-prudential-response-to-climate-risks/
78 Article 18.1 of the Statute of the European System of Central Banks and of the European Central Bank.
79 Dafermos, Y., Gabor, D., Nikolaidi, M., Pawloff, A., & van Lerven, F. (2021). Greening the Eurosystem collateral framework. London: New Economics Foundation. Retrieved from https://neweconomics.org/2021/03/greening-the-eurosystem-collateral-framework
80 DG FISMA. (2021). Study on Sustainability-related Ratings, Data and Research. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/d7d85036-509c-11eb-b59f-01aa75ed71a1/language-en/format-PDF/source-183474104
81 Financial Stability Forum. (2008). Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience. Retrieved from https://www.fsb.org/wp-content/uploads/r_0804.pdf
82

83 Finance Watch. (2021). Breaking the climate-finance doom loop: Finance Watch amendments proposal to the Capital Requirements Regulation and Solvency II. Retrieved from https://www.finance-watch.org/wp-content/uploads/2021/05/Breaking_the_climate-finance_doom_loop_Finance_Watch_amendments_proposal-2.pdf

84 Alogoskoufis, S., Dunz, N., Emambakhsh, T., Hennig, T, Kaijser, M.,...Salleo, C. (2021). ECB economy-wide climate stress test: Methodology and results. ECB Occasional Paper Series, No. 281, September 2021. Retrieved from https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op281~05a7735b1c.en.pdf

85 European Commission. (2021). Review of the EU Macroprudential Framework. Retrieved from https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20review%20macroprudential/1019954/20210630%20CfA%20macropru%20review.pdf

86 Monnin, P. (2021). Systemic risk buffers—The missing piece in the prudential response to climate risks. Retrieved from https://www.cepweb.org/systemic-risk-buffers-the-missing-piece-in-the-prudential-response-to-climate-risks/

87 ECB. (n.d.). The Supervisory Review and Evaluation Process (SREP). Retrieved from https://www.bankingsupervision.europa.eu/banking/srep/html/index.en.html [accessed 22 February 2022].

88 ECB. (2020). Guide on climate-related and environmental risks. Retrieved from https://www.bankingsupervision.europa.eu/legalframework/publiccons/pdf/climate-related_risks/ssm.202005_draft_guide_on_climate-related_and_environmental_risks.en.pdf

89 EBA. (2021). Report on management and supervision of ESG risks for credit institutions and investment firms. Retrieved from https://www.eba.europa.eu/eba-publishes-its-report-management-and-supervision-esg-risks-credit-institutions-and-investment.

90 ECB. (2021). The clock is ticking for banks to manage climate and environmental risks, Supervision Newsletter, 18 August 2021.

91 van Tilburg, R. & Simi , A. (2022). ECB must choose fight, not flight, on climate change. OMFIF. Retrieved from https://www.omfif.org/2022/02/ecb-must-choose-fight-not-flight-on-climate-change/

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