

# The need for forward-looking climate-related data

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I thank Elena Triebkorn and Maurice Fehr from the Bundesbank Sustainable Finance Data Hub for preparing the slides.

The views expressed are those of the authors and do not necessarily reflect those of the Bundesbank.

# Introduction

## The need for forward-looking climate data

1. Overview of international initiatives on sustainable finance data
2. Why forward-looking data? – Excerpts and results about user needs
3. Preliminary results from work on “Constructing forward-looking climate-related physical risk indicators” by Bundesbank / IMF
4. Conclusions on long-term ways forward

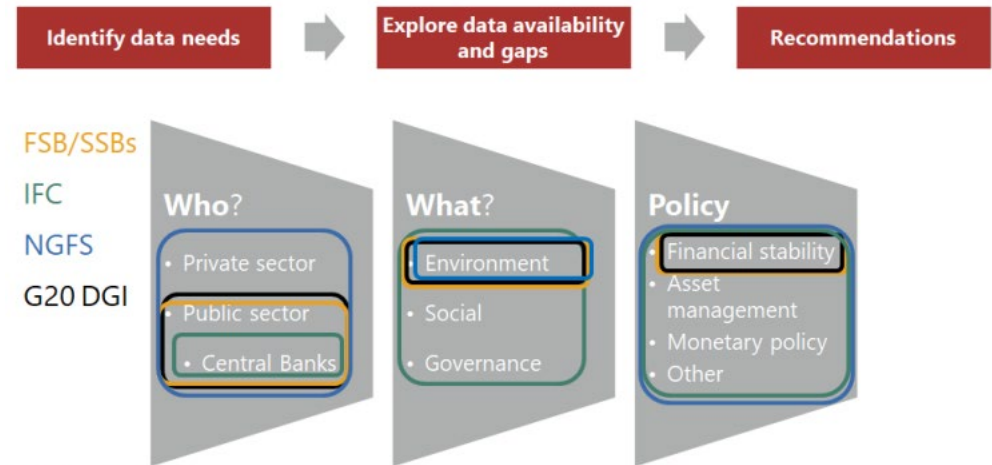
# 1. Overview of international initiatives on sustainable finance data

## Multiple initiatives and stakeholders

– A **number of initiatives** have sought to facilitate the availability of adequate data to support sustainable finance.

– There is a **multiplicity of stakeholders** involved in these efforts.

– Recent central banks' data initiatives **focus primarily on climate change and its financial stability implications.**



Source: IFC Working Group.<sup>3</sup>

## 2. Why forward-looking data?

### Excerpts from the NGFS Bridging Data Gaps Progress Report

- The **Network on Greening the Financial System (NGFS)** published a progress report on its Bridging Data Gaps Workstream in May 2021.
  - The NGFS is a global network of central banks and supervisory authorities.
  - Currently, the NGFS consists of 108 members and 17 observers.
  - The report covers data needs for various stakeholders, e.g. asset managers, credit institutions.
- **Reliable and comparable climate-related data are crucial** in order for financial sector stakeholders to assess financial stability risks, properly price and manage climate-related risks, and take advantage of the opportunities arising from the transition to a low-carbon economy.
- Persistent gaps in climate-related data hinder the achievement of these objectives. Stakeholders report the **need for more forward-looking data** (for example targets or emissions pathways) and granular data (for example geographical data at entity and asset-levels).

## 2. Why forward-looking data?

### Excerpts from IFC Report - Sustainable finance data for Central Banks

- The **Irving Fisher Committee on Central Bank Statistics (IFC)** released a report on Sustainable finance data for Central Banks in December 2021.
  - It received 63 answers, with detailed information provided by 28 advanced economies (AEs) and 31 emerging market economies (EMEs).
  - The IFC consists of 96 full institutional members
- Of key importance are **the indicators needed to properly support progress assessment**, in particular on sustainable financial instruments as well as environmental indicators related to **physical risk**, emission trading and energy use pricing.
- However, as **many indicators are backward-looking**, it is useful to **complement them with forward-looking data to track commitments towards a greener economy**. In general, forward-looking metrics seem to be a **newer area of analysis** for many central banks, with their actual use remaining limited so far.

## 2. Why forward-looking data?

### Excerpts from the ECB roadmap of climate change-related actions

- As an outcome of its monetary policy strategy review, the ECB will **develop new experimental indicators**, covering relevant green financial instruments and the carbon footprint of financial institutions, as well as their exposures to climate-related physical risks.
- This will be **followed by step-by-step enhancements** of such indicators, starting in 2022, also in line with progress on the EU policies and initiatives in the field of environmental sustainability disclosure and reporting.

		2021	2022	2023	2024
3.	Statistical data for climate change risk analyses	Develop indicators on green financial instruments.	Construct indicators on exposures of financial institutions to climate-related physical risks through their portfolios.	Develop new statistical collections related to climate change.	
		Derive indicators on the carbon footprint of portfolios of financial institutions.			

### 3. Constructing forward-looking climate-related physical risk indicators

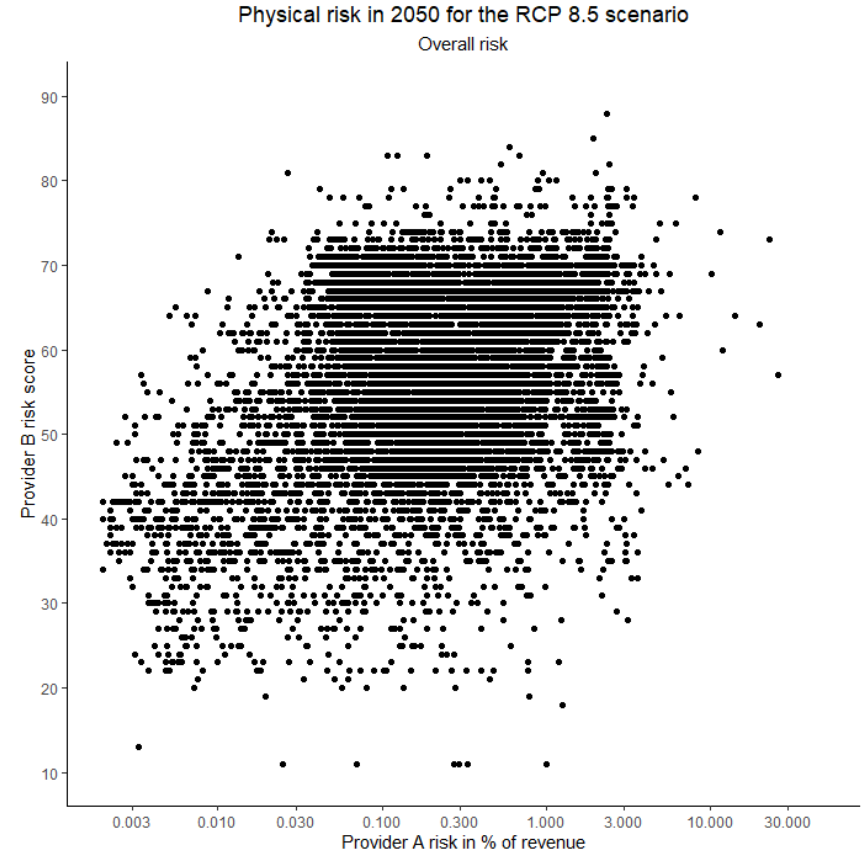
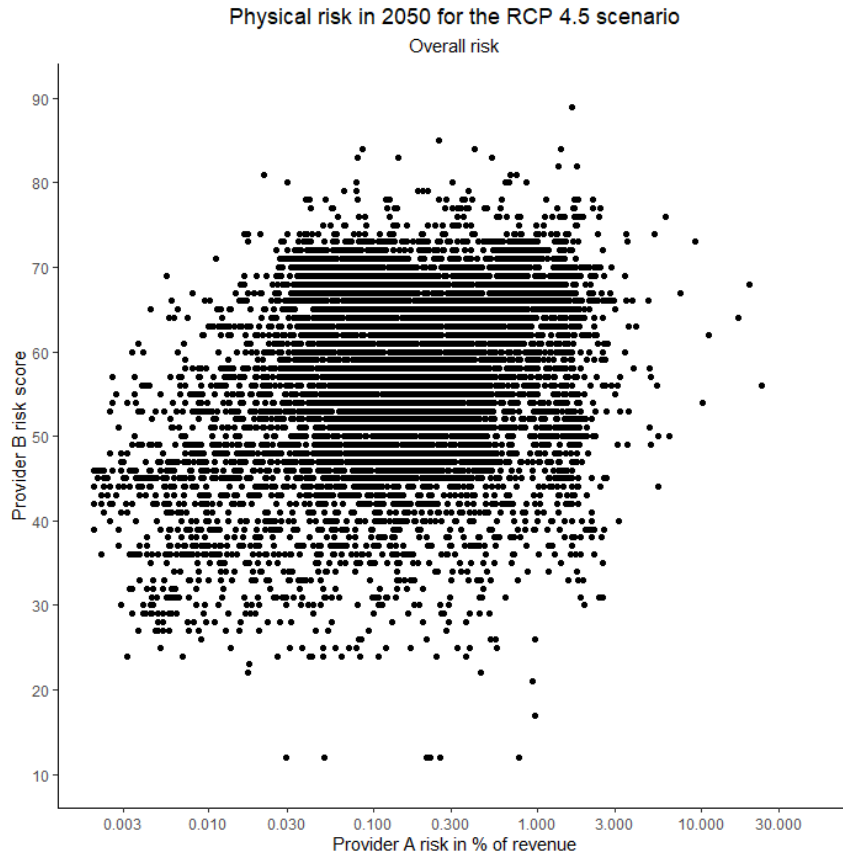
#### Underlying data and research question

- Bundesbank acquired a **variety of climate-related indicators**. From two data providers, **physical risk data at the company level** are available for internal analysis.
- In one case, the data set consists only of **physical risk scores**; in the other case, it also includes the **underlying financial risks**.
- Both data sets are **forward-looking** and use the Intergovernmental Panel on Climate Change (IPCC) **Representative Concentration Pathways (RCPs)** that represent different levels of global warming. They can be loosely translated into: **low** (RCP 2.6), **medium** (RCP 4.5) and **high** (RCP 8.5) **levels of global warming**.
- Bundesbank Sustainable Finance Data Hub (Maurice Fehr and Elena Triebkorn) together with Jens Mehrhoff (IMF) are exploring the question:

***How can we use existing climate data from private data providers to extract relevant forward-looking aggregates at a sector and/or country level?***

# 3. Constructing forward-looking climate-related physical risk indicators

## Comparison of company group level data (Source: ISS ESG vs. Trucost)









### 3. Constructing forward-looking climate-related physical risk indicators

#### Coverage Physical Risk from ISS ESG

NACE	China	United States	European Union	including:		India	Russia	Japan	Rest of the world
				Euro Area	including:				
					Germany				
A	Red	Red	Red	Red	Red	Red	Red	Red	Orange
B-E	Green	Green	Green	Yellow	Orange	Yellow	Orange	Green	Green
including: C	Green	Green	Green	Yellow	Orange	Yellow	Red	Green	Green
F	Orange	Red	Orange	Orange	Red	Red	Red	Orange	Orange
G-I	Orange	Orange	Orange	Orange	Red	Orange	Red	Yellow	Green
J	Orange	Orange	Orange	Orange	Orange	Orange	Red	Orange	Yellow
K	Orange	Yellow	Orange	Orange	Orange	Orange	Red	Orange	Green
L	Orange	Orange	Orange	Orange	Red	Orange	Red	Orange	Yellow
M-N	Orange	Orange	Orange	Orange	Red	Orange	Red	Orange	Orange
O-Q	Red	Orange	Red	Red	Red	Red	Red	Red	Orange
R-S	Red	Red	Red	Red	Red	Red	Red	Red	Orange

-  = not enough issuers for meaningful aggregates
-  = not enough issuers for statistical analysis
-  = barely enough issuers for statistical analysis
-  = enough issuers for statistical analysis

### 3. Constructing forward-looking climate-related physical risk indicators

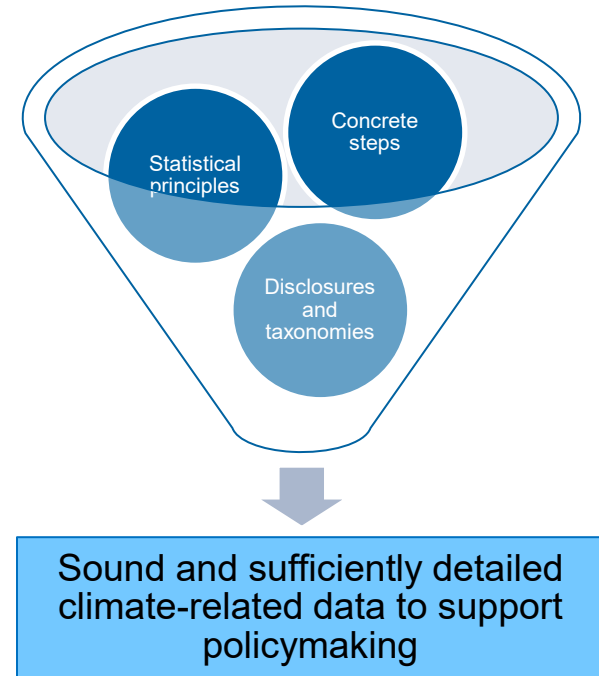
#### Way forward

- Central banks could be a good place to construct physical risk indicators by **combining climate-related with financial data**, which is available in central banks (in the Eurosystem: Analytical Credit Datasets, Security Holding Statistics, Centralised Securities Database).
- In the **short to medium-term**: Making use of existing **enterprise-level data from private sources. Combining them with public data** can bridge data gaps.
- In the **longer-term**: To **be more precise** on detailed physical risks and their financial implications we would need:
  - **New skills**: GIS (Geographic Information System) knowledge required to work with climate-related data on a granular level and close cooperation with climate experts.
  - **Granular financial data**: Exact locations of collateral, counterparties and their branches / facilities as well as their valuation. In addition, data on households is limited.

## 4. Conclusions on long-term ways forward

### Fulfilling fundamental principles of statistics

- Given the growing importance of climate-related data for policymaking, **quality of data is a key issue.**
- Fulfilling Fundamental Principles of Official Statistics shall be an important aim for statistical work and **provide guidance on the steps we shall take** worldwide.
- Adhering to such statistical principles **requires setting up a statistical framework.** The existing frameworks for statistics related to climate change are not yet sufficiently developed to provide sound data for evidence-based policymaking.



## 4. Conclusions on long-term ways forward

### Concrete steps towards a statistical framework



**Dashboards** improve the availability of macro level climate-related data (such as IMF, NGFS and Deutsche Bundesbank). They serve different user needs, complement each other and contribute to more transparency.



In view of micro data needs and possible proprietary data issues, **data catalogues of data sources** (such as the NGFS repository) with an internationally harmonized structure contribute to facilitate access to climate related data.



We are looking forward of the follow up of the **G20 Data Gaps Initiative and concrete steps** associated with these efforts. In the end, such long-term statistical initiatives require the underlying data to be collected in a harmonized and well-structured manner.

Thank you for your attention!

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