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NGFS publishes the second vintage of climate scenarios for forward looking climate risks assessment

Today, the NGFS publishes the second vintage of the climate scenarios and a dedicated website, both aimed at fostering the integration of climate-related risks into the work of central banks and supervisors, and beyond.

- A new [Set of climate scenarios](#): In this second vintage, the NGFS scenarios have been brought up to date, including by incorporating countries' commitments to reach net-zero emissions. They have also been enriched with an expanded set of macroeconomic variables and additional country and sector-level granularity.
- An online [NGFS scenarios website](#): This website serves as a portal to the NGFS scenarios and directs users to all related NGFS publications and data. It also provides interactive visualizations of the scenarios and background resources, and a link to a new Climate Impact Explorer where users can explore and download detailed physical risk data.

Changes to our climate are unprecedented and so past data are a poor guide to the risks that may materialise in the future. The NGFS scenarios provide a framework to assess and manage the future financial and economic risks that changes to our climate might bring. They provide a coherent set of transition pathways, climate impact projections, and economic indicators at country-level, over a long time horizon and under varying assumptions. The NGFS scenarios provide a foundation for scenario analysis across many institutions, creating much needed consistency and comparability of results.

Frank Elderson, Chair of the NGFS and executive board member of the European Central Bank: *"With these scenarios, the NGFS provides – and intends to regularly update – an important public good for all stakeholders, public and private, to help them engage in forward-looking climate-risk analysis under a common and consistent global reference framework."*

The NGFS scenarios illustrate that reaching net zero CO₂ emissions by 2050 on a global basis (a necessary condition to limit global warming to 1.5°C relative to pre-industrial levels) will require an ambitious transition across all sectors of the economy. In particular, significant investment flows would need to be directed towards clean energy and changes in land-use, so that by 2050, renewables (including biomass) deliver around 70% of global primary energy needs. The scenarios further show that policy measures will need to add up to an equivalent global shadow price of emissions of around \$160/tonne in the next decade to incentivise an orderly transition towards net zero by 2050. If these changes occur in an orderly fashion, the scenarios suggest that it could lead to some increase in global GDP, and lower unemployment relative to prior trends. These results could be reversed, however, if the transition is disorderly, for example if meaningful action is delayed such that more severe policies must be introduced later in the horizon to compensate. And if the transition fails, analysis from the NGFS scenarios suggest that up to 13% of global GDP would be at risk by the end of the century, even before accounting for the potential consequences of severe weather events.

Sarah Breeden, Chair of the NGFS' "Macrofinancial" workstream and executive director at the Bank of England: *"Climate scenarios are a crucial tool in assessing the risks of the future. But they are so much more. Because when we better understand the risks of tomorrow, we take more informed action today, and in so doing support an orderly transition to net zero."*

While developed primarily for use by central banks and supervisors, the NGFS scenarios are also useful to others including the financial, business and academic communities. For example, many actors in the private and public sectors are revising their strategies and policies to align with a particular goal, such as reaching net zero emissions by 2050 or enhancing their resilience to particular physical risks. Scenarios highlight some key themes that can be used to help set more granular targets, enhance strategic thinking and form a part of climate-related financial disclosures.

The NGFS climate scenarios were developed in partnership with an academic consortium including the Potsdam Institute for Climate Impact Research (PIK), the International Institute for Applied Systems Analysis (IIASA), the Center for Global Sustainability at the University of Maryland (UMD), Climate Analytics (CA), the Swiss Federal Institute of Technology in Zurich (ETHZ) and the National Institute of Economic and Social Research (NIESR)¹. The NGFS would like to thank the consortium for the excellent collaboration. Since the release of the first vintage of scenarios in June 2020, the NGFS has also engaged with stakeholders and benefited from numerous valuable inputs. A key point of user feedback has been around how to navigate uncertainty in climate scenarios. The NGFS scenarios are explicitly designed to support an assessment of uncertainty both by providing results across a range of scenario assumptions and models, and through regular updates of the underlying data and methodologies.

Looking forward, the NGFS will continue to develop and enrich its scenarios to make them more comprehensive, including by adding further sectoral granularity and improving the integration of the suite of models, with the aim to be as relevant as possible for economic and financial analyses. In addition, the NGFS will present a number of case studies illustrating the use of scenarios by NGFS members and share key learnings related to the methodology of scenario based risk assessment. The NGFS will also keep collaborating with industry to ensure the scenarios are suitable for wider use.

New members/observers

The NGFS is pleased to announce that the Finnish FSA has recently joined the Network as a member.

About the NGFS

The NGFS, launched at the Paris One Planet Summit on 12 December 2017, is a group of central banks and supervisors, which on a voluntary basis are willing to share best practices and contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy. The NGFS brings together 91 central banks and supervisors and 14 observers. Together, they represent five continents and around 85% of global greenhouse gas emissions, and are responsible for the supervision of all of the global systemically important banks and two thirds of global systemically important insurers. The NGFS is chaired by Frank Elderson, member of the ECB's Executive Board. The Secretariat, headed by Jean Boissinot, is provided by Banque de France.

For more details, visit the [NGFS website](#) and [Twitter account](#) or contact the NGFS Secretariat at Banque de France sec.ngfs@banque-france.fr

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