



# Closing the disconnect in ESG data

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A lush green forest with a river and a suspension bridge in the foreground. The scene is filled with tall trees and dense foliage, with sunlight filtering through the leaves. A suspension bridge with a metal mesh deck is visible in the lower left corner, stretching across the river. The overall atmosphere is serene and natural.

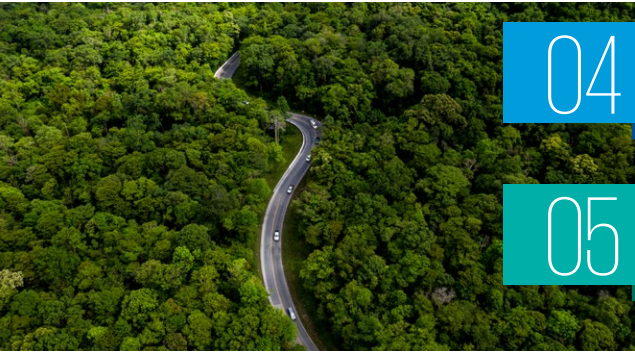
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KPMG and Google Cloud are working together to make new advances in ESG data science. Our aim is to drive innovative business outcomes as ESG scoring, reporting and assurance for financial services companies evolve at pace. With data and analytics as critical components to any ESG assessment, Google Cloud provides the engine needed to power more sophisticated reporting and scoring models.

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# Executive summary

The financial services industry gets it. This is an industry that must play its part in confronting the issues facing the world, from the climate emergency to inequality and injustice. Its leaders know that by pulling the right levers in capital and credit markets, they can drive the change that society so desperately needs.

Increasingly, environmental, social and governance (ESG) factors inform the decisions that financial services leaders make, from day-to-day operational choices to long-term strategic planning. Individual firms may not always share the same views or pursue the same priorities, but they have collectively embraced the idea that financial metrics are not the only measure of success.

Indeed, industry leaders are acutely aware that in addition to the investment returns they generate, their businesses are now judged on a broad range of ESG criteria; ESG metrics are second only to financial indicators as boards measure performance. And as organizations work to deliver on those broader goals, they must account for their ESG performance to a wide range of stakeholders. These include governments, which see the sector as central to achieving their own ESG objectives.

However, in order to respond to those imperatives, the financial services sector now needs access to far better ESG data — broader-based information across its entire spectrum of business activities, more granular data, and more sophisticated tools for generating actionable insight. In many cases, shortfalls in each of these areas are holding the industry back, preventing firms from achieving their ESG goals and ambitions. This wouldn't be acceptable with financial metrics; nor should firms have to accept inaccurate, unaudited, out of date, incomplete and biased data in the ESG realm.

**In this paper, the first of three in-depth analysis into ESG data challenges and opportunities, we investigate why financial service firms desperately need more ESG data, where they currently lack the data and analysis they crave, and how they might begin to close some of these gaps. Future papers will explore cloud-based solutions for solving the ESG data disconnect and spotlight new value propositions.**

The business case for transforming ESG data capabilities is compelling. Financial institutions have an opportunity to secure competitive advantage while simultaneously improving their chances of delivering positive societal outcomes.

This is an industry for which doing well will increasingly go hand in hand with doing good.

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# The ESG imperative

Leading financial institutions around the world are increasingly recognizing the imperative for a step change in their efforts to embed environmental, social and governance (ESG) factors in every facet of their businesses. They recognize that their industry is in an almost unique position to drive positive social change across a broad range of issues.

There are numerous drivers of the ESG imperative that financial institutions embrace, and they accept the critical role they play. Many of these drivers are external, but it is only fair to recognize that large numbers of firms are self-motivated — they are part of a growing movement of stakeholder capitalism, seeking profit with purpose. By the end of 2020, more than 3,750 financial services organizations with US\$130 trillion of assets under management had signed up to the United Nations' Principles for Responsible Investment.<sup>1</sup>

Certainly, customer demand is an important element of the story. Take-up of ESG products is surging in many parts of the world and appears to have accelerated in the wake of the COVID-19 pandemic. In the US alone research from the SIF Foundation reveals that by the end of last year, sustainable investing assets had reached US\$17.1 trillion, a 42 percent increase compared to two years' previously.<sup>2</sup> In Europe, meanwhile, ESG funds hit an all-time record of \$1.4 trillion last year.<sup>3</sup> Growth in ASPAC is also exponential: ESG funds under management more than doubled in 2020, albeit from a lower base.<sup>4</sup>

Moreover, the trend is across the financial services industry-wide. Goldman Sachs, for example, has committed to deploying across investment, financing and advisory activities by 2030 to accelerate climate transition and advance inclusive growth.<sup>5</sup> HSBC has said that by 2030 it will aim to provide between \$750 billion and \$1 trillion of finance and investment towards the transition to a net zero economy; in the first half of 2021 alone, it helped raise more green, social, sustainability and sustainability-linked bonds for clients than in the whole of 2020.<sup>6</sup>

Other stakeholder groups are also pushing for change. There is an increasing need to embed the ESG agenda in people strategies, as employees, particularly younger workers, are actively seeking out businesses with a good track record on ESG issues; they want their work to have purpose. Financial institutions' own investors and shareholders, including large pension funds, are increasingly demanding from an ESG perspective.

Another factor front of mind for financial service firms is their own exposure to many of the issues at the heart of the ESG debate — particularly around climate change. The economic damage of flooding worldwide came to US\$82bn last year according to some estimates, US\$13bn of which was picked up by the insurance industry.<sup>7</sup> The UK banking industry's loan exposures to fossil fuel producers, energy utilities and emission-intensive sectors amount to around 70 percent of the largest banks' common equity Tier 1 capital.<sup>8</sup>



Research published earlier this year based on responses from more than 100 banks, insurers and wealth and asset management companies found they regarded the lack of available relevant data as the single greatest challenge preventing them from adequately addressing climate risk.



Then there is the regulatory agenda, which is advancing at pace, particularly in Europe. In the UK, for example, the Prudential Regulatory Authority (PRA) expects all UK banks and insurers to develop climate risk management capabilities, including scenario analysis, with five of the largest firms selected to run such analysis in 2021; The Task Force on Climate-Related Financial Disclosures will be mandatory for all UK banks and insurers beginning in 2025.<sup>9</sup> In mainland Europe, meanwhile, the European Supervisory Authorities require financial market participants to disclose specific information on their approaches to the integration of sustainability risks, and the consideration of adverse sustainability impacts on their investments across all financial products.

For all these reasons — and more — ESG considerations are now moving center stage in the activities of financial services firms. Yet there is a problem, with many lacking the means with which to seize the agenda because of difficulties with ESG data — even on climate change. Research published earlier this year based on responses from more than 100 banks, insurers and wealth and asset management companies found they regarded the lack of available relevant data as the single greatest challenge preventing them from adequately addressing climate risk.<sup>10</sup> In some areas of the social and governance elements of the ESG agenda, this problem is even more acute.

This is not only a problem for the financial services sector, but also for broader society. For example, the transition to net zero at a global level will require significant funding from the financial services marketplace, spanning public and private capital markets. Similarly, in the social area of ESG, improving safety implications of a product or the politics attached to an organization's practices throughout the supply chain may affect or require a complete reassessment of the economic model currently underpinning it. On governance, the push for gender diversity and pay equity may necessitate new business models as more companies are emphasizing the substantial benefits of creating inclusive workplaces in an effort to increase Diversity, Equity and Inclusion (DEI).

Supporting the transition will be very challenging. Better data and insight can help financial institutions and the real economy they support — to focus on interventions that would make the most difference to us collectively.





## Each sub-sector of the industry naturally has its own data imperatives and challenges:

- Banks' lending activities (and investment banks' broader client base) expose them to the ESG credentials of a broad range of corporates. Increasingly, they may be concerned about lending to or advising organizations with poor ESG practices. HSBC, for example, has developed a risk advisory tool so traders can run a range of what if scenarios related to credit products such as corporate bonds; it is now building climate risk into this tool.<sup>11</sup> Many banks are also conscious of the impact of climate change on key customer segments — they may be unwilling to provide mortgage financing to borrowers buying property in flood-risk areas, for example, or rethink lending criteria to include requirements around energy efficiency. Key customer groups may find themselves excluded.
- Insurers also face significant business risk through key issues at the heart of the ESG agenda, particularly through their property and casualty operations. Indeed, the UN Environment Programme's Principles for Sustainable Insurance initiative is a conscious effort to help insurers manage ESG risks.<sup>12</sup> Understanding this risk in more detail is now essential to dynamically pricing policies for improved risk mitigation and profit. In addition, insurers with life and pensions businesses are active investors; portfolio decisions are increasingly taken with an ESG lens.
- Asset and wealth managers are key investors in every type of corporate, holding both equity and debt. ESG is an increasingly important consideration in portfolio construction and stock selection. The giant asset manager BlackRock is just one example of a firm that cites the need to "expand access to data, insights and learning on material ESG risks and opportunities in investment processes across the board".<sup>13</sup>
- Private equity and venture capital firms providing the funding for early-stage and growing businesses increasingly regard sustainable returns as a key driver of value. In many cases, working to improve investee companies' sustainability is critical to the investment case, so better data is crucial. For example, Carlyle Group and the California Public Employees' Retirement System are leading a collaboration of general and limited partners to develop an initial standardized set of ESG metrics and mechanism for comparative reporting.<sup>14</sup> Elsewhere, venture capital firms such as Lowercarbon Capital are committed to investing in businesses helping the advance towards net zero.<sup>15</sup>







# Today's ESG data landscape

**E**ven before financial institutions begin to think about defining and fulfilling their data needs, they run into a significant roadblock. Despite its ubiquity, there is no globally agreed definition of the term ESG, let alone what 'good' might look like, whether in relative or absolute terms.

Indeed, the term ESG is often used loosely and interchangeably with descriptions such as sustainability and impact. Even in legislative texts, standardized terminology is sorely missing. The EU's Benchmark Regulation focuses largely on 'ESG factors', whereas its Taxonomy Regulation and Sustainable Financial Disclosure Regulation (SFDR) primarily refer to 'sustainability'.<sup>16</sup>

Equally, in contrast to financial accounting regulation, there are no standardized definitions of ESG reporting — either what it means or what is required. Organizations talk about 'reporting on non-financial information', 'corporate social responsibility (CSR) reporting', 'ESG reporting' and 'integrated reporting'. Some focus only on certain aspects of the ESG agenda, while others are more comprehensive.

Given this backdrop where even the dimensions of the playing field have yet to be agreed, it is hardly surprising that ESG data is inconsistent, inaccessible, and often simply absent.

## What data is available?

Currently, the single most important primary source of ESG data is corporates — businesses and other organizations making disclosures of sustainability-related information that are largely based on self-assessment with varying degrees of independent audits. Additional primary data includes public and third sector reporting, as well as other independently sourced datasets, but most ESG data used by the industry originates in corporate disclosures such as financial statements.

An ecosystem of specialists who interpret this primary data continues to develop at pace. It includes data collectors, such as CDP (formerly the Carbon Disclosure Project), who systematically collect corporate disclosures — both data in the public domain and through their own research and make some attempt to verify them. Additionally, data providers also collect ESG data, processing the information in order to score or rate corporates on their ESG performance. Examples of these data providers include Sustainalytics, IHS Markit, MSCI, S&P Global, VigeoEiris, Bloomberg, and FTSE Russell. One recent study found more than 600 data providers globally.<sup>17</sup>

## How is this data organized?

In the absence of any global agreement on harmonized disclosures, a broad range of disclosure standards and frameworks have developed. Financial services organizations in some industries or jurisdictions may be obliged by regulation to work with one or more of these frameworks; in other areas, they may be free to choose.

Examples of these disclosure standards include:

- The **Global Reporting Initiative (GRI)**, which sets out global best practices for sustainable reporting of material issues and their impacts.<sup>18</sup>
- The **Sustainability Accounting Standards Board's (SASB)** standards for the identification and assessment of financially material issues for a company.<sup>19</sup>



- The **Task Force on Climate-related Financial Disclosures' (TCFD)** recommends how FS firms should make climate-related disclosures to investors; unlike the GRI and the SASB, the TCFD is purely focused on environmental data.<sup>20</sup>

Importantly, these standards are largely self-regulatory. By contrast, the EU's SFDR is a legally-binding disclosure framework for financial services firms operating within the bloc. The delayed standards will require firms to make disclosures in line with technical standards<sup>21</sup> set out by the European Banking Authority, the European Insurance and Occupational Pensions Authority and European Securities and Markets Authority.

Disclosure frameworks typically provide ESG metrics and indicators that enable assessment of an organization's ESG performance. These metrics aim to capture the performance of a firm in a comparable manner on a given ESG issue — examples range from data on a firm's scope 1, 2 or 3 CO<sub>2</sub> emissions<sup>22</sup> to the fatality rate of employees. Some metrics are entirely quantitative while others include some qualitative assessment — for example, judgements about likely future performance.



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# Common ESG data challenges

The lack of standardization in the data landscape, beginning with the fundamental lack of consistency on definitions of ESG itself, gives rise to a broad range of challenges for financial services organizations as they attempt to secure and exploit ESG data.

## Challenges include:

- 1. ESG data is voluntary, however inconsistent and difficult to compare.** In the absence of globalized and standardized ESG disclosure obligations, corporates are often free to decide whether to report non-financial information. Where they do disclose — voluntarily or otherwise — they have a choice of standards to take account of, so their reporting is difficult to compare with that of other organizations.
- 2. ESG data is compromised by interdependence.** The weaknesses of primary ESG data feeds through the value chain and are magnified in the process. Data collectors and providers depend on self-assessed disclosures and interpret this data according to their own varying practices.
- 3. Data collectors and providers' outputs are unverified and inconsistent.** While aggregators of ESG data serve a useful purpose, they are often unable to independently verify data and their analytics engines are structured in different ways. The result is that their outputs may be at odds with each other. With the lack of standardization, agencies may award corporates very different ESG ratings<sup>23</sup> and financial institutions are not always equipped to assess the accuracy of these ratings.
- 4. ESG data is patchy.** The quality and quantity of ESG reporting varies enormously by jurisdiction, by asset class, and by size of corporate. In many markets, there is very little ESG data for collectors and providers, or financial institutions themselves, to work with. Data is in particularly short supply when it comes to smaller public corporates. There is also a lack of granularity on ESG impacts at very local levels.
- 5. ESG data is out of date.** Almost all ESG data is backwards looking — often significantly so given the extended timelines of corporate reporting. Every assessment of corporates' ESG performance rate the organization on where it was at a point in time, rather than where it is today.
- 6. Financial services organizations lack their own ESG data competencies.** Many are short of the skills and tools they require to build their own ESG data analytics operations, leaving them exposed to the weaknesses of the ESG data industry. Legacy technologies and a shortage of data science expertise are significant problems.
- 7. There is no single source of the truth.** Financial institutions cannot find all the ESG data they require from any one provider. This requires them to confront the inconsistencies of the ESG data industry, as well as the technical difficulties of compiling multiple data sources. They may also lack the expertise necessary to weigh the merits of different providers.





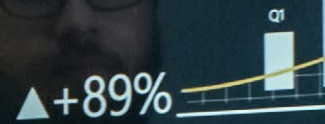
Accessing new data sets and, more importantly, leveraging actionable insight from them will require new frameworks for analysis, and new technologies capable of delivering insight at scale.



## Digital Distribution & Sales Analysis

"There is no one who loves pain itself, who seeks after it and wants to have it, simply because he is not a suffering being; he only wishes to avoid it. All too late you realize the pain is yours own and that you have reached the limits of your anguish. This realization is followed by a new kind of pain: the pain of the truth that you have suffered. You suffer because you can't avoid it; you suffer because you don't wish to; you suffer because you know it."

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AR Consumption growth



Social Networks influence

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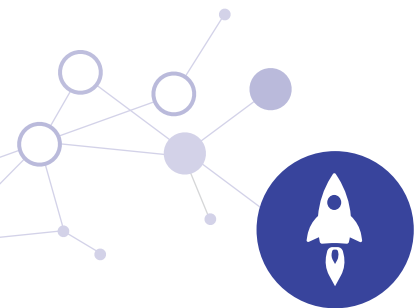
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# Beginning to fill in the gaps

**H**ow does the financial services sector begin to confront the multiple ESG data challenges it currently faces? As a starting point, it makes sense to think about the characteristics that a credible and coherent ESG data solution would offer.

## To start, a solution should be:

- **Dense.** Currently, ESG data coverage is patchy at best, providing a limited view of too many organizations and activities. Instead, financial organizations need a data set that covers all of the entities in which they invest or do business with.
- **Explainable.** The problem is not only that ESG data on certain types of organizations is limited but also that critical issues within the ESG agenda are poorly understood. The industry needs a data solution that provides information on every element of environment, social and governance, and provides a means with which to compare performance on key issues in each of these areas across a portfolio.
- **Diverse.** Given the dangers of self-reporting and gaming of the system, firms need to be able to triangulate their data in order to have confidence in it. This requires data that provides information on the same issue from multiple perspectives.
- **Recent and forward looking.** Performance indicators must move much closer to when real world events occur. Financial institutions that make decisions based on stale metrics inevitably become hostages to fast-moving events. These institutions will also need to focus on ESG targets or goals, for example — “our company plans to run 24/7 carbon-free energy by 2030.”

## One-size fits all does not apply

How, then, to build a solution that might deliver these characteristics? In practice, there

will be no one-size-fits-all answer to the ESG data challenge — the needs and use cases of individual financial institutions are simply too diverse. Equally, confronting these difficulties will not be a once-and-for-all piece of work; in a fast-moving environment where the ESG agenda is evolving rapidly, improving access to relevant ESG data will necessarily be an iterative process. That requires continuous feedback cycles rather than static stock-taking.

Nevertheless, there are two particularly promising ways forward. First, we must be more imaginative about the breadth of data that might be useful and relevant; accessing new data sources provides a means with which to build more accurate, timely and triangulated viewpoints. Secondly, making better use of new tools and technologies to evaluate that data will produce higher quality outputs.

## New data sources required

As we have seen, right now, the financial services industry is heavily dependent on a single primary source of ESG data, relying on corporates’ disclosures, albeit sometimes parsed through data collectors and ratings agencies. In the short term at least, it may be difficult to improve the breadth and depth of this data, but there are multiple other datasets that could provide both additional data and a means with which to verify corporates’ claims.

One example is indirect data such as satellite imagery, which provides a powerful near- or real-time snapshot of the physical world that can be used in multiple ways. Researchers at University College London, for example, have developed models for estimating energy usage using satellite data.<sup>24</sup> Such data can also be used to map oil inventories.<sup>25</sup>



Communications data is another rich area for ESG insight, particularly in a world where the conversation about environmental, social and governance issues across news media, social media and other outlets is louder and more varied than ever before. These conversations, once turned into structured information, provide a contemporaneous snapshot of both the macro and the micro. The GDELT Project which monitors the world's broadcast, print, and web news from nearly every corner of every country in over 100 languages, is just one example of what is possible.

Public concern over supply chain or labor market practices, say, may show up on social media well before problems are reported. Local and hyper-local media increasingly highlight issues of significance well before they are picked up by larger media organizations. Such data can provide key early warning signs of an ESG problem — leading investment firms, for example, are already making efforts to secure social media data and analysis<sup>26</sup>, with third party provision growing.

#### **New tools and methodologies**

Accessing these new data sets and, more importantly, leveraging actionable insight from them will require new frameworks for analysis, and new technologies capable of delivering insight at scale.

Natural language processing (NLP) is one such technology with huge potential from an ESG perspective. It offers a means with which to extract insight from social media, news articles and other unstructured data sources — including voice and video as well as text — in order to identify key issues or assess sentiment. NLP tools can also be used to interrogate corporate information in new ways — for example, to extract keywords linked to a company's culture from data sources such as earnings calls, company transcripts and news articles.

Artificial intelligence (AI) and machine learning (ML) tools will also become increasingly important. Such tools offer a means with which to collect and aggregate ESG data more effectively, automating tasks such as filtering and analytics, and powering sentiment analysis.

AI and ML also offer opportunities to delve deeper into risk and opportunity in an ESG context — for example, through algorithms that connect specific ESG indicators to financial performance. However, to be effective, these AI and ML models will require a vast amounts of data.

More sophisticated data warehousing and analytics tools will likely be part of the solution too. For example, researchers are using Google Cloud's BigQuery serverless data warehouse and business intelligence engine to map the operations centers of businesses to better understand how they are affected by natural and anthropogenic disasters, catastrophes, and global pandemics. This work leverages publicly available data sets.

Deploying such techniques requires significant computing power, particularly for more sophisticated modelling work. This will likely require increased use of high-performance computing to optimize the cost of running simulations; tools such as virtual machines, batch scheduling and graphic processing units will be increasingly in demand. Cloud-based solutions will likely provide broader access to such capabilities. HSBC's risk modelling tool, for example, leverages cloud computing to run multiple parallel risk calculations, including its new climate scenarios.<sup>27</sup>



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### Whose job is it anyway?

These suggestions for new sources of data and new tools for driving insight are by no means exhaustive. But already, it is obvious that closing the ESG data gap is likely to require significant investment in new skills and resources. Clearly, not every financial institution will want — or be able — to make that investment for itself.

In that context, one obvious question is who should take responsibility for delivering the ESG data solutions of the future. Should financial institutions be expected to build their own centres of excellence, or will there be third parties to whom they can look for these advanced competencies and functionality?

In practice, while it would be unrealistic to expect every individual financial institution to build its own bespoke solution, it is also unlikely that we will see the emergence of a one-stop-shop for ESG data. Financial services organizations certainly have a right to expect more from ESG data providers, but they will also have to take some responsibility themselves.

This, after all, is the norm in traditional finance reporting. Financial institutions depend on an array of third parties for financial data, analyses and ratings. But when deciding who to lend to, to insure, or invest in, they also conduct their own research and analysis — not least with the aim of securing competitive advantage.

That said, there is a role for greater assurance in the ESG data market. While many providers are working hard to improve the quality of their data, currently, too small a proportion of data is independently verified and cross-checked. And where assurance is taking place, providers are unregulated, giving little confidence in the quality of their work. Financial institutions are struggling to assess the quality of the data they receive — and therefore to make informed decisions about which sources and data providers they should trust. As with financial disclosures, third-party audit and assurance is vital to resolve this issue.



Closing the ESG data gap is likely to require significant investment in new skills and resources.







## Case study

The UK-based asset manager CCLA is gathering new data on how companies address the issue of mental health. As well as managing funds for public sector organizations, the firm is the largest manager of charity assets in the UK. They are building a mental health benchmark that rates publicly-quoted companies around the world according to their public disclosures on mental health and wellbeing practices. In an area where data is in short supply, the benchmark will give CCLA a means with which to engage with investee companies on such issues, and an opportunity to respond to its investors' concerns about this aspect of ESG. CCLA are hoping that the provision of this data will act as a catalyst for other investors to act on this important issue.





# The business case for change

It will require significant energy, investment and commitment for financial institutions — and the broader ESG sector — to rise to the challenges that ESG data currently present. Certainly, there are potential solutions on the horizon — and new partners with which to explore those solutions — but there is significant work to do.

Still, the business case for investment in ESG data transformation looks increasingly compelling, with a range of important and valuable paybacks.

Some of these paybacks are obvious. For example, as financial services leaders face mounting regulation requiring them to improve ESG practices, including reporting and disclosure, they must find more cost-efficient compliance solutions. Similarly, mounting risk, in the context of climate change particularly, requires organizations to invest in mitigation and resilience; without a clearer picture of where their potential exposures lie, this will not be possible.

However, investment in ESG data should not only be regarded as a defensive strategy. It also provides financial institutions with the ability to go on the offensive — to forge stronger relationships with key stakeholders, for example, to recruit and retain from a broader pool of talent, and to establish greater brand equity with customers and clients.

Perhaps most excitingly of all, ESG data transformation creates opportunities for financial institutions to build new value propositions — to develop new products and solutions for clients that add value and drive revenue growth.

In consumer banking, for example, leading retail banks are focused on how to develop spending calculators that give account holders a clear view of the potential ESG impacts of every single purchase they make before they make it — and therefore inform their choice of product or service. It may be possible to charge for such functionality, or at least to use it to bolster the bank's value proposition, particularly as younger customers focus on impact and sustainability.

In insurance, insurers are increasingly able to use ESG data to help policyholders avoid problems in the first place, or to secure insurance coverage that would once have been unobtainable. Hyper-local climate data, for example, offers a means to work with industries ranging from agriculture to construction. Geo-location data enables insurers to track the driving habits of policyholders and to tailor their insurance accordingly.

In asset and wealth management, where demand for ESG investment products continues to soar, more sophisticated ESG data enables firms to offer new funds, portfolio management services and support for DIY investors.

In short, leveraging ESG data in this way opens up a plethora of exciting new propositions across the financial services space. From this perspective, the business case for ESG data transformation does not look so difficult to build — there is every opportunity to do well at the same time as doing good. Is your organization ready?



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# Endnotes

- 1 About the PRI | PRI Web Page | PRI (unpri.org)
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