

Comparable, Forward-Looking, Independent Climate Data as a Public Good

Lessons from the TPI Global Climate Transition Centre
at the London School of Economics and Political Science

*Carmen Nuzzo**

Abstract

Climate data serve different users, for different purposes and at different levels of aggregation. Their value to markets and to policy nonetheless depends on a common set of properties: comparability, a forward-looking dimension, independent production, methodological rigour and public accessibility. Drawing on the experience of the TPI Global Climate Transition Centre at the London School of Economics and Political Science, this article argues that the binding constraint on climate-related financial analysis has shifted over the past decade: no longer the scarcity of data, but the difficulty of comparing them. It sets out what each of these properties requires in practice, how independent assessments are used by investors and policymakers, and where the limits of assessment now lie, namely in the measurement of adaptation and nature-related risk and in the growing share of corporate activity falling outside the disclosure perimeter. It concludes that sustaining these data as a public good is difficult where it depends only on philanthropic funding, and that the principal constraints today are not methodological but informational: what is not disclosed cannot be assessed, however good the method. Nor does better evidence resolve the separate question of climate action: data inform decisions, they do not make them.

Keywords: climate data, sustainable finance, net zero, transition risk, public goods.

1. INTRODUCTION

Climate data serve different purposes, different audiences, and different use cases. Whatever the application, however, their value to markets and to policy depends not only on their volume but also, crucially, on properties that are difficult to achieve: the data must be comparable, forward-looking, independently produced, rigorously constructed and, ideally, publicly accessible.

This article draws on the experience of the TPI Global Climate Transition Centre (TPI Centre) at the London School of Economics and Political Science (LSE). The Centre, established in 2022 and part of LSE's Global School of Sustainability, is an independent source of research

* Professor in Practice – Executive Director, TPI Global Climate Transition Centre at the London School of Economics and Political Science.

and data on the progress of listed companies, banks and sovereigns¹ in the transition to a low-carbon economy, and serves as the academic partner of the Transition Pathway Initiative (TPI), an initiative led by asset owners and supported by asset managers, which was launched in 2017.² Its assessments are published annually, with all methodologies and results made openly available and free to use for non-commercial purposes.

The article also draws on the debate that informed the first panel session of the high-level conference that the Banco de España hosted on 26 March 2026, titled “Climate Risk and Sustainable Finance: Bridging Policy, Research and Practice.” The conference brought together central bankers, statisticians, academics and market practitioners to take stock of how far the analytical infrastructure for climate risk has developed, and how much further it still needs to progress.

The session theme, “Climate Data and Analytical Tools,” established the framing for the discussion that followed during the day. Its premise was simple but consequential: none of the actions that follow climate ambitions (e.g. climate stress-testing, transition planning, prudential supervision, capital allocation) can be built on a foundation of data that is patchy, incomparable or limited by commercial interests. The session reflected the plurality of needs described above, with contributions from practitioners working on the design of globally consistent climate scenarios for financial sector stress-testing, on the experience of building official climate statistics inside a central bank, and on the work of an academic centre with a primary focus on investors’ needs.

The constituencies represented came to climate data with different problems to solve. For investors the question is one of fiduciary duty and risk management: whether the businesses they hold on to behalf of their beneficiaries are viable in a low-carbon economy, and whether to retain, engage with, or exit a given company. Answering this question requires a view on individual issuers, namely their emissions trajectories, their governance, and whether their stated ambitions are matched by plan implementation. Central banks, supervisors and other policymakers face a different set of questions: whether climate-related risks are material to the soundness of individual institutions and to financial stability more broadly, through which channels those risks are transmitted, and whether the financial system is capitalised and prepared accordingly, alongside, for some, the implications for monetary policy, for their own balance sheets, and for the design of regulation. That requires a view of exposures in aggregate, across institutions, sectors and jurisdictions.

1 The term sovereigns refers to national governments in their capacity as issuers of debt.

2 As of March 2026, 155 investors representing around US\$80 trillion in combined assets under management (AuM) and advice had pledged support for TPI. AuM are subject to market-price and foreign-exchange fluctuations. As the sum of self-reported data by TPI supporters, they may double-count assets.

These are different questions, and the data they require take very different forms. An analyst's benchmark of steel producers and a supervisory scenario carrying output, inflation and sectoral prices are not interchangeable outputs. But the properties each depends on are the same. Neither is usable if the underlying measurements are not comparable across the entities or jurisdictions assessed; neither is decision-relevant if it captures only past performance; and neither can be relied upon if its construction methodology cannot be scrutinised. This convergence is why these properties are worth treating as general requirements rather than the preferences of any one class of user.

2. THE NEED FOR COMPARABLE DATA

Reliable, comparable data constitute a precondition for sound decision-making by investors and policymakers alike, and for the redirection of capital towards sustainable ends. In the case of investors specifically, they provide a consistent starting point for the analysis of individual holding, make peer benchmarking possible, and allow the replicability of beneficial investment projects and solutions. The cumulative effect is on confidence: investors who can test the claims that their investee entities make are more willing to commit capital to those that are seriously engaged in the transition.

When the Paris Agreement was signed, the prevailing assumption was that the binding constraint was scarcity. The reasoning ran along these lines: companies did not disclose enough; if they did, transparency would improve, analysis would follow, and capital allocation would shift in ways that reflected climate-related risks and opportunities. Disclosure was the bottleneck, and disclosure requirements were seen as the remedy.

That diagnosis proved incomplete, for two reasons. The first is that the gap was never a shortage of climate science. The material available a decade ago was substantial and, on its own terms, of high quality, but it had been produced to answer different questions, for different users. Scenarios from the Intergovernmental Panel on Climate Change (IPCC) and from integrated assessment models are designed to inform climate policy: they extend to 2100, are organised around emissions and temperature outcomes. While they are linked to economic variables such as output and energy prices, they do not produce the monetary and financial ones (inflation, policy rates, asset prices) needed to translate a climate pathway into credit losses or a capital position, and they typically report results for broad world regions rather than for individual countries.

A similar mismatch applied to the underlying datasets. Emissions data assembled for national inventories are retrospective, and although they carry considerable sectoral detail, that detail does not follow the industrial classifications investors work with. More fundamentally, the

accounting is territorial: emissions are attributed to countries rather than to the entities that generate them, which makes the data better suited to tracking progress against national commitments but not to assessing an individual issuer. What was missing was a bridge between this material and the variables that influence financial decisions.

The second reason concerns what occurred when disclosure did expand. Data volumes rose significantly (for example, corporate emissions inventories, sustainability reports, climate risk disclosures, net zero target announcements) but without necessarily producing information that could be used comparatively. Disclosures adopted different metrics, different baselines, different boundaries for what counted as an emission, different time horizons, and different implicit assumptions about future policy. Two companies in the same sector could each disclose extensively and still leave an investor with no reliable means of setting one against the other. What had changed was the nature of the constraint: it no longer lay in the absence of data, but in the difficulty of comparing them.

In practice, comparability requires the consistent application of a single measurement framework across a defined universe of entities. To assess companies, methodologies have to be sector specific. Similarly, sovereigns have to be assessed within similar income brackets, so that differences in wealth and development do not distort the comparison. Comparability also requires an evidence base that can be traced back to source. TPI Centre assessments are built exclusively on publicly available information (e.g. annual reports, sustainability disclosures) rather than on questionnaires or private submissions from the entities assessed. Because the inputs are public, any third party can in principle consult the same material. This methodological design principle aims to promote accountability and transparency. It also means the exercise reinforces rather than substitutes for existing disclosure obligations: entities are not asked to undertake additional reporting but are held accountable for what they have already chosen, or been required, to publish.

Comparability also requires clarity as to what is being compared. Different data capture different aspects of the climate challenge, and no single indicator captures them all. For example, the TPI Centre assesses companies' progress in the transition to a low-carbon economy along two dimensions. Management Quality examines how a company manages its emissions and whether it has established the governance necessary to pursue its targets, scored on a progression from Level 0 (meaning no evident awareness of climate-related risks and opportunities) to Level 5 (where a company discloses quantitative metrics relating to the implementation of its transition plan). Carbon Performance is a quantitative, sector-specific exercise that takes a company's emissions-intensity track record and compares its trajectory against benchmark pathways aligned to the Paris Agreement: national pledges, below 2°C, and 1.5°C.

More recently, the Centre has begun piloting a third strand of research, examining companies' transition plans with a specific focus on implementation, thus adding a third dimension to the analysis. Separate frameworks apply to banks and to sovereigns, reflecting the differing ways in which the transition bears upon a lender and upon a government. What this share with the corporate framework is the underlying architecture: public information as the sole input, and assessment organised around ambition, governance, policy and disclosure.

3. THE FORWARD-LOOKING DIMENSION

Comparability alone is not sufficient for data to be decision useful. A consistently constructed record of historical data documents past performance; it provides considerably weaker evidence on whether an entity is positioned in relation to future climate risks and opportunities, which is the question that concerns investors and supervisors alike.

This is not a marginal distinction. Conventional approaches to financial risk assessment are calibrated on historical observation, and that record was generated under conditions unlike those the transition and a warming climate will produce. Backward-looking data can of course be extrapolated; the difficulty is that the uncertainty attaching to such extrapolation is not easy to characterise, since the structural relationships on which it depends are precisely those that climate change may alter. This is why scenario analysis has become central to supervisory practice: not because scenarios are predictions, but because they are a structured way of reasoning about a range of possible futures.

At the entity level, the same problem takes a different form. Assessing preparedness requires a prospective dimension, with attention not only to whether an entity has set targets but to the scenarios under which those targets would be realised. This is why the Centre assesses net-zero target alignment against three benchmarks rather than a single one. It requires attention, further, to whether the entity possesses the governance arrangements necessary to pursue those targets, and, increasingly the decisive question, to whether its capital allocation is consistent with their delivery. It is for this reason that the Centre's focus is moving beyond alignment towards implementation. A company may announce a net-zero commitment; the commitment of capital expenditure to that end constitutes a materially different signal. Distinguishing between the two represents a considerably more demanding evidentiary exercise than the measurement of past emissions, and much current disclosure is not designed to support it.

The distinction between ambition and implementation has become the central methodological problem in this field. In the years immediately following the Paris Agreement, the analytical task was largely one of establishing whether companies had committed to the transition at

all: whether they had quantified their emissions, set a target, and had adequate governance practices in place to reach those targets (such as assigned board-level responsibility). These questions can now be answered from disclosure documents. However, as target-setting has become more widespread, establishing that a company has announced a net-zero target no longer distinguishes it from its peers in most sectors: what is now more informative is whether the company is doing what delivery of that commitment would require.

That question is considerably harder to answer from published sources. It requires evidence about capital expenditure and its allocation across assets and technologies, about the operational lifetime of existing plant, about planned additions and retirements, and about whether the company's assumptions concerning technology cost and policy support are plausible. Some of this is disclosed; much of it is not, at times for competitive reasons, or is disclosed at a level of aggregation that makes assessment very difficult. It is for this reason that work at the asset level, i.e. building up from individual production facilities rather than down from corporate-level statements, has become a methodological priority. An asset-level view allows a top-line commitment to be tested against what is physically being built, extended or closed, which is a more robust basis for judgement, in addition to the comparison of stated intentions.

A related requirement, less often discussed, is that forward-looking assessment must be situated in the policy environment the entity actually faces. A company's decarbonisation options are shaped substantially by circumstances beyond its control: the carbon price in the jurisdictions where it operates, the availability of low-carbon inputs, the state of the electricity grid, the existence or absence of support for emerging technologies. Comparing companies without reference to those circumstances' risks producing an incomplete, and at times misleading, picture. Contextualising assessments by jurisdiction, without abandoning the sectoral comparability that makes them useful, is a genuine methodological tension rather than a solved problem.

4. INDEPENDENCE AND PUBLIC ACCESSIBILITY

The third requirement concerns not what is measured but who does the measuring, and on what terms.

As demand for climate assessments has increased, a commercial industry has emerged in response. Within parts of that industry, the entities producing assessments of climate alignment may maintain commercial relationships with the entities being assessed or protect their methodologies as proprietary intellectual property. Neither feature is disqualifying in itself, and a number of commercial providers undertake rigorous work. Both, however, render independence more difficult to establish from the outside. A user cannot scrutinise

a methodology that is not visible and has no means of determining whether a commercial relationship has shaped what is presented.

These concerns are no longer confined to academic commentary. Regulators have reached a similar diagnosis, largely along lines set out by the International Organisation of Securities Commissions (IOSCO) in 2021, and binding regimes and voluntary codes have since emerged in several jurisdictions. In Europe, ESG rating providers came under supervision at EU level in July 2026, with a comparable United Kingdom regime due in 2028. Both address transparency of methodology and the management of conflicts of interest.

For a provider outside that commercial model, independence must therefore be structural. In the case of the TPI Centre, this takes several concrete forms. The entities assessed are selected by the Centre itself, on the basis of size (for instance, measured by market capitalisation in the case of listed companies) and level of emissions. No assessed entity pays for its assessment. Methodologies are publicly available, published in the first instance as discussion papers inviting feedback, clearly versioned as they evolve, and subject to public consultation whenever substantive changes are made. Following standard academic practice, and exposing methods to scrutiny and challenge, is precisely what makes the resulting TPI Centre's data valuable.

The value of such openness is evident in the range of users who have adopted the data. The Centre's primary audience consists of investors, and the frameworks were originally conceived to support them in their investee entity evaluations. The user base has nonetheless broadened well beyond that constituency. Academics increasingly employ the datasets on account of their coverage; the material features in professional education, including the Chartered Financial Analyst (CFA) Institute's ESG certificate; and the assessments have been cited by policymakers and standard setters, among them the European Commission, the OECD and the UK's Transition Plan Taskforce. A further cohort has emerged among climate litigants. The breadth of that uptake is itself an argument for open publication.

These characteristics give the data the character of a public good. Information is inherently non-rival: one user's access does not diminish that of another. But it can easily be made exclusive, through subscription or licensing. Free availability is therefore a choice, and one that has so far been underwritten by philanthropy. The TPI Centre's work benefits from charitable funding, and the NGFS scenarios, freely available to any user, have likewise been supported by philanthropic grants. Investors, supervisors and researchers now rely on this infrastructure as a matter of routine. Yet, philanthropic priorities shift, and grants of this kind are typically designed to seed new work rather than to sustain recurring assessment. If comparable, forward-looking and independently produced data are to remain publicly available, the question of who sustains them cannot rest with philanthropy indefinitely.

5. FROM ASSESSMENT TO DATA USE

An argument about the properties of data is only as good as the evidence that those properties change what users do. It is worth setting out, therefore, how the TPI Centre's entity assessments are used, and how that use has altered over the past several years, because the pattern is instructive about what comparable, independent data are and are not good for.

In the years immediately after the Paris Agreement, the dominant investor use was negative screening. Investors used comparative assessments to identify laggards within a sector or operating in carbon-intensive sectors and exclude them from portfolios designed to meet climate or sustainability objectives. That use persists, but others have developed as well.

For instance, screening is now also positive, when investing in high-emitting companies that show decarbonisation progress. Investors use the data for net zero portfolio alignment. Net-zero commitments at the portfolio level require a consistent basis for assessing whether their holdings are collectively consistent with those commitments, which is not possible without entity-level assessments constructed on a common basis. In addition, as regulatory reporting obligations have expanded, institutions have started using data for reporting and compliance, as they are in need of a trusted basis for statements about the climate characteristics of what they hold. Comparative carbon performance and management quality assessments have also been used as the reference for index construction, with substantial assets tracking indices built on this basis³ (an application that depends entirely on the underlying assessments being methodologically stable, transparently documented and independent of the issuers being assessed).

Perhaps the most consequential investor use is active ownership: engagement with company management and, for equity holders, the exercise of voting rights. This deserves emphasis because it illustrates something important about what these datasets do. A single score is, by construction, a simplification. It cannot capture the specific circumstances of an individual company, and it is not intended to. What a comparable, independently produced assessment provides is a common reference point that investors and their investee entities can accept as a reasonable basis for discussion, precisely because neither commissioned it and both can inspect how it was constructed. The assessment is the opening of the engagement exchange, not its conclusion. Investors who use these frameworks would treat a low score as a question to be put to management, rather than as a finding to be acted upon without further interrogation.

For investors, it is not only financial and non-financial corporate assessments that matter but also sovereign data, for two distinct reasons. The first concerns sovereign bondholders directly: lending to a government means taking a position on the sustainability of its fiscal path,

3 See, for example [FTSE TPI Climate Transition Index Series](#).

and climate change bears on that path from both directions, through the expenditure that mitigation and adaptation require, and through the effect of physical damage and transition-related disruption on the public accounts. The second applies to corporate investors, who may hold no sovereign debt at all. Government policy shapes the environment within which companies operate (the carbon price, the pace of grid decarbonisation, the availability of support for emerging technologies) and therefore determines much of what is feasible for any given firm. Corporate assessments are therefore more informative when read alongside an understanding of the jurisdictions in which the company operates.

TPI Centre's sovereign framework, *Assessing Sovereign Climate-related Opportunities and Risks (ASCOR)*⁴, was designed to support a dialogue between investors and governments rather than simply to supply investors with a score. It serves three functions accordingly. It gives investors a structured basis on which to frame climate considerations in their assessment of sovereign issuers, dividing countries by income brackets to avoid introducing an income bias. It also gives governments a means of demonstrating progress to the market, and, because the relevant evidence is drawn from publications by several government ministries and departments, an occasion for improving coordination among them. Finally, it gives both parties a common reference point for engagement, with debt management offices typically the first point of contact for investors.

The ASCOR uses are increasingly visible in practice, and the Centre has documented them directly, publishing a compilation of investor and issuer cases. For example, in 2025, Slovenia became the first European country to issue a sustainability-linked bond (SLB), and its framework referenced its total Greenhouse Gas Emissions Sustainability Performance Targets (1.1. and 1.2) as being aligned with ASCOR's 1.5°C fair share scenario in 2030. ASCOR has also been adopted into practical financial market applications through the launch of an exchange-traded fund (ETF)⁵ tracking a sovereign climate index that relies on ASCOR data. The index, developed by FTSE Russell⁶, uses ASCOR assessments and green bond issuance to select euro-area sovereign bonds and re-weight them according to their climate commitments and progress: countries that improve their climate performance are rewarded with a higher weight in the index, and therefore with higher demand for their government bonds.

Bank assessments occupy a third position, and a distinctive one. They matter to investors as issuers in their own right, but they matter more as the channel through which capital reaches the rest of the economy: lending and underwriting decisions shape what gets financed and what does not. The Centre assesses the largest global banks on the same design principles applied to corporates and sovereigns (public information only, with attention to ambition,

4 See [ASCOR](#) webpage and the TPI Centre [ASCOR country results](#).

5 See ['Introducing Robeco's Climate Euro Government Bond ETF'](#) (11 September 2025).

6 See [The FTSE Climate Collective Transition EMU Broad Government Bond Index](#).

governance, policy and disclosure). The assessment focuses on which business activities banks' decarbonisation targets actually cover and how far those targets align with low-carbon benchmarks, supplemented in successive years by closer examination of regional particular segments, including selected emerging-market institutions and, most recently, European banks.

What distinguishes the banking assessments is that a bank's climate position is largely derivative. Because banks are multifaceted businesses operating across many sectors, it is not possible to construct a single bank-wide emissions pathway in the way that can be done for a real-economy company operating principally in one high-emission sector. Financed emissions are a function of which companies a bank lends to; its transition risk is a function of the sectors and jurisdictions concentrated in its book. A bank cannot report reliably on either unless the companies it finances disclose reliably themselves, which makes the quality of any banking assessment dependent on a chain that begins outside the financial sector altogether.

The substance of what the annual assessment cycles reveal is the subject of the Centre's regular "State of Transition" reports across the three asset classes, which take stock of developments and address selected themes in detail. Connecting the three types of assessments, so that exposure can be traced across categories rather than examined within each in isolation, is the direction in which the Centre's work is now developing.

The three different entity assessments point towards each other. A company's position cannot be read without reference to the jurisdiction whose policy shapes what is feasible for it. A sovereign's climate performance is realised, or not, through the companies operating within its borders. And a bank's exposure is the aggregate of the corporates and sovereigns on its balance sheet. The implication for policymakers is that evidence gathered on any single front will give an incomplete reading of where the transition stands. Assessing whether a financial system is exposed, or whether a decarbonisation policy is working, requires a joint diagnosis: one that traces the connections between what governments legislate, what companies do in response, and what banks finance as a result.

6. THE LIMITS OF ASSESSMENT: MEASUREMENT AND DISCLOSURE

Mitigation remains the focus of the Centre's assessments. Adaptation, however, has risen rapidly up the investor agenda over recent years, partly because it is less politically contested than mitigation in several jurisdictions, and partly because the physical materialisation of climate hazards has made the issue tangible for portfolios with direct exposure. Assets whose output depends on water availability, for example in the mining sector, offer an obvious illustration.

The difficulty is that adaptation and nature-related risk are substantially harder to measure than emissions. A tonne of carbon dioxide is the same quantity wherever it is emitted, which is what makes emissions data comparable across companies and countries in the first place. No comparable unit has emerged for biodiversity loss, water stress or physical resilience. The relevant metrics are inherently local, sector-specific and dependent on the hazard in question, which means the comparability that mitigation assessment achieved through a single common unit has to be constructed differently. This is where investor demand for methodological development is currently greatest.

It would be a mistake, however, to treat adaptation and mitigation as alternatives. The two are sometimes discussed as though they competed for the same capital. They address different parts of the same problem. Mitigation investment targets the cause: while a substantial part of the requirement is now bankable, notably in renewable generation, the financing gap remains concentrated in many hard-to-abate sectors where the necessary technology is either immature or not yet commercially viable without policy support. Adaptation investment addresses consequences that are, to a significant extent, already determined by past emissions. The financing gap is larger on the mitigation side, by a considerable margin, because the industrial transformation required is capital-intensive, and in many cases not yet bankable on commercial terms. That does not make adaptation finance less necessary. It means the two agendas have to be pursued in parallel, and that data infrastructure has to support both.

In both cases the same combination of approaches is probably the way forward, namely bottom-up evidence at entity and sector level, assessed against a consistent framework, combined with top-down analysis of exposure at the macro level and regional level. In the case of the TPI Centre, this collaboration has already begun, with the Centre for Economic Transition Expertise on the macro dimension and with colleagues at LSE working specifically on adaptation, nature and biodiversity.

A further limit, of a different character, warrants explicit statement. Mandatory climate-related disclosure generally applies above a company size threshold, and most consistently to listed issuers, though the extent to which large private companies are captured varies by jurisdiction. Some have begun to disclose voluntarily, but the majority do not, and this is in the nature of private markets. The constraint is therefore one of disclosure rather than of analytics.

This matters increasingly for policymakers, because the share of corporate activity sitting outside the disclosure perimeter has been growing. More than 35,000 companies have delisted from public markets globally since 2005, around 12,000 of them in Europe, and in both Europe and the United States delistings have outpaced new listings for most of that period, producing a sustained net decline in the number of listed companies. The assessable universe is therefore contracting relative to the economy it is meant to represent, and it does so precisely where

climate-related exposures are least visible. To the extent that those exposures go undisclosed and unassessed, valuations are less likely to have accounted for them.

This is, however, a domain in which investors hold considerable power. What a listed company may be required to publish, a private company can be asked to provide. Investors in private markets negotiate terms directly with the entities they fund, and private capital can also be more patient than its listed equivalent, which makes it well suited to funding structured with conditionality, tied to demonstrable progress against climate or sustainability objectives.

Nothing in the design of the TPI Centre's frameworks confines them to listed companies. What limits their application is the availability of the underlying information, which in private markets may be secured through the terms of investment rather than through regulatory requirement. Such information nonetheless remains private to the parties that negotiate it, and while it serves the investor who obtains it, it does not add to the stock of comparable data on which the market as a whole depends.

7. FROM DATA TO NARRATIVE AND COMMUNICATION

A final requirement is readily overlooked in discussions of data infrastructure, concerning not the construction of datasets but the terms in which they are discussed. For data to enter decision-making, they must be rendered into the conceptual vocabulary of the stakeholders expected to act on them, and different constituencies may not share a single vocabulary. The same underlying evidence concerning a company's decarbonisation trajectory is understood by investors in terms of net-zero commitments, alignment with a benchmark pathway, portfolio decarbonisation and stewardship obligations. The company itself frames identical evidence in terms of business strategy, capital allocation, competitive positioning and operational feasibility. A prudential supervisor approaches it through exposures, materiality, transmission channels and capital adequacy. A statistician is concerned with coverage, classification and the integrity of a series over time.

Each framing reflects a distinct institutional mandate and a distinct decision to be taken. It follows that information framed for one type of stakeholder may be of limited use to another, since relevance depends on the connection between the information and a decision the recipient is responsible for taking.

The risk of mistranslation is greater where terminology appears to be shared. The term "transition plan" carries a different meaning for a corporate strategist, for whom it constitutes a forward business proposition, than for a supervisor, for whom it is evidence on which to judge whether

an institution's exposures have been appropriately assessed and provisioned. "Alignment" is meaningless absent specification of the benchmark against which alignment is measured, and different user communities hold differing default assumptions as to what that benchmark comprises. Apparent agreement on terms may therefore conceal substantive disagreement as to what is being measured. This is a difficulty that comparability of the underlying data does not of itself resolve.

There are also cases in which the requirement is not translation but different data altogether. An investor assessing a single issuer, a supervisor assessing a portfolio of exposures, and a statistician constructing a national aggregate require information at different levels of granularity, at different frequencies, and over different horizons. Ultimately, comparability, a forward-looking orientation and independent data provision are required by all three. However, whether a given user needs the same data explained differently or different data altogether is a question to be resolved analytically.

Investors, for example, require complex qualitative and quantitative evidence to be converted into metrics that are readily interpretable. This is why the TPI Centre's frameworks distil such evidence into indicators that take the form of "yes" or "no" answers, which serve investors better than more elaborate formulations that require interpretation before they can be acted on. The simplification entails a genuine loss of nuance, which is absorbed by the analysts who scrutinise thousands of documents to produce the entity assessments. It is a defensible compromise only where the underlying detail remains published and accessible to any user seeking it, or can be pursued further in the course of engagement.

For institutions producing climate data as a public good, this carries a practical implication. Public availability is a necessary condition of accessibility but not a sufficient one. Making data genuinely usable requires sustained engagement with each stakeholder constituency, and increasingly the connection of those stakeholders to one another: explaining what a metric does and does not establish, situating results within the decisions each group confronts, and accepting the challenge to method that follows. This is a substantial undertaking, and one to which policymakers and academic institutions are well placed to contribute through their convening power. The conference at which this discussion took place is itself an example.

8. CONCLUSION

The past decade has brought a marked improvement in the availability of climate-related data. Disclosure has expanded, methodologies have evolved, and assessments that are more comparable across entities are now available in a way they were not ten years ago, as well forward-looking metrics. Where such data are independently produced and publicly

accessible, that has depended largely on philanthropic funding, which raises a question about how sustainable the model is.

Two further implications follow from the argument set out in this article. The first is that the remaining constraints are no longer primarily analytical. The measurement problems in adaptation and nature are real and unresolved, and no improvement in methodology will resolve them without prior agreement on what is to be measured. The disclosure gap is of a different character: in listed markets the question is whether existing requirements produce information that is usable, and in private markets it is one that investors are themselves well placed to address through the terms on which capital is provided. In neither case is better analytics the binding constraint. Nor, it should be said, is the evidence base the only thing that determines what happens next: data inform decisions, they do not make them.

The second concerns how the demands on the data infrastructure are changing. As the constituencies using climate data have grown more familiar with the subject, their questions have become more precise, and with that has come an expectation of more granular and more frequent information than annual assessment provides, particularly by investors.

The expectation is understandable, but it has to contend with the pace at which the underlying changes actually occur. Corporate transformation is slow: business models, capital stock and growth strategies change over years rather than months, and the capital expenditure decisions that determine a company's trajectory take longer still to become visible in its emissions. The same is true of government policies. The effect of a carbon price, a subsidy regime or a grid investment programme registers over years, and often only once firms have adjusted to it.

Artificial Intelligence (AI) is widely expected to make more frequent data updating possible. The Centre's own experience suggests that AI may to an extent assist with the most time-consuming part of the work, namely the extraction of structured information from large volumes of unstructured disclosure. However, the more demanding part is judgement: establishing whether what an entity has disclosed actually satisfies a given criterion, in a context where language is frequently ambiguous and where the absence of a statement may itself be informative. That judgement is not yet something the technology can be relied upon to supply, and it is what the reliability of an assessment ultimately rests on. Reliability here is not merely a technical property: an independent assessment carries weight only for as long as those assessed, and those relying on it, have reason to trust that it has been done carefully.

For a readership concerned specifically with the energy transition, the practical conclusion is narrower. What the sector continues to lack is shared infrastructure allowing the same underlying evidence to be used by an investor engaging with a portfolio company, a supervisor assessing systemic exposure, a researcher testing a hypothesis, and a citizen seeking to

understand what the transition will require. Building it involves genuine trade-offs: national detail against international comparability, breadth of coverage against depth of assessment, speed against rigour. These are trade-offs to be made explicitly, a point the Madrid discussion helped to bring out by setting supervisory, statistical and academic perspectives alongside one another. Occasions of that kind are valuable and would bear repeating.

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TPI GLOBAL CLIMATE TRANSITION CENTRE - STATE OF THE BANKING TRANSITION 2025

Comparable, Forward-Looking, Independent Climate Data as a Public Good

UK THE FINANCIAL SERVICES AND MARKETS ACT 2000 (Regulated Activities) (ESG Ratings) Order 2025, and the FCA's consultation of December 2025, with the regime taking effect 29 June 2028.