

SPEECH

# Sustainable finance: from “eureka!” to action

## Keynote speech by Frank Elderson, Member of the Executive Board of the ECB and Vice-Chair of the Supervisory Board of the ECB, at the Sustainable Finance Lab Symposium on Finance in Transition

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Many great discoveries have been made outside well-controlled laboratory environments. Alexander Fleming discovered penicillin when he returned from holiday and found mould growing on a Petri dish containing bacteria he was studying. Henri Becquerel discovered radioactivity by accident after he put the equipment he used to study the relationship between x-rays and sunlight in a drawer on an overcast day. And Archimedes famously had his “eureka” moment while sitting in a bathtub.

Not all “eureka” moments happen in well-controlled laboratory experiments, but laboratories nevertheless provide an ideal controlled environment to make major discoveries. To develop ideas, test theories and move from scientific findings to practical solutions for real-world problems. Laboratories provide the bridge from theory to practice, from discovery to application and from insight to action.

### Eureka!

Back in 2017 a small group of central banks and supervisors from around the world shared an insight that was relatively novel to them and their peers: climate and nature-related risks are a source of financial risk.<sup>[1]</sup> And this insight was as consequential as it was straightforward. If climate and nature-related risks are a source of financial risk, they fall squarely within the respective mandates of central banks and supervisors – to preserve price stability and ensure the safety and soundness of banks. In fact, if central banks and supervisors were to disregard climate and nature-related risks, they would run the risk of failing to deliver on their mandates.

This was a “eureka” moment for central banks and supervisors.

That small group of central banks and supervisors recognised that action was needed if they were to continue delivering on their mandates as the climate and nature crises increasingly affected the economy and the financial system. And so the Central Banks and Supervisors Network for Greening the Financial System (NGFS) was founded in 2017, providing a much needed laboratory environment for central banks and supervisors working on climate and nature.<sup>[2]</sup> The NGFS was created as a platform to share, develop and advance practices to incorporate climate and nature-related considerations into the tasks and responsibilities of central banks and supervisors. And, importantly, to work closely with academics and stakeholder groups who were already considering the macro-financial consequences of global heating and nature degradation.

### Sharing the “eureka!” moment

From that “eureka” moment, it quickly became the globally accepted consensus that climate and nature-related risks fall squarely within the mandates of central banks and supervisors. The NGFS has grown from eight members in 2017 to 142 members today. All of these central banks and supervisors – from all over the world – subscribe to the NGFS’s stance on the relevance of climate and nature-related risks and use the network as a platform to share experiences and best practices.

In addition, and to a large extent as a direct result of the NGFS’s pioneering work, climate-related risks now feature prominently in the work programmes of major international standard-setting bodies such as the Basel Committee on Banking Supervision, the Committee on Payments and Market Infrastructures and the Financial Stability Board. Unfortunately, the same cannot yet be said for nature-related risks, though a recent stocktake on nature-related risks by the Financial Stability Board showed that a growing number of authorities have been considering the potential implications of nature-related risks for financial stability.<sup>[3]</sup>

In Europe, the relevance of climate and nature-related risks for the economy and the financial system has also been explicitly acknowledged by the legislator. The revised Capital Requirements Directive, which provides the regulatory and supervisory framework for banks in Europe, contains a clear reference to climate and nature-related risks. And the European Union’s climate objectives are explicitly recognised as part of its general economic policies.

Moreover, there is an ever-growing body of evidence showing the macro-financial relevance of climate and nature-related risks. Even if a successful and timely transition requires vast investment flows, analysis consistently confirms that the economic benefits of a transition far outweigh the costs. This conclusion holds especially when considered against the alternative scenarios of doing nothing or doing too little too late.<sup>[4]</sup> Moreover, if global heating and nature degradation are left unchecked, they will lead to increased macroeconomic volatility as climate and nature events become more severe and more frequent and have a greater impact on the economy – something we are already witnessing today.<sup>[5]</sup>

Regrettably, the prevailing consensus in climate science tells us that the goal of limiting global heating to 2 degrees Celsius, as set out in the Paris Agreement, is not currently being met. And it is not even close to being met. Last year the UN Emissions Gap Report concluded that the world is on track for an average increase of 2.9 degrees. And even that will only be achieved if all government commitments to mitigation measures are implemented in full and on time. This means that, besides the investment needs for the transition, policymakers also have to be increasingly mindful of the investment needs for adaption to increased damages from global heating and nature degradation.<sup>[6]</sup>

To sum up, there is no doubt that the ongoing climate and nature crises go to the heart of central banking and banking supervision. And that is why the ECB, moving in lockstep with the work being done by the NGFS, international standard-setting bodies and academia, has been taking action to incorporate climate and nature-related considerations into its monetary policy and supervisory tasks.

## **From “eureka!” to action: in monetary policy...**

Let me start with the steps we have taken in the area of monetary policy.

When the ECB concluded its strategy review in the summer of 2021 – the first review since 2003 – the new strategy explicitly acknowledged the profound implications of climate change for the economy and its relevance for monetary policy. And this new strategy came with a concrete climate action plan.

In the three years since then, we have made significant progress in improving our ability to take climate considerations into account in the macroeconomic analyses that inform our policy discussions. We are now much better able to assess the economic consequences of the green transition in the euro area using a set of macroeconomic models.<sup>[7]</sup> Moreover, we are identifying physical risks that are already posing risks to price stability. We found, for instance, that increases in food prices following extreme heatwaves were an upside risk to price stability.<sup>[8]</sup> This risk has featured explicitly in our monetary policy assessment and communication in recent quarters.

With respect to our monetary policy instruments, in October 2022 we started tilting our reinvestments of corporate bonds towards issuers with a better climate performance. This enables us to avoid undue exposures to climate-related risks that are detrimental to price stability and to align the way we conduct our monetary policy more closely with the EU's general economic policies. As of July 2023 we suspended bond purchases under our asset purchase programme, including corporate bonds, to help bring inflation back to our 2% target. We are still applying the tilting strategy in the partial reinvestments of maturing bonds in the context of our pandemic emergency purchase programme, until these reinvestments are also discontinued as intended at the end of 2024.<sup>[9]</sup> If any corporate bond purchases were needed for monetary policy purposes in the future, the established direction of the tilt would set the minimum benchmark.

In addition to our bond holdings, we are also looking at the collateral framework that we apply in relation to banks' participation in our lending operations. As an early outcome of this work, in 2021 we started to accept sustainability-linked bonds as collateral, provided that they meet the eligibility criteria. We have also decided that only assets that comply with the EU Corporate Sustainability Reporting Directive will remain eligible once this Directive enters into force. And we are continuing to explore options to further incorporate climate considerations into our collateral framework. To this end, we are working with relevant authorities, such as the European Securities and Markets Authority and the European Banking Authority, to encourage better disclosures from collateral issuers and in turn facilitate a better assessment of climate-related risks.

Our current actions aim to support a high degree of confidence in the alignment of our activities with the goals set by the Paris Agreement within our mandate. However, the decarbonisation path for our monetary policy assets remains dependent on actions that are not fully under our control, including the decarbonisation efforts made by the issuers of bonds that we hold.

This is one of the main reasons why we have committed to regularly reviewing all our measures to assess their impact. If necessary, we will adapt them to ensure they continue to fulfil their monetary policy objectives and support the decarbonisation path to reach the goals set by the Paris Agreement and the EU's climate neutrality objectives. Within our mandate, we will also look into addressing additional nature-related challenges.

This process will be fully guided by our monetary policy strategy. Specifically, whenever we have a choice between two instruments – or calibrations of instruments – that are equally conducive to

maintaining price stability, we are legally obliged to choose the one that best supports the general economic policies in the EU. This implies that whenever we adjust the calibration of our instruments, we must choose the option that supports our decarbonisation path, unless our proportionality assessment shows that there are other, less intrusive ways of achieving price stability.

Looking ahead, besides the adjustments that we are already implementing, this strategic commitment may require us to consider two further avenues.<sup>[10]</sup>

The first concerns our public sector bond holdings. Here our reasoning is very similar to that applied to our corporate bond holdings. Presently, most of our monetary policy assets are bonds issued by governments of EU Member States. However, the climate and nature-related risk intensity of these bonds is not obvious as there is currently no clear and reliable framework to assess their compatibility with the Paris Agreement. At the same time, since the pandemic, the universe of supranational bonds issued by EU institutions has increased significantly, with green bonds now making up a relatively large share.<sup>[11]</sup> In my view, when there is no clear monetary policy rationale for preferring domestic sovereign bonds, we should contemplate increasing the share of EU supranational bonds in our total bond holdings to minimise potential climate and nature-related risks and to better align our balance sheet with the general economic policies in the EU. This would be relevant if we had to consider new bond purchases in the future. But it is also relevant for the composition of the structural bond portfolio that will be part of our new operational framework, as announced earlier this year.<sup>[12]</sup>

Second, if there is a monetary policy need to reconsider targeted longer-term refinancing operations (TLTROs) for banks in the future, there are compelling reasons to seriously consider greening these TLTROs. After all, the ECB has in the past adopted a similar approach by incorporating financial stability considerations into the design of its instruments. As of the third series, which was launched in 2019, the TLTROs featured a lending target that excluded housing loans to limit the risk of real estate bubbles forming.<sup>[13]</sup> Similar targeting strategies can be considered to support green lending or exclude non-green lending in the future, provided an efficient validation process can be found.

## **...and banking supervision**

Let me move to the steps we are taking in banking supervision.

Since the ECB published a guide setting out our supervisory expectations for banks' risk management practices in 2020, we have consistently taken climate and nature-related risks<sup>[14]</sup> into account in our supervision.<sup>[15]</sup> Our guide outlines the ECB's understanding of the safe and prudent management of climate and nature-related risks under the current prudential framework. We have now carried out a number of supervisory exercises to assess banks' approaches to managing these risks against our expectations. Following these horizontal exercises, we have repeatedly urged banks to ensure the sound management of climate and nature-related risks, using our expectations as a starting point. In other words, we expect banks to manage climate and nature-related risks just like any other material risk they are exposed to. Considering the requirements clearly set out in the Capital Requirements Directive as implemented into national law and the need for banks to implement a regular process for identifying all material risks, banks must ensure that practices are in place for the sound management

of climate and nature-related risks. They must do so by the end of 2024, and we have also set interim deadlines for banks to remediate certain shortcomings related to the management of these risks. These deadlines were informed by what the banks themselves considered reasonable when we first started discussing climate and nature-related risk management with them.

However, our first two interim deadlines have now passed and a number of banks did not deliver. As a basic starting point for managing any type of risk, we asked banks to perform an adequate materiality assessment of the impact of climate and nature-related risks across their portfolio by March 2023. Almost a year ago – just over six months after that deadline expired – we announced that a number of banks had not yet satisfactorily delivered on this. Consequently, 28 banks received binding supervisory decisions. Out of those, 22 were told that if they didn't remedy their shortcomings by a certain date, they would incur a periodic penalty payment for every day the bank remains in breach of the requirement. Encouragingly, most banks have now submitted a meaningful materiality assessment, which shows that our supervisory efforts have been effective in almost all cases. For the banks where this is not the case, the process is ongoing to determine whether penalties will be charged.

For the second interim deadline, we asked banks to clearly include climate- and nature-related risks in their governance, strategy and risk management by December 2023. As with the first interim deadline, most banks have made progress and frameworks for climate and nature-related risks are now broadly in place. This notwithstanding, weaknesses in banks' practices remain and have been communicated in further feedback letters. In a small group of outliers, foundational elements for the adequate management of climate and nature-related risks are still missing. These banks are now receiving binding supervisory decisions outlining the potential of periodic penalty payments if they fail to timely deliver on the requirements.

To avoid any doubt, we will proceed in exactly the same way with respect to the third and final deadline at the end of this year. By then we want to see that banks' risk management practices ensure the sound management of climate and nature-related risks across all areas of our supervisory expectations. Thereafter, banks will have to keep updating their practices in accordance with advances in data availability, methodologies and legislative and regulatory requirements. Banks need to ensure that their risk management practices are and continue to be commensurate with the magnitude of the climate and nature-related risks that they face. As supervisors it is our job to make sure they do. To achieve this, we will use – obviously always in a proportionate way – all supervisory instruments that we have at our disposal.

## **Conclusion**

The impact of the climate and nature crises on the world and therefore also on the economy will become increasingly profound. While we should continue to push for an orderly and full transition, it is becoming increasingly likely that we will ultimately see a combination of disorderly transition and further increasing physical damages due to the climate and nature crises. It implies that the world in which we live and in which central banks and supervisors pursue their mandate will see a further increase in uncertainty.

The perhaps most renowned laboratory scientist in human history Marie Skłodowska-Curie once remarked that “nothing in life is to be feared; it is only to be understood.” She went on to say that “now is the time to understand more, so that we may fear less.” In light of the ongoing climate and nature crises I would add that now is the time to understand more, so that we can act. NGOs and academic think tanks play a critical role in advancing the frontier of our understanding and in pushing for action. In the pursuit of their mandates, central banks and supervisors are forward-looking and science-based institutions. We have understood – eureka! – that the climate and nature crises require us to look further than ever before beyond our familiar horizon. We are learning to update our models and analytical tools with insights from academic areas beyond economics and finance. We are adapting our instruments to incorporate climate and nature-related considerations.

It is our task. It is our commitment. Because it is our mandate.

Thank you for your attention.

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1.

The initial acknowledgement by the Central Banks and Supervisors Network for Greening the Financial System (NGFS) focused on climate-related risks as a source of financial risk, yet its early reports also made explicit reference to broader environmental risks as a source of financial risk. The NGFS formally acknowledged that nature-related risks are a source of financial risk in a statement in March 2022. See NGFS (2022), [Statement on Nature-Related Financial Risks](#), 24 March.

2.

The eight founding members of the NGFS were the Banco de México, the Bank of England, the Banque de France and Autorité de contrôle prudentiel et de résolution, De Nederlandsche Bank, the Deutsche Bundesbank, Finansinspektionen, the Monetary Authority of Singapore and the People’s Bank of China.

3.

Financial Stability Board (2024), [Stocktake on Nature-related Risks – supervisory and regulatory approaches and perspectives on financial risk](#), 18 July.

4.

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

5.

The frequency and severity of extreme weather events resulting from rising temperatures have already increased markedly. In the NGFS [2023 membership survey](#), around three-quarters of central banks surveyed indicated that their economies had already experienced damages from such acute climate events over the last decade. Annual global damages from weather-related hazards have more than doubled in real terms in the past 20 years, reaching USD 275 billion in 2022. See NGFS (2024),



[“NGFS publishes report on acute physical impacts from climate change and monetary policy”](#), press release, 29 August.

6.

Elderson, F. (2024), [““Know thyself” – avoiding policy mistakes in light of the prevailing climate science”](#), keynote speech at the Delphi Economic Forum, 12 April.

7.

Brand, C., Coenen, G., Hutchinson, J. and Saint Guilhem, A. (2023), [“The macroeconomic implications of the transition to a low-carbon economy”](#), *Economic Bulletin*, Issue 5, ECB.

8.

Kotz, M. et al. (2023), [“The impact of global warming on inflation: averages, seasonality and extremes”](#), *Working Paper Series*, No 2821, ECB.

9.

On 6 June 2024 the Governing Council announced that it intends to discontinue all reinvestments under the pandemic emergency purchase programme at the end of 2024.

10.

Elderson, F. (2023), [“Monetary policy in the climate and nature crises: preserving a “Stabilitätskultur”](#)”, speech at the Bertelsmann Stiftung, 22 November.

11.

Schnabel, I. (2023), [“Monetary policy tightening and the green transition”](#), speech at the International Symposium on Central Bank Independence organised by Sveriges Riksbank, 10 January.

12.

ECB (2024), [“Changes to the operational framework for implementing monetary policy”](#), 13 March.

13.

ECB (2021), [“The role of financial stability considerations in monetary policy and the interaction with macroprudential policy in the euro area”](#), *Occasional Paper Series*, No 272, Frankfurt am Main, September.

14.

In our banking supervision we have typically referred to these risks as climate-related and environmental risks, or C&E risks. For the purpose of this speech I will consider environmental and nature-related risks interchangeable and only refer to the latter.

15.

ECB (2020), [Guide on climate-related and environmental risks](#), November.