SPEECH

Central banks in a changing world: the role of the ECB in the face of climate and environmental risks

Speech by Christine Lagarde, President of the ECB, at the Maurice Allais Foundation

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It is an honour to be speaking to you today as part of your series of workshops in memory of Maurice Allais.

His contributions, in particular his work on general equilibrium theory and market efficiency, helped lay the theoretical foundations for the growth model that Western economies pursued after the Second World War.

As Maurice Allais once said, “what could be a better way of preparing for the aftermath of the war than to try to find a solution to the fundamental problem of any economy, namely how to promote the greatest feasible economic efficiency”.[1]

In many ways, his vision was borne out. Prioritising efficiency, both in our internal economic affairs, such as developing the single European market, and in our external trade, led to a period of unprecedented sustained economic growth.

And as economies advanced along a path of steadily increasing potential output, central banks like the ECB could focus first and foremost on stabilising inflation by managing demand, without having to worry too much about structural changes in the economy.

But Maurice Allais also predicted that widespread global integration without proper governance could “only create instability everywhere”.[2] And this prediction is now, regrettably, also proving to be correct.

Open trade has led to increasing tensions between major powers – although notably not within the EU, where we have had a suitable governance system in place. And as a result, multilateral trade is becoming more fragmented: the number of new global trade restrictions has been rising steadily, from about 650 new restrictions in 2017 to more than 3,000 in 2023.[3]

At the same time, the environmental costs of rapid global economic integration – coupled with the undervaluation of ecosystem services – are now having to be paid.

The supply of the nature-related services that underpin global growth, such as timber, minerals and carbon storage, is diminishing. Six of the nine “planetary boundaries” – Earth system processes, including climate

change and biodiversity, which maintain the planet's stability – have been breached.[4]

These developments reinforce each other, as increasing animosity reduces the political will to work together on climate issues. And rising trade barriers impede the flow of renewable technologies that are crucial to preventing further climate degradation.

As central bankers, we are now facing a fundamentally different environment: one characterised by more instability, more volatility and more uncertainty about the very structure of the economy.

I have argued previously that this new world requires us to rethink our policy frameworks.[5] Today, I would like to explain why, as we develop strategies to manage this environment, we need to pay particular attention to climate and nature-related risks owing to the unique impacts they have. And I will also explain how the ECB is responding to them.

The unique nature of climate and nature-related risks

The world never stands still, and central banks are constantly facing new shocks, new risks and changes in the economic environment – be it reversals in government policy, tensions in the financial sector or disruptions in global trade. In most cases, we simply have to take the environment as given and adjust our policy accordingly.

But there are four factors which make climate and nature-related risks a unique challenge for central banks – a challenge that calls for a different type of response.

First, they are a new type of systemic risk. Unlike rare tail events known as "black swans", climate change represents a break from the classical Gaussian probabilistic universe because it is doomed to happen if not addressed by appropriate policies.

These risks also extend globally. If we fail to stop the rise in average temperatures, extreme climate events will become inevitable. Among 380 climate scientists from the Intergovernmental Panel on Climate Change, 77% believe humanity is headed for at least 2.5°C of global heating, well beyond the Paris Agreement goal of 1.5°C.[6]

The second factor is the irreversibility of their impacts. If we do not reverse the course of climate change and environmental degradation, we will reach points of no return.

Some ecosystems are subject to tipping points which, if reached, may change the climate so much that it is impossible – or extremely difficult and costly – to return the environment to its original state.

For example, the Amazon rainforest and tropical peatlands currently store around 220 gigatonnes of carbon, equivalent to 20 years of global CO_2 emissions.[7] If these were destabilised, it would become virtually impossible to stay below 1.5°C of global heating.

Third, the impacts of climate and nature-related risks will spread throughout the economy, affecting central banks' tasks.

The recent energy crisis, although unrelated to the green transition, illustrates how volatile energy prices and shifts in energy markets can significantly influence inflation dynamics. The increase in prices of energy and energy-sensitive goods and services contributed around 6 percentage points to euro area inflation at its peak in October 2022.

Furthermore, climate and nature-related risks create financial risks on the balance sheets of financial institutions. These risks can lead to losses or higher funding costs, reducing the flow of credit to the real economy. This can also affect the transmission of central bank policies to the financing conditions of households and firms.[8]

In the euro area, banks are exposed to climate-related risks, with high-emitting sectors over-represented in their corporate loan portfolios, accounting for over 70% of corporate lending.[9] These risks also extend to our own holdings of corporate bonds.

Finally, these risks are also unique in that, unlike for instance geopolitical risks, central banks can contribute towards mitigating them.

There is broad political consensus on the need to tackle the causes of climate risks. And while governments are in the lead and have the most powerful tools, we can also play our part, within our mandate, in preparing the economy for the future.

So, what is the ECB doing?

What the ECB is doing

First of all, we are maintaining price stability, which is essential for the transition to a low-carbon and circular economy.

The green transition requires substantial investment, and a stable inflation outlook gives firms greater visibility on investment costs, which is particularly important for green projects given their long-term planning horizons. Moreover, price stability supports the relative price signals from policies such as carbon pricing, improving their efficiency.

But beyond creating the right conditions for investment, we are committed to playing our part to address climate change, within our mandate. Our approach can be summarised with three key words: analysing, advising and acting.

Analysing

The basis of contributing to addressing climate change – within the scope of our tasks – is our analysis of how it affects the economy, the financial system and our own activities.

In recent years, we have made significant strides in understanding climate risks. Our findings show that delaying the green transition may result in increased long-term costs.[10] Furthermore, climate change may

pose systemic risks to financial stability[11], and the degradation of nature may pose additional risks in this area.[12]

But there is still more ground to cover. That is why we have announced our Climate and Nature Plan 2024-2025[13], which builds on existing work and explores new frontiers. It calls for robust analysis, and we have identified three core areas for this analysis.

First, we are delving deeper into the green transition's impact on labour markets, economic shocks and investment needs. For example, ECB research shows that the 2022 heatwave in Europe increased food price inflation in the euro area by around 0.7 percentage points.[14]

Second, we are further enhancing our understanding of the physical impacts of climate change. For instance, only about a quarter of losses owing to climate-related catastrophes are currently insured in the EU. In some countries, the figure is less than 5%.[15]

And third, we are exploring the risks stemming from nature loss and degradation. This degradation affects the economy and financial risks, with over half of global GDP – approximately €40 trillion – strongly dependent on nature.[16]

Furthermore, we carry out regular climate-related stress tests of the banking system. These assessments evaluate banks' resilience to various climate scenarios and cover approximately 2.9 million companies and over 2,900 banks. Our second stress test, conducted in 2023, revealed that banks are exposed to the highest credit risk if the green transition is rushed at a later stage and investment is required quickly at higher costs. In the "late push" transition scenario, banks can expect to see their credit risk more than double by 2030 compared with 2022.[17]

Advising

The results of this analysis influence our own internal thinking and guide our approach to policymaking, allowing us to offer better-informed and more targeted advice.

For example, in European and international fora we support the implementation of key preconditions for the green transition, such as an effective carbon price that reflects the true social cost of carbon emissions, better and more comprehensive climate disclosures and the completion of the EU capital markets union.

We formulate recommendations in the form of legal opinions on climate-related legislation, such as the Corporate Sustainability Reporting Directive.

And we aim to disseminate our analysis to enrich the wider policy debate and raise awareness of the potential impacts of climate change, including through our involvement in the Network for Greening the Financial System (NGFS).

In this context, the ECB has contributed to key areas of the NGFS work programme, such as the Workstream on Scenario Design and Analysis. This workstream offers an invaluable climate risk

assessment tool that provides policymakers globally with essential guidance.[18] Furthermore, we chair the NGFS Experts' Network on Legal Issues. The work on climate litigation has been instrumental in increasing awareness of this growing source of risk.[19]

Acting

And that leads me to my final point. Building on our analysis, the ECB acts within its mandate to contribute to mitigating and averting climate risks. In recent years, we have significantly stepped up our activities.

On the monetary policy front, in October 2022 we began tilting the reinvestments of our corporate bond holdings towards issuers with a better climate performance.[20] Since then, the weighted average carbon intensity of our corporate bond purchases has decreased by more than 65%. Moreover, climate-related financial risks are now considered in regular reviews of collateral haircut schedules.[21]

And following the recent review of our operational framework, we decided to introduce climate-related disclosure requirements in the collateral framework from 2026.[22]

We also ensure, as a supervisory authority, that banks integrate climate and nature-related risks into their strategy, governance and risk management. We have issued binding supervisory decisions for banks to carry out so-called materiality assessments of climate and nature-related risks.[23] At the end of 2023 around 90% of the banks under our supervision considered climate and environmental risks to be material.[24]

In the area of payments, we are reducing the environmental footprint of banknotes and payment systems. We use 100% sustainable cotton for banknotes and have banned the disposal of banknote waste in landfills.[25]

Finally, we are committed to reducing our own environmental footprint. Since 2010 the ECB has run a certified environmental management system covering its operations. Over the last ten years, we have reduced electricity and heating consumption per workplace by 30% and 49%, respectively.

Conclusion

Let me conclude.

Maurice Allais once wisely remarked that what essentially defines us is our relentless effort to understand the profound nature of an often indecipherable world.[26]

This is the challenge that central banks face in a rapidly changing world. However, when it comes to climate, we cannot merely strive to better understand our world's complexities or avoid making things worse. We must also contribute to making things better.

Climate and nature-related risks are unique and will continue to increase, and they will only grow in importance over time.

So, within our mandate, the ECB will continue to analyse climate risks, to advise stakeholders and, importantly, to act.

1.

Allais, M. (1989), "Les lignes directrices de mon œuvre", *L'Actualité économique*, Vol. 65, No 3, pp. 323-345.

2.

Sterdyniak, H. (2011), "Maurice Allais, itinéraire d'un économiste français", *Revue d'économie politique*, Vol. 121, pp. 119-153.

3.

McKinsey Global Institute (2024), "Geopolitics and the geometry of global trade", 17 January.

4.

Richardson, K. et al. (2023), "Earth beyond six of nine planetary boundaries", *Science Advances*, Vol. 9, No 37, September.

5.

Lagarde, C. (2023), "Policymaking in an age of shifts and breaks", speech at the annual Economic Policy Symposium "Structural Shifts in the Global Economy" organised by Federal Reserve Bank of Kansas City in Jackson Hole, 25 August.

6.

Carrington, D. (2024), "World's top climate scientists expect global heating to blast past 1.5C target", *The Guardian*, 8 May.

7.

Based on 2022 carbon emission rates. See Marsden, L. et al. (2024), "Ecosystem tipping points: Understanding risks to the economy and financial system", UCL Institute for Innovation and Public Purpose, Policy Report 2024/03.

8.

Dieckelmann, D. et al. (2024), "Turbulent times: geopolitical risk and its impact on euro area financial stability", *Financial Stability Review*, ECB, May.

9.

European Systemic Risk Board (2023), *Towards macroprudential frameworks for managing climate risk*, December.

10.

Emambakhsh, T. et al. (2023), "The Road to Paris: stress testing the transition towards a net-zero economy", *Occasional Paper Series*, No 328, ECB.

11.

ECB and European Systemic Risk Board (2023), *Towards macroprudential frameworks for managing climate risk*, December.

12.

Boldrini, S. et al. (2023), "Living in a world of disappearing nature: physical risk and the implications for financial stability", *Occasional Paper Series*, No 333, ECB.

13.

ECB (2024), "Climate and nature plan 2024-2025 at a glance".

14.

Kuik, F., Nickel, C., Parker, M. and Modery, W. (2023), "The price of inaction: what a hotter climate means for monetary policy", *The ECB Blog*, 18 December.

15.

ECB (2023), "The climate insurance protection gap".

16.

Boldrini, S. et al. (2023), "Living in a world of disappearing nature: physical risk and the implications for financial stability", *Occasional Paper Series*, No 333, ECB.

17.

ECB (2023), "Faster green transition would benefit firms, households and banks, ECB economy-wide climate stress test finds", press release, 6 September.

18.

NGFS (2023), *NGFS Climate Scenarios for central banks and supervisors – Phase IV*, 11 July.

19.

NGFS (2021), *Climate-related litigation: Raising awareness about a growing source of risk*, November.

20.

ECB (2021), "ECB presents action plan to include climate change considerations in its monetary policy strategy", press release, 8 July.

21.

ECB (2022), "ECB reviews its risk control framework for credit operations", press release, 20 December.

These schedules were found to be sufficiently protective against climate-related financial risks in the latest

review in December 2022.

22.

ECB (2024), Climate and nature plan 2024-2025, 30 January.

23.

Elderson, F. (2024), "Making banks resilient to climate and environmental risks – good practices to overcome the remaining stumbling blocks", speech at the 331st European Banking Federation Executive Committee meeting, 14 March.

24.

Elderson, F. (2024), "You have to know your risks to manage them – banks' materiality assessments as a crucial precondition for managing climate and environmental risks", *The Supervision Blog*, 8 May.

25.

ECB (2023), *Product Environmental Footprint study of euro banknotes as a payment instrument*, December.

26.

Allais, M. (1997), *L'anisotropie de l'espace: La nécessaire révision de certains postulats des théories contemporaines – Les données de l'expérience*, Clément Juglar, Paris, p. 40.