

## Sustainability Insights:

# 1,000 SPOs, A Sustainable Finance Milestone

April 28, 2026

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### Key Takeaways

- Through the 1,000 SPOs we've published since 2008, we see financing frameworks becoming more transparent as scientific data and investor expectations evolve, with more quantitative eligibility thresholds, clearer exclusion criteria, stronger disclosures, and a gradual shift toward verifiable implementation.
- We also see taxonomies and thematic sublabels shaping sustainable finance definitions, with taxonomies often used as benchmarks rather than solely an alignment tool and sublabels supporting targeted, outcome-oriented capital allocation.
- Although post-issuance transparency is improving, with issuers increasingly aligning with common guidelines and disclosing clearer allocation data, impact metrics remain sensitive to the methodology and assumptions behind them.

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Sustainable debt financing continues to favor mature climate transition technologies, a trend evident across the 1,000 SPOs we've analyzed as of April 21, 2026. We believe this reflects investors' continued preference for proven, lower-risk decarbonization solutions. At the same time, our analyses point to a market that has become progressively disciplined in how sustainable debt frameworks are designed, alongside increasing, albeit uneven, attention to post-issuance impact reporting.

Our SPOs cover at least \$1.25 trillion in sustainable debt, starting from CICERO Shades of Green's first green bond framework assessment in 2008, through S&P Global's acquisition and subsequent integration of Shades of Green in 2022. Taken together, they offer insights into the evolution of the sustainable finance market and the structural challenges that remain, particularly regarding measuring social impacts and expanding access for issuers in emerging markets.

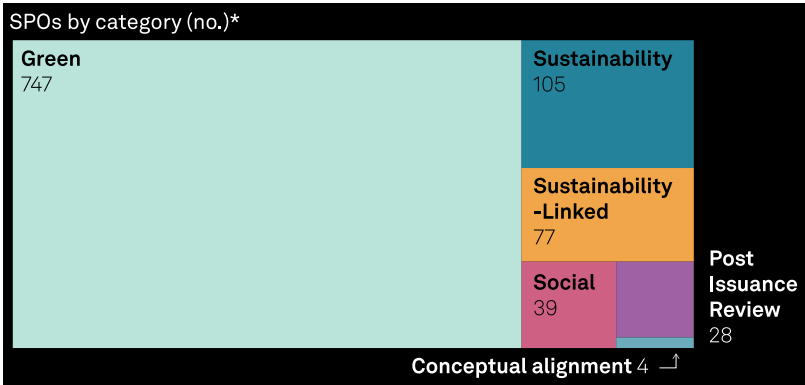
# Decarbonization Dominates Financing Objectives

Most of the 1,000 SPOs we have conducted are for issuers' climate mitigation financing. This underscores that decarbonization projects, such as renewable energy buildouts, electric vehicles, and energy efficient (green) buildings, have long benefited from well-developed policy frameworks and clear, bankable revenue streams, unlike the focus areas of other sustainable financing, such as social, adaptation, or nature-related projects.

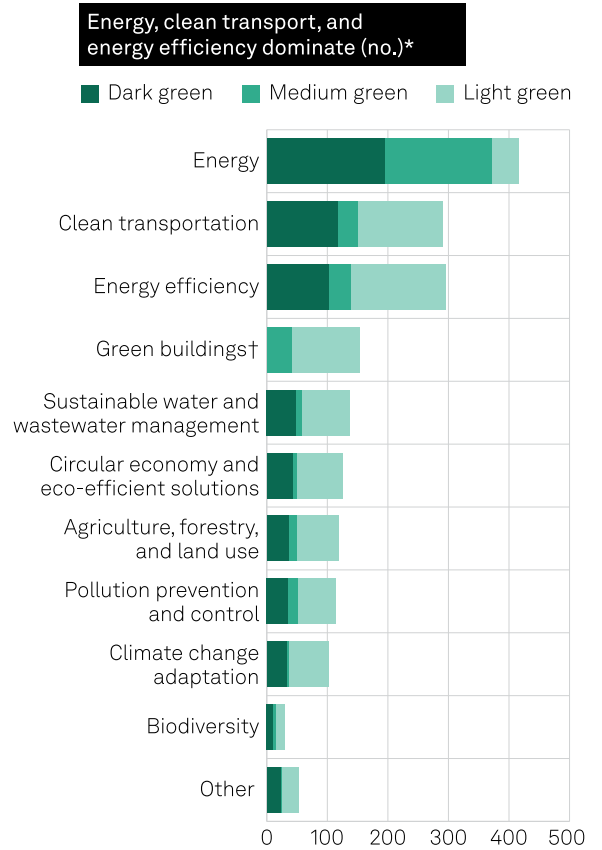
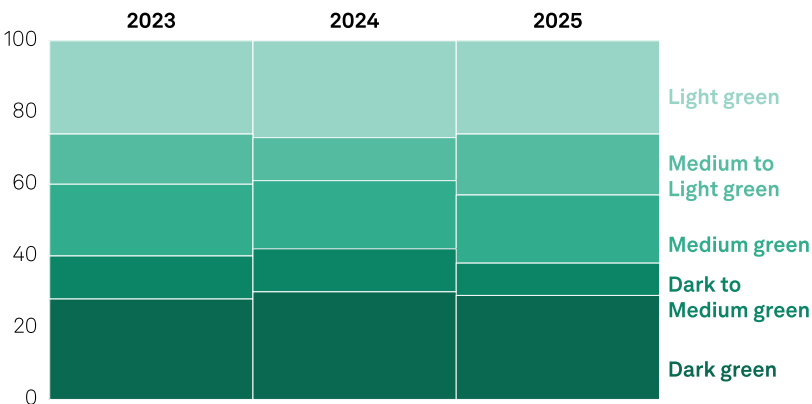
**Green financing has thus far favored well-established technologies over more nascent solutions.** Among the more than 2,000 green projects we've analyzed since 2008, most are concentrated in established sectors, like renewable power generation and clean transportation, which we typically assess as Dark green (see chart 1). Our Shades of Green represent our qualitative opinion of how consistent activities funded by the financing are with a sustainable future. We assign a Shade by applying our "[Analytical Approach: Shades Of Green Assessments](#)," July 27, 2023.

Chart 1

## The vast majority of our 1,000 SPOs are on green financing



### Stable share of assessments across Shades over the years (%)§



As of April 21, 2026. \*Data includes CICERO Shades of Green numbers before integration with S&P Global Ratings. §Data since July 2023, the integration of CICERO Shades of Green. †Given data limitations for green buildings, we have only included the shading distribution after CICERO Shades of Green integration. Source: S&P Global Ratings.

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**The distribution of our Shades reveals that the majority of frameworks are Dark green or Medium green, but this pattern changes when looking at it from a capital allocation perspective.**

Financing of nuclear projects, for instance, tends to be substantially larger than for green real estate projects and is typically categorized as Medium green. Still, in a market where nearly all bonds labeled sustainable are rated investment grade ('BBB-' or higher), investors' risk-return appetite remains closely aligned with that in conventional bond markets. We believe this explains why the distribution of Shades on financed projects has remained relatively stable, with established climate mitigation solutions continuing to dominate and some improvements in Shade among repeat issuers. In addition, despite its more limited use among the financings we've reviewed, sustainability-linked instruments remain an alternative to finance the decarbonization of hard-to-abate sectors, with stronger target-setting practices over the years.

## Repeat Green Issuers Are Strengthening Frameworks Amid Technological Progress And Increased Transparency

Through our SPOs, we've seen issuers responding to improved scientific understanding of climate change drivers, global climate policy agreements, and investors' increasing expectations.

**In a sample of SPOs for recurring issuers in 2023-2025, we found that the 43% that were already Dark green maintained that Shade.** Those issuers operate primarily in renewable energy generation and electrified transportation. Of the Light green and Medium green frameworks, 50% (mainly those financing real estate) maintained these Shades or were assigned a stronger overall Shade of Green compared to our previous SPO. The qualitative improvements we observed in these frameworks include:

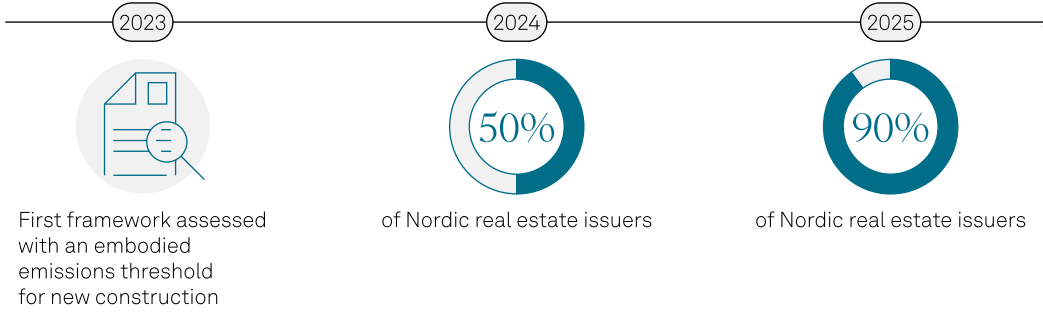
- Stronger entity-level physical climate risk assessments and adoption of adaptation measures;
- A shift from research and development in previous frameworks to actual implementation of innovation;
- Stepwise advances in critical transition technologies;
- Clearer exclusions of activities entailing high environmental risk; and
- Quantitative performance criteria in project categories.

**Among the examples of framework enhancements, we noted considerations related to lifecycle embodied emissions beyond building energy performance.** This feature became more material in our assessment of green building best practices, since analyses revealed that lifecycle embodied emissions account for 20%-60% of a building's total emissions (see "[Behind The Shades: Real Estate](#)," March 31, 2025). In 2023, the financing framework of [Vasakronan](#), a Swedish real estate company, was the first framework we assessed that included a quantitative embodied emissions threshold for new construction. By 2024, half of the 12 Nordic real estate companies for whom we completed an SPO had embodied emissions thresholds in their frameworks; by 2025, this had risen to 90% of the 10 cases that year (see chart 2).

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Chart 2

**Most Nordic real estate companies include embodied emissions thresholds for eligible new green buildings in frameworks assessed in our SPOs**



Sources: Companies' frameworks, S&P Global Ratings.  
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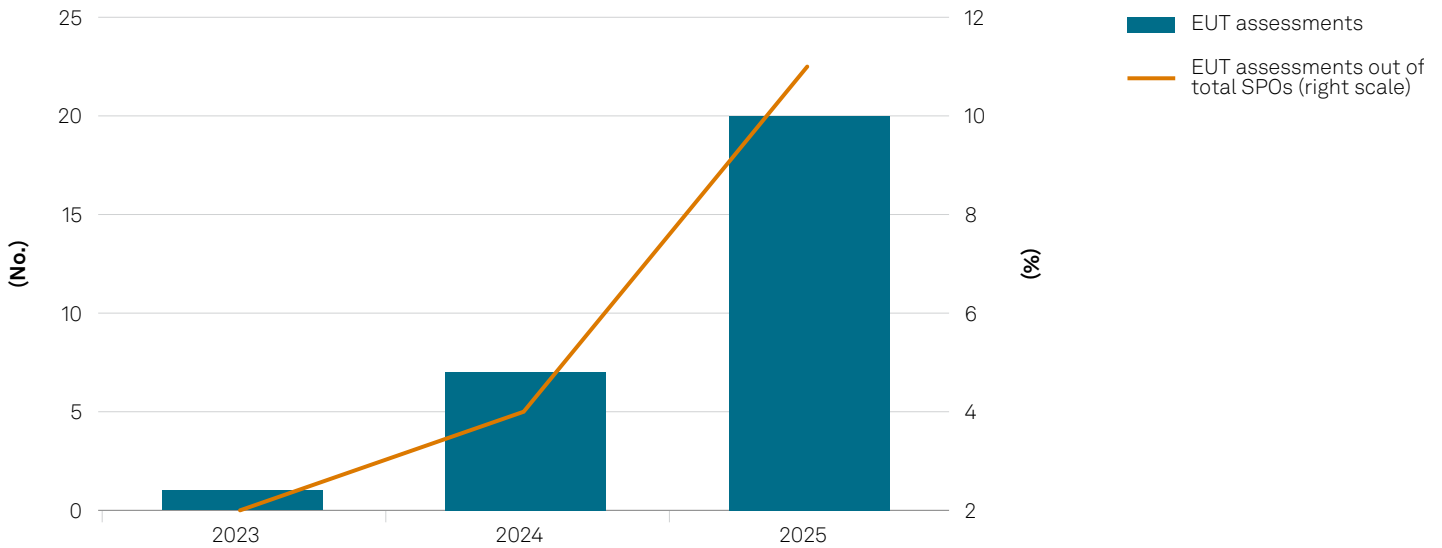
## Taxonomy Assessments: The EU Is The Leading Standard Among Regional Alternatives

EU Taxonomy assessments are gaining traction within the frameworks we have reviewed (see chart 3). However, we have yet to assess alignment with any formal taxonomies outside the EU. We believe technical difficulties in meeting taxonomy requirements, especially in documenting compliance with the Do No Significant Harm criteria, combined with the frequent revisions of these frameworks, represent key obstacles to wider adoption.

Chart 3

**Rise in EU Taxonomy assessments reflects entrance of the EU's green bond label**

July 2023 - December 2025



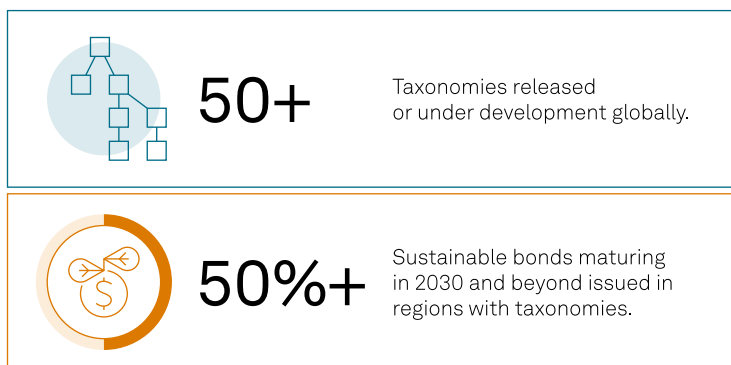
EUT--EU Taxonomy. Source: S&P Global Ratings.  
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**That said, we've observed a growing proportion of sustainable finance frameworks referencing taxonomy-specific technical standards.** As of third-quarter 2025, over one-third of the frameworks we reviewed for pre-issuance SPOs leveraged taxonomy-screening criteria for project evaluation and selection. For example, waste-to-energy (WTE) projects are recognized in South Africa's and Colombia's taxonomies as an eligible green activity. We have seen the inclusion of WTE projects, using local taxonomy definitions, in the financing frameworks of issuers in emerging markets, such as [Banco Santander de Negocios Colombia S.A.](#)

**Requests for non-EU-Taxonomy assessments have been low.** Yet regional taxonomies have proliferated in recent years, becoming a key tool for local definitions of eligible sustainable and sometimes transition activities. There are now at least 50 taxonomies globally, with more under development or in the planning stage. And more than half of the sustainable bonds maturing in 2030 and beyond were issued in regions with taxonomies (see "[In Or Out: Taxonomies Will Remain Relevant Despite Headwinds](#)," Oct. 23, 2025). Against this backdrop, recent efforts to enhance interoperability have begun to emerge. At COP30 in 2025, Brazil led the proposed "Super-Taxonomy Initiative," which aims to promote comparability across national taxonomies through shared principles rather than a single global standard.

Chart 4

### Proliferation of regional taxonomies



Source: S&P Global Ratings.  
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## Thematic Sublabels Signal A Shift Toward More Targeted Financing

Issuers are increasingly adopting sublabels for sustainable issuance, such as "nature," "blue," "biodiversity," "green enabling," and "Amazonia," to better define the environmental focus of their financing.

**Such sublabels have featured in only a small number of the frameworks we've reviewed so far.**

However, we believe they are helping expand the sustainable debt market into underrepresented areas, particularly non-climate environmental themes. Thematic sublabels also allow issuers to more closely link financing to specific outcomes, while serving a strategic role in targeting activities key to specific investors and aligning with the priorities of their sector or region.

**We've observed that frameworks with labeled issuance often incorporate well-defined baselines and performance metrics, while still being founded on the International Capital Market Association (ICMA)'s principles.** They frequently draw on international frameworks

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developed by intergovernmental organizations and multilateral development banks (MDBs) as well as global policy agendas, including the U.N.'s Sustainable Development Goals and targets in the Kunming-Montreal Global Biodiversity Framework. This results in more prescriptive eligibility criteria, clearer upfront articulation of intended impacts, and, in many cases, more structured post-issuance reporting (see table).

### Selected thematic labels assessed in our SPOs

Year	Issuer	Sector	Thematic label	Eligible projects	Criteria and transparency commitments
2024	<a href="#">Vulcan Energy Resources</a>	Metals and mining	Green-enabling projects	Clean transportation and stationary battery storage: assets dedicated to the extraction and processing of lithium hydroxide monohydrate (LHM)	<ul style="list-style-type: none"> <li>--Downstream: 100% of LHM end use to electric vehicle (EV) batteries and battery energy storage systems</li> <li>--Upstream: Commits to using geothermal heat for lithium processing and electrochemical conversion rather than reagent-intensive processing</li> <li>--Commits to independent ESIA aligned with Equator Principle 4 and IFC Performance Standards, with stated mitigatory actions, as well as climate change risk assessment focused on a broad range of climate scenarios</li> </ul>
2025	<a href="#">Companhia de Saneamento Básico do Estado de São Paulo (SABESP)</a> <a href="#">Companhia de Saneamento Básico do Estado de São Paulo (SABESP)</a>	Water and wastewater utilities	Blue finance	<ul style="list-style-type: none"> <li>--Sustainable water and wastewater systems, technologies, management</li> <li>--Climate change adaptation: planning and technology to increase water security and resilience</li> </ul>	<ul style="list-style-type: none"> <li>--Commits to delivering measurable outcomes on water management (water loss, customer satisfaction, water quality, etc.) in all municipalities of the state of São Paulo above a documented baseline, in line with IFC's green bond framework requirements</li> <li>--Issuer's goal of achieving universal water and sewage treatment by 2029 is four years ahead of the 2033 target under Brazil's sanitation regulatory framework</li> </ul>
2025	<a href="#">Southeast Asia Commercial Joint Stock Bank</a>	Banks	Blue finance	Sustainable water and waste management; Ocean friendly products, marine biotechnology, and chemicals	<ul style="list-style-type: none"> <li>--Commits to &gt;10% water efficiency improvement and water savings against baseline for projects for agriculture and industrial use</li> <li>--Commits to requiring a minimum 20% reduction of plastic per unit ton of product for eligible circular economy projects</li> <li>--Requires proof of origin under project selection process and adopts a third-party chain of custody traceability system to ensure transparency of raw materials' origins</li> </ul>
2025	<a href="#">The Housing Bank for Trade and Finance</a>	Banks	Blue finance	Sustainable water and wastewater management systems, such as desalination and conveyance	<ul style="list-style-type: none"> <li>--Finances desalination plants powered by renewable sources and therefore not emissions intensive activity</li> <li>--Commits to at least a 10% reduction in physical losses for conveyance system against baseline</li> <li>--Commits to due diligence in accordance with IFC Performance Standards or the European Bank for Reconstruction and Development's environmental and social requirements</li> </ul>

## Selected thematic labels assessed in our SPOs

Year	Issuer	Sector	Thematic label	Eligible projects	Criteria and transparency commitments
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ESIA--Environmental and social impact assessment. IFC--International Finance Corp. Source: S&P Global Ratings.

**Although it may take time for thematic labels to gain ground, underlying trends point to recent momentum in non-climate environmental categories.** Compared with 2024, in 2025, we saw a 96% rise in agriculture and forestry project categories, 44% in biodiversity, 38% in pollution prevention, and 25% in water. This suggests that issuers are increasingly allocating capital toward a broader set of environmental objectives, even where thematic labels are not explicitly used.

## Emerging Markets Show Well-Diversified Environmental And Social Projects Aligned With Countries' Needs

Unlike what we see in advanced economies, financing in emerging markets is not concentrated in climate mitigation projects. Rather, we see a proliferation of green and social categories, including forestry and land use, adaptation, biodiversity, food security, access to essential services, and basic infrastructure.

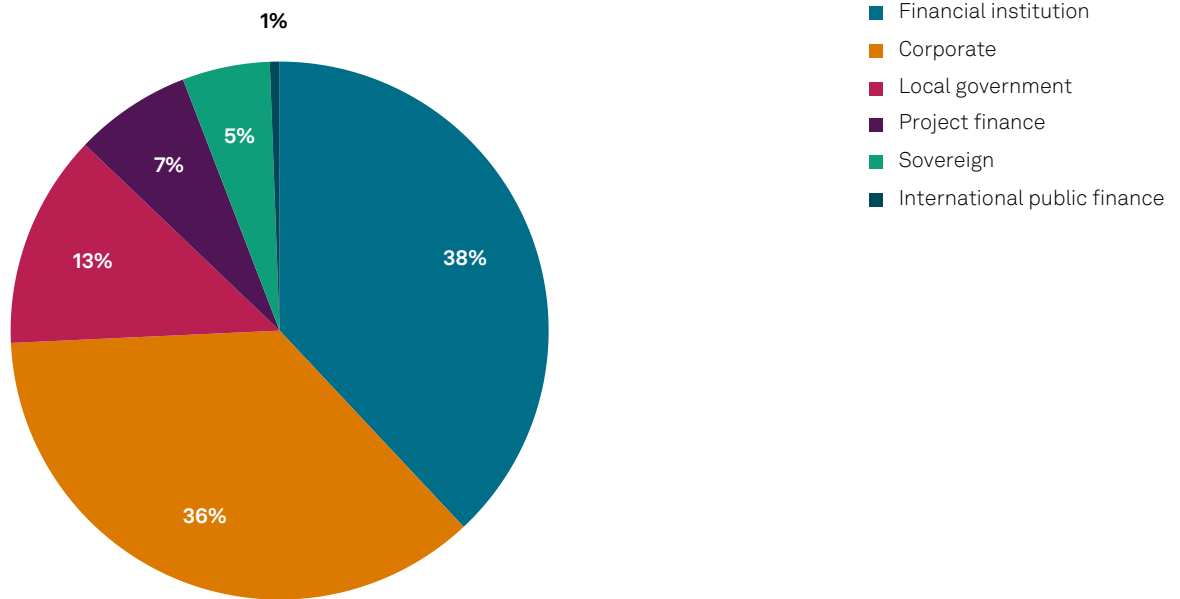
**Sovereign frameworks increasingly cover the most material environmental and socio-economic issues facing countries in emerging markets.** For example, in our SPOs on the frameworks of [Togo](#), [Rwanda](#), and [Cameroon](#), we note the efficient mapping of economies' specific characteristics (such as reliance on agriculture and natural resources, significant poverty levels, and high exposure to physical climate risks) to the use of proceeds.

**Financial institutions also play a significant role in sustainable debt issuance as funding intermediaries in emerging markets.** MDBs, and private or state-owned banks in particular, represent a central pillar of sustainable debt markets in these economies (see chart 5); notable examples include the [Islamic Development Bank](#) and [Banco do Brasil S.A](#), which play an outsized role in mobilizing capital through labelled instruments. Labelled instruments in emerging markets, thanks to the enhanced transparency on allocation and impact they provide, often enable issuers to reach a broader range of investors than is typical for non-labelled debt.

Chart 5

### Banks lead S&P Global Ratings' SPOs in emerging markets

July 2023-March 2026



Data since July 2023, the integration of CICERO Shades of Green. Source: S&P Global Ratings. © 2026 Standard & Poor's Financial Services LLC.

## Social And Sustainability Frameworks: Effective Locally Though Often Lacking Metrics On Social Outcomes

Among the SPOs we've published since July 2023, 39% were on sustainability frameworks or transactions in emerging markets, compared to 12% in advanced economies. This reflects the role of financial institutions and local and federal governments in driving issuance in emerging markets. More-limited market access than in advanced economies, due to higher credit risk, and the average smaller size of projects make investing in both social and green projects more attractive to meet minimum bond-size requirements.

**Local context plays an important role in our assessment of social projects and in the broader social debt market** (see "[Social Project Analysis: A Key Component Of Our SPOs And A Tool For Sustainable Development](#)," June 25, 2025). For instance, affordable housing and access to essential services--the social project categories we most frequently encounter in our SPOs--depend heavily on local variables. An example variable is income thresholds in affordable housing government programs. In the U.S., such programs may generally use the area median income, a metric from the U.S. Department of Housing and Urban Development, to define low-income target populations. This metric represents a GDP per capita threshold, which is substantially higher than its equivalent in Brazil, underscoring the importance of local context. Similarly, jurisdiction informs our assessment of an issuer's definition of the target population, especially in countries where public authorities have recognized socially vulnerable groups, for example, indigenous communities.

**Although we see sufficient local context in the frameworks we assess, we believe there's room for progress in the measurement of intended social outcomes.** Assessing impacts can be particularly difficult in social project categories. This is due in part to the complexity of quantifying factors like "quality of access," which are fundamentally subjective, or assessing innovative projects for which there is little historical data to act as a benchmark. It can also be difficult to discern whether changes in targeted outcomes, like poverty rates, are the result of successful social programs or broader dynamics like economic growth and demographic trends. As a result, much of the reporting on the benefits of social projects amounts to counting dollars invested, houses built, or loans granted. Moving away from input or process metrics and toward indicators of results, where possible, is a continued opportunity for social debt markets.

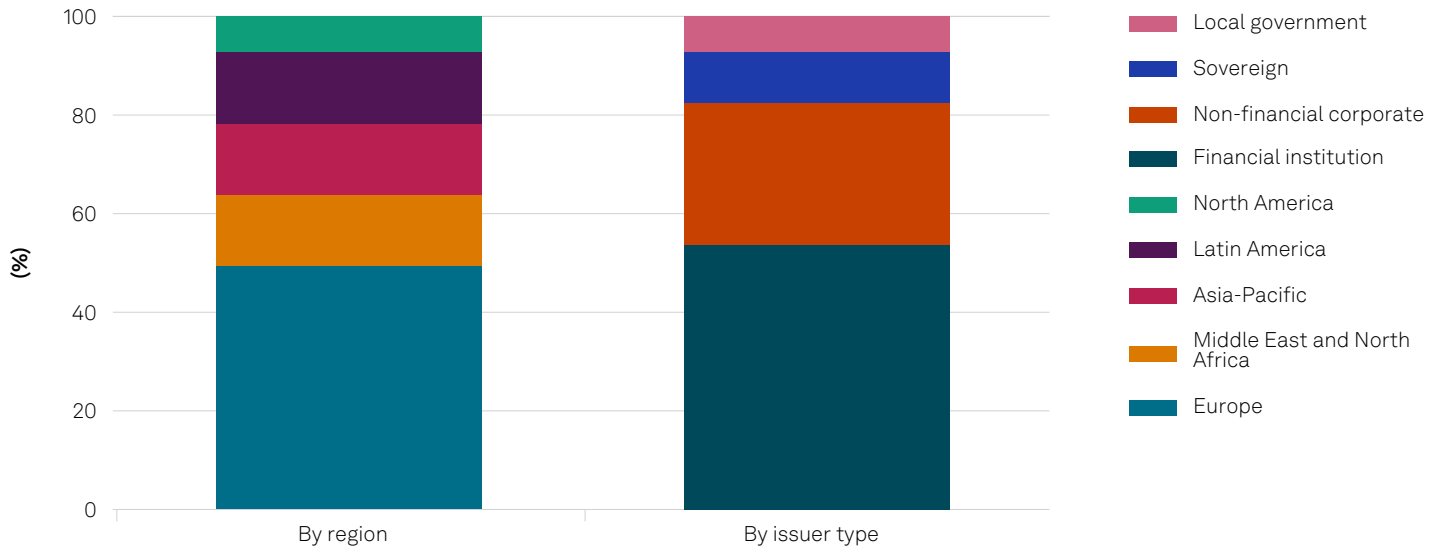
## Post-Issuance Reporting Still Shows Gaps, Though Transparency And Comparability Are Improving

Investors consistently emphasize that the sustainable finance market's credibility depends, at a minimum, on timely reporting, at least annually. They generally expect such reporting to clearly attribute impacts to projects, including pre-issuance forecasts, supported where possible by independent third-party reviews.

**Our SPOs reveal a steady progression toward more consistent and comparable sustainability reporting.** We believe this is a sign of issuers' increasing awareness of the need for transparent reporting to maintain market credibility. Across a sample of 28 Post Issuance Reviews, 48% relate to the frameworks of issuers in Europe, including financial institutions (52%), corporates (28%), sovereigns (10%), and local governments (7%). Many issuers appear to be providing clearer allocation of proceeds to eligible projects, linking financing to broader business strategy, aligning with established principles, and referencing material impact metrics such as those in the International Sustainability Standards Board Standards, ICMA's Harmonized Reporting Guidelines, or the New Product Sustainability Index. Though these patterns are emerging, reporting practices still vary globally. European issuers tend to show relatively more advanced reporting practices than issuers in emerging markets, likely reflecting mature regulatory and market frameworks.

Chart 6

**S&P Global Ratings' allocation and/or impact report reviews to date**  
January 2020-April 2026



Source: S&P Global Ratings.  
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**Nevertheless, several technical reporting challenges remain.** Accurately attributing allocations is generally achievable through prorating. But isolating the impacts of labeled financing remains complex, requiring care to avoid double counting when assessing the environmental or social benefits of financed projects. Transparency on the calculation of key performance indicators and baseline assumptions is often uneven, particularly for metrics like avoided emissions. This is because such metrics are highly sensitive to methodological choices, such as the treatment of a technology's lifecycle emissions or selection of energy grid factors, which are not always disclosed or standardized. Furthermore, reporting often relies on projected impacts rather than on actual, realized outcomes, limiting a full assessment of performance (see "[Sustainable Finance FAQ: Sustainable Bond Impact And Transparency In Post-Issuance Reporting](#)," Aug. 14, 2025, for common reporting challenges). These observations highlight the continuing importance of transparency, standardized reporting, and robust impact metrics to maintain the credibility of labeled sustainable finance instruments in the market and demonstrate their impacts.

## Appendix

### A sample of SPOs on sustainable frameworks of emerging market sovereigns

[Government of Romania's Green Bond Framework](#)

[Republic of Honduras' Framework For Green, Social, And Sustainable Thematic Bonds](#)

[Togo Sustainable Financing Framework](#)

[Rwanda's Sustainable Finance Framework](#)

[The Dominican Republic's Green, Social, And Sustainable Bond Framework](#)

[Mongolia's SDG Bond Framework](#)

[Government of India's Green Bond Framework](#)

[Republic of Indonesia SDGs Framework](#)

[Republic of Kenya Green Bond Framework](#)

Source: S&P Global Ratings.

- **Editor:** Bernadette Stroeder
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## Related Research

- [Sustainability Insights: Behind The Shades: Oil And Gas](#), April 16, 2026
- [In Or Out: Taxonomies Will Remain Relevant Despite Headwinds](#), Oct. 23, 2025
- [Analytical Approach: Taxonomy Assessments](#), Oct. 15, 2025
- [Sustainable Finance FAQ: Sustainable Bond Impact And Transparency In Post-Issuance Reporting](#), Aug. 14, 2025
- [Social Project Analysis: A Key Component Of Our SPOs And A Tool For Sustainable Development](#), June 25, 2025
- [Behind The Shades: Real Estate](#), March 31, 2025
- [Analytical Approach: Second Party Opinions](#), March 6, 2025
- [Analytical Approach: EU Taxonomy Assessment](#), Oct. 31, 2024
- [Analytical Approach: Shades Of Green Assessments](#), July 27, 2023

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