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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) today published the <u>fifth vintage of its long-term</u> <u>climate macro-financial scenarios for forward-looking climate risks assessments</u>. The NGFS scenarios explore the transition and physical impacts of climate change, over a long time horizon and under varying assumptions. The main development of this fifth phase is an updated assessment of physical risk. It now incorporates a new damage function, resulting in more substantial physical impacts from climate change.

Alongside the updated scenarios, the NGFS has published three supplementary documents to provide guidance to central banks and supervisors on the use of the scenarios:

- A <u>high-level overview</u> of the updates in the Phase V publication package, with a specific focus on the new damage function used for (chronic) physical risk assessment;
- A more detailed <u>explanatory note</u> on the new damage function; and
- An <u>updated technical documentation</u> which discusses the NGFS modelling framework and assumptions behind the scenarios.

**Updated scenarios:** The NGFS scenarios have been updated with new economic and climate data, policy commitments, and model versions. The scenarios now incorporate the latest GDP and population projections of the IPCC's Shared Socioeconomic Pathways (SSPs). In addition, they include the most recent country-level climate commitments as of March 2024.

Sabine Mauderer, Chair of the NGFS and First Deputy Governor of the Deutsche Bundesbank:

"This update of the NGFS climate scenarios marks an important step forward in our collective understanding of climate-related macroeconomic risks. By incorporating the most recent climate commitments and enhanced risk modelling methodologies, we have significantly improved the accuracy of physical risk assessments. Notably, the new vintage assesses that GDP losses by 2050 could be two to four times greater than previously estimated. For instance, they increase significantly for both the Current Policies (5% to 15%) and Net Zero 2050 scenarios (2% to 7%). Reflecting the latest climate science, the scenarios will help central banks and the financial sector to manage the associated risks. As we confront the growing challenges posed by global climate change, this release reaffirms our steadfast dedication to contributing to a resilient and sustainable financial system."

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

"The latest NGFS long-term scenarios are an important guidepost for the financial sector in thinking about climate change. This update of NGFS scenarios clearly demonstrates that insufficiently ambitious climate policies worldwide make the transition even more challenging. The lack of policy ambition creates a vicious circle; increasing costs of mitigation policies complicate their implementation, resulting in further unabated emissions, climate damage and thus necessitate more ambitious future policies. Hence, this further increases economic losses stemming from a warming climate. The scenarios also show that climate change is becoming a first order factor for our economies."

**Enhanced modelling of (chronic) physical risk:** Reflecting recent advances in climate economics, a new damage function for estimating the impact of (chronic) physical risk has been introduced. However, its potential limitations need to be taken into account as well.

- The new damage function captures the effects of climate change on the economy much more comprehensively. It is calibrated using the most recent climate and economic data available and covers a broad set of climate variables. It also reflects the latest evidence that economic output does not recover immediately after climate shocks.
- This update emphasizes that a timely and coordinated transition will be significantly less costly, compared to the negative impacts of unabated climate change on GDP. The estimated global losses from (chronic) physical risk are now 2 to times 4 higher globally by 2050 compared to the previous version of the NGFS scenarios.
- A clear understanding of the technical aspects behind the NGFS estimates of damages from climate change is necessary for interpreting the results. Total climate losses from physical risk should not be taken as the simple sum of chronic and acute damages as presented in the NGFS scenarios. The new damage function may result in some overlap between economic losses from chronic and acute physical risks. Moreover, the current NGFS scenarios do not account for long-term climate adaptation measures, certain climate phenomena (*e.g.* tipping points), indirect socio-economic impacts (*e.g* migration), and certain other sources of risk (*e.g.* nature-related risks). Thus, the economic effects of climate change may be even more severe than projected under the NGFS scenarios.

**NGFS risk assessments may require complementary assessments to align with users' specific objectives.** In this regard, the guidance and the caveats provided by the NGFS to users on how to use the NGFS climate scenarios (see the <u>guidance note</u>) remain relevant.

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)<sup>1</sup>.

## **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 141 central banks and supervisors and 21 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 Sabine Mauderer, First Deputy Governor of the Deutsche Bundesbank. The Secretariat, headed by Yann Marin, is provided by Banque de France.

For more details, visit the <u>NGFS website</u> and <u>Twitter account</u> or contact the NGFS Secretariat at Banque de France <u>sec.ngfs@banque-france.fr</u>

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