

# Achieving net zero emissions

High-quality, reliable, and comparable gauges are lacking. Charlotte Gardes-Landolfini and Fabio Natalucci on how to close the data deficit

**C**limate change is transforming the global investment landscape, creating new risks and opportunities. Physical risks, from rising sea levels to the lethal heat waves scorching Europe and elsewhere, affect asset values for everything from stocks to real estate and infrastructure. So-called transition risk—including government policies to reduce greenhouse gas emissions—lowers the value of fossil fuel companies.

To evaluate these risks and support the transition to a low-carbon economy, investors and others in the financial world need information. For example, they may want to know if a company's assets are physically vulnerable, the volume of greenhouse gases it emits, and what its plans are for lowering emissions.

In addition, heightened geopolitical risks, notably due to Russia's war in Ukraine, and the [deterioration](#) of the global economic outlook may make the transition to a low-carbon economy more complex, expensive and disorderly.

Energy policy decisions could also be affected by the amount of carbon lock-in—which occurs when fossil fuel-intensive systems perpetuate, delay or prevent the low-carbon transition—that is generated in the near term, including by a delayed phase-out of thermal coal.

### **Data deficit**

Currently, however, financial market participants face a lack of high-quality, reliable, and comparable data needed to efficiently price climate related risks and avoid greenwashing—spurious attempts by financial or non-financial companies to burnish their environmental credentials.

This data deficit poses a serious obstacle to the energy and ecological transition, which requires migrating capital toward low-carbon industries and massive new investments in mitigation and adaptation.

It also makes it more difficult for financial supervisors to assess risks to financial stability given uncertainties and challenges to quantifying climate-related impacts. Therefore, policymakers urgently need to ensure that better climate data are made available.

A [new report](#) from the Network for Greening the Financial System takes an important step. It features a [directory](#) that evaluates available climate data, identifies gaps, and offers practical, concrete ways to close those gaps.

The report, a product of a working group co-chaired by the IMF and the European Central Bank, strengthens what we call climate information architecture. This has three [building blocks](#): high quality, comparable data; global disclosure standards; and climate alignment approaches and methodologies, including taxonomies of assets and activities.

*Banks, pension funds, and other investment firms  
need better climate data to assess risks*

The report makes three contributions. First, it highlights that, despite the substantial progress on the climate data front since [COP26](#), challenges remain, including:

- Insufficient coverage in disclosures of non-publicly listed companies and small and medium-sized companies
- Limited availability of comparable and science-based forward-looking information, such as targets, commitments, and emissions pathways, that are needed to assess physical and transition risks
- Auditability is needed to build trust and enhance the quality of data, yet it remains limited

Second, the report makes tangible policy recommendations:

- Foster convergence toward common and consistent global disclosure standards, for example by increasing availability of granular emissions data and improving the reliability of reported climate-related data
- Increase efforts toward shared principles for taxonomies, for example by increasing the linkages between taxonomies and disclosures
- Develop well-defined metrics and methodological standards, for example by better harmonizing forward-looking metrics and reinforcing public and private cooperation to improve methodologies
- Better leverage available data sources, approaches, and tools, for example by improving use of new technologies

The third and most important contribution is the climate-data directory, which surveys available data based on the needs of the financial sector and how information is used.

For example, banks, pension funds, and other investment firms apply scenario analyses and stress testing to analyse climate-related risks from individual securities and companies themselves, in combination with credit ratings. They need climate-related data to assess vulnerability to these risks at the sector, company, household, and sovereign level, and to evaluate the determinants of physical risks and transition risks.

Policymakers may need other data to determine whether a sharp drop in asset prices could hurt balance sheets of financial companies, putting financial stability at risk.

### **Climate data directory**

The climate data directory can shape evidence-based conclusions on the main data gaps. For example, it shows where raw data aren't available to construct metrics such as the exposure to climate policy relevant sectors, or the share of assets such as coal-fired power plants in energy portfolios.

Missing are accounting data and exact geographic location of assets, as well as data on greenhouse-gas emissions and effects related to biodiversity, forest depletion, floods, droughts, and storms.

Though not offering direct access to underlying data, the directory is a public good, a living tool aimed at better disseminating climate-related data and offering practical solutions to bridge data gaps. It's designed to help financial professionals identify relevant sources to meet their needs, facilitate access, and better disseminate existing climate-related data. It can play a decisive role in fostering progress on the four policy recommendations described above.

The report's findings and accompanying policy recommendations line up closely with the IMF's work on climate data, disclosures, and taxonomies and other methodologies intended to align financial portfolios with Paris Agreement goals.

### **Metrics and methodologies**

For example, the Fund's [Climate Change Indicators Dashboard](#), a statistical initiative to address the growing need for data used in macroeconomic and financial stability analysis, may benefit from the directory's improved metrics and underlying methodologies.

The IMF is also leading a [joint project](#) to provide guidance on the Group of Twenty's [high-level principles](#) for taxonomies and other sustainable-finance alignment approaches. This work is particularly relevant for emerging market and developing economies, which face considerable challenges in reducing greenhouse-gas emissions and attracting private capital to finance the transition.

The IMF participates in the International Financial Reporting Standards Foundation's new [standard-setting board](#) for sustainability and climate disclosures, which plays a key role in such work. It also co-leads the Financial Stability Board's Climate Vulnerabilities and Data [workstream](#) to incorporate climate in the organization's regular vulnerabilities assessment.

These efforts aim to address areas of concern in climate vulnerabilities, metrics, and data based on their materiality and their cross-border and cross-sectoral relevance. Finally, the IMF has started to include [climate-related risk analysis](#) in its [financial sector assessment programs](#).

Late last year, the IMF dedicated its annual statistical forum to [gauging climate change](#) and discussed with other international bodies how to close climate finance data gaps. And in October, we will publish an analytical chapter of the Global Financial Stability Report that takes a more in-depth look at financial markets and instruments in scaling up of private climate finance in emerging market and developing economies. ■

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*This article is based on an [IMF Blog](#)*