



EUROPEAN CENTRAL BANK

EUROSYSTEM

Christine LAGARDE

President

Mr Damien Carême

Ms Karima Delli

Mr Claude Gruffat

Ms Marie Toussaint

Members of the European Parliament

European Parliament

60, rue Wiertz

B-1047 Brussels

Frankfurt am Main, 11 March 2022

L/CL/22/54

Re: Your letter (QZ-053)

Honourable Members of the European Parliament, dear Mr Carême, Ms Delli, Mr Gruffat and Ms Toussaint,

Thank you for your letter, which was passed on to me by Ms Irene Tinagli, Chair of the Committee on Economic and Monetary Affairs, accompanied by a cover letter dated 7 December 2021.

The reference to Professor William Nordhaus' Nobel Prize lecture in a blog post by Mr Panetta, which you refer to in your letter, relates to his observation on climate change as a quintessential global externality: as Mr Panetta observes, the negative effects of greenhouse gas emissions are felt not just where the emissions originate but globally, and this requires international coordination. This statement, which also characterises the mitigation of climate change as a form of global public good, holds irrespective of the specific model used to assess the impact of climate change.

Regarding your question on the methods and models used to analyse climate change at the European Central Bank (ECB), let me first draw your attention to the commitments set out in the comprehensive action plan on climate change, together with the detailed roadmap¹ to incorporate climate change considerations into our monetary policy framework, as adopted by the ECB's Governing Council. Specifically, on macroeconomic

¹ See the press release of 8 July 2021 entitled "ECB presents action plan to include climate change considerations in its monetary policy strategy" and its annex "Detailed roadmap of climate change-related actions", available on the ECB's website at: https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1~f104919225.en.html and https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1_annex~f84ab35968.en.pdf.

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modelling, we are committed to expanding our analytical capacity to better account for the implications of climate change and mitigation policies for the economy, the financial system and monetary policy transmission. This includes for example integrating climate risks into the ECB's workhorse models, assessing their impact on potential growth, conducting scenario analyses regarding transition policies and modelling the implications of climate change for the transmission of monetary policy. In September 2021 we published the underlying analysis in the paper entitled "Climate change and monetary policy in the euro area"², where a dedicated chapter assesses in detail the challenges for macroeconomic modelling.

Let me also refer you to the publication³ of our economy-wide climate stress-test⁴. Taking the Phase I scenarios of the Network for Greening the Financial System (NGFS) as a basis, we applied three main scenarios for our stress test. First, the orderly transition, under which climate policy measures are well calibrated and implemented in a timely and effective manner and the Paris Agreement targets of "well below 2 degrees Celsius" are met. Second, the "hot house world" scenario, under which no regulation or policy aimed at limiting climate change is introduced and global temperatures would rise by at least 3 degrees Celsius. Third, between these two extreme climate scenarios, there is a disorderly transition scenario that assumes delayed implementation of the requisite climate policy measures. The results show that firms and banks clearly benefit from adopting green policies early on to foster the transition to a zero-carbon economy. To close, let me emphasise our commitment to continuing to publish and share the analysis we conduct on the impact of climate change with the public.

Yours sincerely,

[signed]

Christine Lagarde

² See "Climate change and monetary policy in the euro area", *Occasional Paper Series*, No 271, ECB, Frankfurt am Main, September 2021, available on the ECB's website at: <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op271~36775d43c8.en.pdf?f26c937c8b72f2d321adc33893e17197>.

³ See the press release of 22 September 2021 entitled "Firms and banks to benefit from early adoption of green policies, ECB's economy-wide climate stress test shows", available on the ECB's website at: <https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210922~59ade4710b.en.html>.

⁴ See "ECB economy-wide climate stress test", *Occasional Paper Series*, No 281, ECB, Frankfurt am Main, September 2021, available on the ECB's website at: <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op281~05a7735b1c.en.pdf>.

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