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NGFS publishes latest long-term climate macro-financial scenarios for climate risks assessment

The Network for Greening the Financial System (NGFS) published today the [fourth vintage of its long-term climate macro-financial scenarios](#) for forward-looking climate risks assessments. The NGFS Scenarios explore the transition and physical impacts of climate change, over a long time horizon and under varying assumptions. The NGFS also published three accompanying documents, aimed at providing guidance on the use of these scenarios by central banks and supervisors: a revamped technical documentation; a data user guide; and a technical note on compound risks.

Updated set of scenarios¹. The NGFS scenarios have been updated to account for the latest GDP and population pathways and the most recent country-level climate commitments as at March 2023. Key changes include:

- The orderly scenarios now reflect climate policy delays and the energy crisis following the war in Ukraine.
- The modelling of acute physical risks has been enhanced with the inclusion of two more hazards (droughts and heatwaves) and increased geographical granularity.
- Two new scenarios have been developed:
 - the “Too-little-too-late” Fragmented World scenario that illustrates the adverse consequences of delayed and divergent climate policy ambitions globally; and
 - the “Orderly” Low Demand scenario that explores a Paris-aligned transition driven by substantial behavioral changes in which global warming is limited to 1.5°C.
- The Divergent Net Zero scenario has been discontinued.

Revamped technical documentation. The document includes updated technical information on the NGFS climate scenarios, and highlights key modelling assumptions and comparisons between models, scenarios and vintages for key variables. This documentation includes a high-level overview for non-expert users, and technical modules and non-technical summaries on the modelling components to help users better understand the assumptions and limitations of the scenarios.

Data user guide. This guide provides step-by-step guidance on how to access, download and work with NGFS climate scenarios. The guide describes the *NGFS Scenario Explorer* – the platform to access the data – and *NGFS Data EnTry* – a new data handling tool that supports the user journey from data extraction to visualization.

¹Reaching net zero CO₂ emissions by 2050 at the global level requires an ambitious transition across all sectors of the economy. The NGFS scenarios illustrate that an immediate coordinated transition will be less costly than inaction or a disorderly transition in the longer term. They suggest that not mitigating climate change will lead to the strongest negative impacts on GDP in the second half of the century.

Technical note on “Compound Risks: Implications for Physical Climate Scenario Analysis”. This note explores the materiality of compound shocks and provides initial thoughts on a framework for incorporating compound risks in climate physical risk scenario analysis.

Ravi Menon, Chair of the NGFS and Managing Director of the Monetary Authority of Singapore:

“We are witnessing the early stages of climate change, in the form of unprecedented heat waves, floods and agricultural degradation of increasing frequency. The latest iteration of the NGFS scenarios thus incorporates acute physical risks. It also provides further insights on how physical risks and transition policies affect the macroeconomy. We hope that the updated NGFS scenarios and accompanying documents will enable central banks, supervisors and the broader financial community to better analyse climate-related financial risks. The NGFS will continue to enhance its climate scenarios to account for data availability, modelling advancements and the changing climate policy environment to help stakeholders in their decision-making and risk management.”

Livio Stracca, Chair of the NGFS workstream “Scenario and Design Analysis” and Deputy Director General Financial Stability at the European Central Bank:

“A common understanding of how climate change can impact our economies is essential to guide action worldwide. The NGFS climate scenarios provide central banks, supervisors and an increasingly rich set of users with a common reference framework to answer questions like “what can happen?” – if climate change is not mitigated – and “what should happen?” – shedding light on the benefits of a timely green transition. In this fourth vintage, the NGFS scenarios have been enriched in terms of narratives, models and results, and show once again the urgent need to mitigate climate change.”

The NGFS scenarios, created to provide a common reference framework for analysing climate risks to the economy and financial system, 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), and the National Institute of Economic and Social Research (NIESR)².

An update of the NGFS (Phase IV) scenarios will be published in the course of 2024, and will include further sectoral disaggregation and possibly a more adverse new chronic physical risk damage function. The NGFS welcomes feedback from users on the scenarios to keep on improving them.

About the NGFS

The Network for Greening the Financial System (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 is 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 127 central banks and supervisors and 20 observers. Together, they span across five continents, operate in economies that account for more than 88% of global greenhouse gas emissions and are collectively responsible for the supervision of all global systemically important banks and 80% of the internationally active insurance groups. The NGFS is chaired by Ravi Menon, Managing Director of the Monetary Authority of Singapore. 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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