S&P Global
Ratings

Analytical Approach

Second Party Opinions And Transaction Evaluations

Dec. 7, 2022

Editor's Note: On Jul. 27, 2023, this document was partly superseded by "Analytical Approach: Second Party Opinions: Use Of Proceeds." This document is still applicable to sustainability-linked second party opinions (SPOs) only in paragraphs 1-4, 7-16, and 27-36. In addition, we have retired the article "Analytical Supplement: Second Party Opinions And Transaction Evaluations," published Dec. 7, 2022. We have also retired our Green Transaction Evaluation and Resilience Transaction Evaluation products.

This report does not constitute a rating action

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Overview And Scope

1. This article describes S&P Global Ratings' analytical approach for providing opinions on sustainable financing. These opinions are not credit ratings, do not consider credit quality, and nor do they factor into our credit ratings. They are not the same as and are not connected with S&P Global Ratings' ESG Evaluation product. The opinions we offer are Second Party Opinions (SPOs) and Transaction Evaluations. They are point-in-time analyses and become public only at the issuer's request.
   - We offer SPOs on green, social, sustainability, or sustainability-linked financial instruments. An S&P Global Ratings SPO is an alignment opinion that assesses whether a framework or transaction documentation aligns with certain third-party published sustainable finance principles and guidelines ("Principles") identified by the issuer. SPOs on frameworks do not automatically apply to individual transactions issued under the framework because we need to review the transaction documentation.
   - We offer a Transaction Evaluation on debt or equity transactions using a scale of 1-100 to indicate the relative environmental benefit of the green or resilience projects to be funded, with 100 being the greatest potential benefit. We can assign a Transaction Evaluation with or without an SPO.
   - We offer an "Analysis of EU Taxonomy Alignment" as an appendix to an SPO or Transaction Evaluation. We can opine on whether a financing document aligns with the EU Taxonomy in cases when at least one economic activity is covered by Technical Screening Criteria (TSC), which are incorporated into European law via delegated acts.
2. A current list of third-party principles and standards (collectively "the Principles") against which we may offer SPOs is available in the Analytical Supplement, and we expect to update this list as necessary. Standard setters define what constitutes an external review. For example, there are four types of external reviews described by the International Capital Market Association (ICMA): (1) Second Party Opinion, (2) Verification, (3) Certification, and (4) Green Social, Sustainability, and Sustainability-Linked Bond Scoring/Rating. For Principles based on ICMA's approach, S&P Global Ratings provides SPOs and scores on frameworks and transactions. We do not provide verifications or certifications. Similarly, we do not offer alignment opinions that require any verification or certification, such as the Climate Bonds Initiative (CBI) certification standard.
3. Our SPOs are organized into standardized analytical components that match the common areas the various Principles define. An opinion of "aligned" means that we assess the documentation for a given transaction or framework as aligned with the components of the relevant Principles. For some features of the framework or transaction we can indicate the degree to which commitments in documentation go beyond a simple alignment by noting their inclusion of recommendations from the Principles, and other market best practices.
4. SPOs and Transaction Evaluations are not credit ratings. The analytical approach is applicable to a wide variety of financial instruments and financing frameworks, including those issued by corporate entities, project and structured finance vehicles, financial institutions, multilateral development banks, and sovereign, regional, and local governments. We do not limit our opinions to bonds for new projects that issuers label as green, social, or sustainability. We can provide SPOs and Transaction Evaluations on any refinancing, bonds, bank loans, private placements, project finance debt, hybrids, portfolios, asset-backed securities, and other financial transactions as well as Transaction Evaluations on equity transactions. Our analytical approach is relevant for pre- and post-closing of a financing and pre- or post-construction of a real asset.

5. This analytical approach for Transaction Evaluations is also applicable to financings by entities whose businesses are solely focused on environmentally beneficial activities (such as wind turbine manufacturers) issuing general use-of-proceeds transactions and to portfolios of assets, including those held by financial or other institutions.

6. A single financing can fund multiple projects, all of which may have environmental, climate, or resilience benefits, but in different combinations and to varying degrees. Alternatively, only a portion of the proceeds may be directed to beneficial projects. Our analytical approach for Transaction Evaluations can accommodate either scenario.

7. As these external reviews are point-in-time analyses, we do not conduct ongoing surveillance.

8. All terms followed by an asterisk (*) are defined in the glossary in the Appendix.

Second Party Opinions Analytical Approach

9. We provide SPOs on whether the documentation of a sustainable finance framework, program, or transaction aligns with the Principles.

10. There are several principles and standards on which we can offer an SPO, and we can adapt our analysis to the specific principles against which the framework or transaction is being assessed. We can also comment on the use of various taxonomies in our analysis. The ICMA is one of the main Principles setters, describing "voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green (social) bond market by clarifying the approach for issuance of a green (social) bond." (Green Bond Principles, June 2021; Social Bond Principles, June 2021.)

11. Our analysis and opinions are organized into standardized analytical components that match the common areas defined by the various Principles. An opinion of aligned means that we assess a given transaction or framework as aligned with the components of the relevant Principles. We may also indicate the degree to which documentation goes beyond a simple alignment by noting the inclusion of recommendations from the Principles and other industry best practices for governance and reporting.

Determining alignment for an SPO on sustainable finance transactions or frameworks

12. The analytical components we use to determine our alignment opinions with Principles are listed here. An SPO assesses different combinations of analytical components depending on the specific Principles in relation to which we are forming the SPO.

- Sustainability strategy
- Use of proceeds
- Process for project evaluation and selection
- Management of proceeds
- Selection of key performance indicators (KPIs)
- Calibration of performance targets
- Instrument characteristics
- Reporting
- Post-issuance review

13. For example, SPOs that reference the ICMA's Green Bond Principles (GBP) require four analytical components: Use of proceeds; Processes for project evaluation and selection;

Management of proceeds; and Reporting. Alternatively, SPOs that reference the Sustainability-Linked Bond Principles (SLBP) require five analytical components: Selection of KPIs; Calibration of performance targets; Instrument characteristics; Reporting; and Post-issue verification. We map Principles and standards to these analytical components in our Analytical Supplement. When new Principles are created, or existing ones are updated, we expect to update the Analytical Supplement, and, if required, our analytical approach.

14. For all analytical components we can determine whether they are **aligned**, or **not aligned**, with the relevant Principles. In addition, when the Principles make further recommendations for best practices on disclosures and commitments in documentation, or there is an emerging best practice, we can provide additional opinions as **aligned with strong commitments and aligned with advanced commitments**.

Sustainability Strategy

15. Where relevant to the Principles selected, our opinion describes whether the documentation is aligned or not aligned with those Principles. In our rationale we comment on whether, in our view, an entity is adhering to the relevant requirements. Our opinion is not a comment on the strategy itself. Rather, the alignment opinion focuses on how clearly, in the documentation, the issuer describes the transaction or framework's specific environmental or social objectives and how these objectives relate to the issuer's overall sustainability strategy and reasons for issuing the instrument.

16. There can be variations among Principles in the scope of this section. Therefore, the analysis supporting our opinion is tailored to the Principles against which we are providing the SPO. For example, ICMA's Climate Transition Finance Handbook requires the issuer to articulate how the eligible financing will enable the development of its climate change strategy, while the GBP have no requirements on articulating a sustainability strategy.

Use of proceeds

17. Our opinion describes whether commitments made in the documentation are aligned, or not aligned, with the relevant use-of-proceeds Principles. Beyond an aligned or not aligned opinion, we also provide a qualitative opinion on an entity's additional commitments in the documentation as strong, or advanced. The alignment opinion focuses on how clearly, in the documentation, the issuer sets out its commitment to using the funds raised for sustainability projects.

Table 1

Alignment Opinion Definition

Alignment opinion	Definition
Not aligned	Does not meet the requirements in the relevant Principles
Aligned	Meets the minimum requirements for alignment with the relevant Principles
Aligned, with strong commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **several** suggested/recommended elements from the Principles
Aligned, with advanced commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **all** suggested/recommended elements from the most demanding Principles, **or** has adopted best market practices, whichever is more advanced

18. Principles and taxonomies can vary as to what qualifies as an environmental or social project. In addition, the Principles make recommendations for greater commitment and clarity on how proceeds are used. We comment on any additional features included in the framework or transaction documents.

19. As examples of current variations, we can compare the ICMA's GBP and Social Bond Principles (SBP) and consider the effect of different taxonomies on the analysis behind our use-of-proceeds opinion. ICMA's 2021 principles stipulate that an issuer should commit the net proceeds of an issuance exclusively to eligible green and social projects. According to the 2021 GBP, eligible green projects will seek to achieve at least one of five environmental objectives:

    1. Climate change mitigation,
    2. Climate change adaptation,
    3. Natural resource conservation,
    4. Biodiversity conservation, and/or
    5. Pollution prevention and control.

20. According to the 2021 SBP, the following describe the most common eligible social project categories:

    1. Affordable basic infrastructure,
    2. Access to essential services,
    3. Affordable housing,
    4. Employment generation and programs designed to prevent and/or alleviate unemployment,
    5. Food security and sustainable food systems, and
    6. Socioeconomic advancement and empowerment.

21. Different taxonomies can introduce different requirements as to what qualifies as an eligible green or environmental project, and therefore for use-of-proceeds eligibility. So, if a Principle requires adherence to a specific taxonomy, we include that in the alignment opinion.

Process for project evaluation and selection

22. Our opinion describes whether the documentation is aligned, or not aligned, with the relevant Principles on the process used to evaluate and select eligible projects to fund. We also provide a qualitative opinion on an entity's commitments, made in the documentation, as strong, or advanced.

Table 2

Alignment Opinion Definition

Alignment opinion	Definition
Not aligned	Does not meet the requirements in the relevant Principles
Aligned	Meets the minimum requirements for alignment with the relevant Principles
Aligned, with strong commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **several** suggested/recommended elements from the Principles
Aligned, with advanced commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **all** suggested/recommended elements from the most demanding Principles, **or** has adopted best market practices, whichever is more advanced

23. The alignment opinion focuses on how clearly in the documentation the issuer explains its internal process to ensure alignment with environmental or social requirements when choosing eligible projects. Principles and taxonomies can vary as to what qualifies as an environmental or social project. The Principles also make recommendations for greater commitment and clarity on project selection governance. We expect to comment on this, and for these variations to influence our strong and advanced opinions when relevant.

24. Typically, the Principles require the issuer to explain the process by which it selects eligible projects, the related eligibility criteria it applies to select those projects, including exclusionary criteria, if applicable, and the overall sustainability objectives that underpin the selection process.

Management of proceeds

25. Our opinion describes whether the documentation is aligned, or not aligned, with the relevant Principles on how the proceeds will be managed over the lifetime of the funding. The alignment opinion focuses on how clear, in the documentation, is the issuer's commitment to ensure that the funds raised will continue to be dedicated to eligible sustainability projects throughout the life of the sustainable finance funding. Some Principles make recommendations for greater commitment to continuity of sustainable investment.

26. For example, the ICMA's Principles require an issuer to monitor the net proceeds of all outstanding green and social bond transactions, which includes appropriately tracking the proceeds and adjusting the balance of net proceeds to match allocations to eligible green and social projects. The ICMA's GBP and SBP also require an issuer to disclose to investors the types of temporary placement they intend to use for unallocated proceeds.

Selection of Key Performance Indicators

27. Our opinion describes whether the documentation is aligned, or not aligned, with the relevant Principles on the selection of KPIs. Some Principles make optional recommendations for stronger structuring practices, which when incorporated in the documentation can lead to a strong, or advanced, relevance opinion. For each KPI, we consider its relevance for sustainability by exploring its clarity and characteristics; its significance for the issuer's sustainability disclosures; and how material it is to the issuer's industry, and strategy.

Table 3

Alignment Opinion Definition

Alignment opinion	Definition
Not aligned	Does not meet the requirements in the relevant Principles
Aligned	Meets the minimum requirements for alignment with the relevant Principles
Aligned, with strong commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **several** suggested/recommended elements from the Principles
Aligned, with advanced commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **all** suggested/recommended elements from the most demanding Principles, **or** has adopted best market practices, whichever is more advanced

28. When an issuer uses a score or rating as a KPI, S&P Global Ratings evaluates the relevance of the KPI to the issuer's sustainability statements, industry, and strategy. This includes seeking to understand the issuer's rationale for selection of the KPI and, for issuer-selected KPIs that are scores or ratings, the methodology used to determine the KPI. KPIs selected by issuers may be produced by third parties or S&P Global Ratings. Our review focuses on the relevance of the issuer-selected KPI to the issuer's sustainability statements, industry, and strategy. It is not a comment on the quality of the methodology used to determine the selected KPI.

Calibration of Performance Targets

29. Our opinion describes whether the documentation is aligned, or not aligned, with the relevant Principles on the calibration of performance targets for the selected KPIs. Some Principles make optional recommendations for stronger structuring practices, which when incorporated in the documentation can lead to a strong, or advanced, ambition opinion for each KPI target. We consider the level of ambition for each target by assessing its clarity and characteristics, how the issuer defines the target with reference either to its past performance, or to external or competitor benchmarks, and how it explains what factors could influence future performance.

30. When an issuer uses a score or rating as a KPI, S&P Global Ratings evaluates how the score or rating references past performance of the KPI and external benchmarks for the issuer's competitors, as well as what could influence changes in the score or rating. This includes seeking to understand the methodology used to determine the score or rating and the issuer's rationale for selection of the KPI. This approach is followed in evaluating any score or rating used as a KPI, whether produced by S&P Global Ratings or a third party.

Table 4

Alignment Opinion Definition

Alignment opinion	Definition
Not aligned	Does not meet the requirements in the relevant Principles
Aligned	Meets the minimum requirements for alignment with the relevant Principles
Aligned, with strong commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **several** suggested/recommended elements from the Principles
Aligned, with advanced commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **all** suggested/recommended elements from the most demanding Principles, **or** has adopted best market practices, whichever is more advanced

Instrument characteristics

31. Our opinion describes whether the documentation is aligned, or not aligned, with the relevant Principles based on disclosure of the instrument's characteristics. The alignment opinion focuses on the disclosure of the type of financial and/or structural effects involving trigger event(s), and the potential variation of the instrument's financial and/or structural characteristics. We expect the information disclosed for a transaction to be more specific than the information in framework documentation.

Reporting

32. Our opinion describes whether the documentation is aligned, or not aligned, with the relevant Principles on reporting. Some Principles make optional recommendations for stronger reporting practices, which when incorporated in the documentation can lead to a strong, or advanced, disclosure opinion.

Table 5

Alignment Opinion Definition

Alignment opinion	Definition
Not aligned	Does not meet the requirements in the relevant Principles
Aligned	Meets the minimum requirements for alignment with the relevant Principles
Aligned, with strong commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **several** suggested/recommended elements from the Principles
Aligned, with advanced commitments	Meets the minimum requirements for alignment with the relevant Principles; **and** Includes **all** suggested/recommended elements from the most demanding Principles, **or** has adopted best market practices, whichever is more advanced

33. Our disclosure opinion focuses on the issuer's commitment to disclosure practices in the documentation and considers plans for updates on the sustainability performance of the issuer for general purpose funding, or the sustainability performance of the financed

projects over the lifetime of any dedicated funding. Our disclosure score reflects our view of any commitments to post-issuance reporting.

34. For example, the ICMA's Principles stipulate that an issuer should report on the use of proceeds annually until full allocation. They also state that information presented in the annual report must include a list of the projects that receive financing, a description of each project (including the amount allocated to each project), and their expected environmental and social impacts. The ASEAN Green Bond Standards specify that issuers should post annual updates on a website.

Post-issuance review

35. When the relevant Principle requires post-issuance review, this opinion describes whether the documentation is aligned, or not aligned, with these requirements. The alignment opinion focuses on the issuer's post-issuance review commitments including the type of post-issuance third-party verification, periodicity, and how this will be made available to key stakeholders. Please note, our SPO is not itself a post-issuance review.

36. There can be variations in post-issuance review requirements among Principles. For example, a post-issuance review under the GBP is presented as a suggestion, rather than an obligation, for stronger disclosure practices and is included in the reporting analysis. The SLLP and SLBP, on the other hand, require discrete post-issuance review and so SPOs on them will have this section.

Analysis of EU Taxonomy Alignment

37. This analysis aims to help readers see how activities that will be funded with proceeds from a financing framework, or a specific transaction, align with the EU Taxonomy.

38. The EU Taxonomy defines six environmental objectives (EU Objectives):

    a. Climate change mitigation;
    b. Climate change adaptation;
    c. The sustainable use and protection of water and marine resources;
    d. The transition to a circular economy;
    e. Pollution prevention and control;
    f. The protection and restoration of biodiversity and ecosystems.

39. In order to be treated as environmentally sustainable under the EU Taxonomy, any economic activity funded by the financial instrument must meet three conditions:

    1. The activity must make a substantial contribution to at least one of the EU Objectives (substantial contribution)
    2. The activity must do no significant harm (DNSH) to any other EU objectives
    3. The activity must meet minimum safeguards

40. The European Commission provides the EU Taxonomy Compass (the Compass), which aims to include all Technical Screening Criteria (TSC) required to check for the alignment of economic activities with the EU Taxonomy. The Compass only includes TSC that are fully enacted via delegated acts and published in the Official Journal of the European Union. At the time of publishing only the Climate Delegated Act which covers the Climate change adaptation and mitigation EU Objectives is included as it became European law on Jan. 1, 2022. The Commission will update the Compass with new TSC when future delegated acts come into force. Our alignment opinions focus on the criteria and requirements defined in the Compass at the date of the publication of our analysis in a report.

Overall Alignment Opinion on the Financing Framework or Transaction

41. We consider the financing document to be EU taxonomy-aligned only when our opinion is fully aligned. We differentiate nonalignment with the EU taxonomy under two categories—partially aligned and not aligned—as summarized here:

Table 6

Overall EU Taxonomy Alignment Opinion On A Financing Framework Or Transaction

Fully aligned	**All** economic activities that can be funded by the financing documentation are included in the Compass **And** all economic activities align with all TSC for substantial contribution and for DNSH **And** the issuer meets the minimum safeguards in the Compass
Partially aligned	Is not fully aligned but **at least one** economic activity that can be funded by the financing documentation is included in the Compass **And** at least one economic activity aligns with all TSC for substantial contribution and for DNSH **And** the issuer meets the minimum safeguards in the Compass **And** all economic activities that are not included in the Compass are at least aligned as defined in both use of proceeds (table 1) and process for project evaluation and selection (table 2)
Not aligned	No economic activities included in the Compass that can be funded by the financing documentation meet the TSC for substantial contribution and DNSH **Or** the issuer might not meet the minimum safeguards in the Compass **Or** any economic activity not included in the Compass is not aligned for either use of proceeds (table 1) and process for project evaluation and selection (table 2)

Alignment Opinion for Each Economic Activity

42. First, we consider whether each economic activity that can be funded by the financing document is aligned or not aligned with the EU Taxonomy or not included in the Compass. Then we apply the table above to develop the overall alignment opinion.

Table 7

Alignment Opinion For An Economic Activity

Aligned	The economic activity clearly meets the substantial contribution and DNSH TSC **And** the issuer clearly meets minimum safeguards defined in the Compass.
Not aligned	The economic activity does not meet the substantial contribution or DNSH TSC **Or** the issuer does not clearly meet the minimum safeguards defined in the Compass.
Not included	The economic activity is not included in the Compass.

Applying the Substantial Contribution and Do No Significant Harm Technical Screening Criteria to Each Economic Activity

43. We review each economic activity covered by a financing framework or transaction to conclude whether it is aligned, or not aligned, with the substantial contribution criteria, or not included in the Compass.

Table 8

Alignment With Substantial Contribution Criteria

Aligned	The economic activity matches the description in the Compass for contributing to an EU Objective and the related substantial contribution criteria are clearly met.
Not aligned	The economic activity matches the description in the Compass for contributing to an EU Objective but the substantial contribution criteria are not clearly met, **Or** the economic activity does not match the description in the Compass for contributing to an EU Objective.
Not included	The economic activity is not included in the Compass.

44. We review each economic activity covered by a financing framework or transaction to conclude whether it is aligned, or not aligned, with the DNSH criteria, or not included in the Compass.

Table 9

Alignment With DNSH Criteria

Aligned	The economic activity clearly meets the DNSH criteria for the other EU Objectives defined in the Compass.
Not aligned	The economic activity does not clearly meet the DNSH criteria for the other EU Objectives defined in the Compass.
Not included	The economic activity is not included in the Compass.

45. Essential information sources for our analysis are the financing documentation, discussions with the issuer, public disclosures from the issuer, and internal documents and policies from the issuer. For each activity, where our assessment does not lead to a clear and conclusive determination that all the relevant TSC are met, we will consider it as not aligned.

Applying the Minimum Safeguards to the Issuer

46. We assess whether the issuer is aligned or not aligned with the minimum safeguards defined in the Compass. Our analytical focus is on the process used by the issuer for project selection and understanding how the issuer commits to meeting the minimum safeguards over the life of the funding. Our conclusion is limited to a review of the policies, management practices, and commitments in place at the time of our review. Our analysis is not subject to ongoing surveillance, so any breach of these safeguards does not automatically trigger a review of our opinion. This analysis is done once for the whole financing framework or transaction document, and not separately for each economic activity.

47. The Compass defines the minimum safeguards as the “OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights (UN GPBHR), including the principles and rights set out in the eight fundamental conventions identified in the Declaration of the International Labour Organisation on Fundamental Principles and Rights at Work and the International Bill of Human Rights”.

48. In our opinion the OECD Guidelines for Multinational Enterprises covers all the safeguards established in the other standards. Consequently, our analysis focuses on these OECD Guidelines for most aspects and on the UN GPBHR for any human rights risk assessment.

49. Public or internal evidence that we look for in our analysis includes:

- Project selection or due diligence process that includes a human rights risk assessment
- Human rights commitments covering child and forced labor, and discrimination
- Health and safety commitments related to employees
- Competition commitments related to antitrust, anti-competitive practices
- Taxation commitments to comply with the tax obligations required in each country
- Bribery and corruption commitments to combat bribe solicitation, extortion, and corruption

Table 10

Alignment With Minimum Safeguards

Aligned	The issuer commits to meeting minimum safeguards described in the Compass with a specific comment in the financing documentation **And** evidence in the issuer's management systems or policies that its aims to comply with **all** these safeguards over the life of the funding
Not aligned	There is no specific reference in the financing documentation committing to meet the minimum safeguards described in the Compass, **Or** there is missing evidence in the issuer's management systems or policies that it aims to comply with **at least one** of these safeguards over the life of the funding

50. Essential information sources for our analysis are the financing documentation, discussions with the issuer about their project selection and due diligence processes, public disclosures from the issuer, and internal documents and policies from the issuer. We also consider how the issuer has updated its due diligence process for project selection following recent or adjacent ESG controversies. Where our assessment does not lead to a clear and conclusive determination that all the relevant minimum safeguards are met, we will consider it as not aligned.

Transaction Evaluation Analytical Approach

51. Transaction Evaluations on transactions are opinions that reflect our assessment of the potential relative environmental benefit of the funded green or resilience projects on a scale of 1-100 with 100 being the greatest potential benefit. A green Transaction Evaluation is an opinion that reflects our assessment of the relative potential environmental benefits of the use of proceeds over the life of the financed projects, taking into consideration the types of projects financed and their location. A resilience Transaction Evaluation is an opinion that reflects our assessment of the estimated reductions in the costs of expected damages from extreme weather events that projects may achieve. These analyses are point-in-time opinions and not subject to surveillance once they are assigned. Our opinion on governance and transparency is derived from our SPO analysis on the commitments made in the transaction documentation for use of proceeds, processes for project evaluation and selection, management of proceeds, and reporting disclosures.

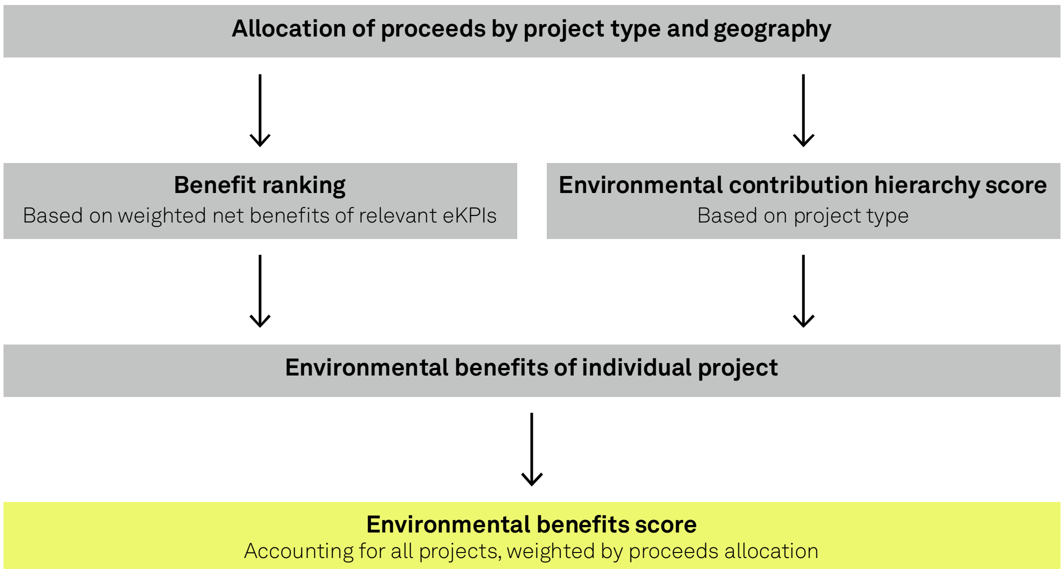
Environmental benefit score

52. The environmental benefit score is an opinion that reflects our assessment of the relative ranking of the potential environmental benefit of projects financed by a given financial

transaction (see charts 1, 2, and 3). The score is a weighted average of the project's potential benefit ranking (see Environmental benefit ranking section below) based on project type and location, which is then normalized by the project's placement within our environmental contribution hierarchy (see Environmental contribution hierarchy section below).

Chart 1

Determining The Environmental Benefits Score



53. For financings that involve multiple projects, the total benefit score is a weighted average of individual project scores, based on the allocation of proceeds.

54. In situations where the details of the projects to be funded have not been disclosed, or some funded projects are not in scope for benefit analysis, we may assume a worst-case allocation scenario or determine an approximate proxy approach, where relevant.

Environmental benefit ranking

55. The benefit ranking provides a relative score compared to similar projects based on the specific project type and location.

56. Benefit rankings are calculated for projects using one or more environmental key performance indicators (eKPIs; outcome metrics that will benefit from the financed projects). If there is more than one eKPI for a project, the total benefit ranking will reflect a weighted average of the respective eKPI benefit rankings.

57. The benefit ranking indicates the relative net environmental benefit of a project compared to a baseline scenario. To derive this ranking, we first consider each project's potential positive and negative impact over its total lifetime relative to the local baseline for relevant eKPIs (see chart 2). A check mark in chart 2 identifies which eKPIs are relevant for different environmental projects. For example, for a renewable energy project, we estimate the net benefit compared to production from the conventional grid considering the carbon emissions, waste creation, and water usage associated with the supply chain, operation, and decommissioning.

Chart 2

eKPIs Considered In Determining Benefit Ranking For Projects With Environmental Benefits

Project type	Carbon intensity‡	Waste generation	Water use	SOx emissions	Eutrophication	Land pollutants
Utilities						
Energy: renewable	✓	✓	✓			
Energy: nuclear	✓	✓	✓			
Energy: fossil fuels	✓	✓	✓	✓*		
Water	✓		✓			
Wastewater/sewage	✓		✓			
Waste management	✓		✓§		✓§	✓
Facilities						
Green buildings	✓		✓			
Energy efficiency	✓		✓			
Water efficiency	✓		✓			
Transport	✓					
Natural resource use						
Forestry	✓					
Alternative farming†	✓		✓		✓	✓
Improvements in conventional farming	✓		✓		✓	
Crop-based products	✓					
Land restoration	✓					
Agricultural water use	✓		✓			

*For flue-gas desulfurization only. §For food loss reduction only. †Depending on the technology's benefit, two or three of four possible eKPIs are considered. ‡Depending on the specific project, this will be the carbon intensity for energy, buildings, transport, waste management, or agriculture and forestry. SOx--Sulfur oxides. eKPIs--Environmental key performance indicators.

58. The estimated benefit is compared against modelled results from comparable projects in other locations. The score is based on deciles: if the net benefit of the selected project fits between the 20th and 30th percentiles of the range of impacts, the project scores 30 out of 100.

Environmental contribution hierarchy

59. The contribution hierarchy ranks a project's potential relative contribution to positive environmental outcomes. We assign each tier of the contribution hierarchy a score and a weight, which we use to calculate the weighted average environmental benefit scores. Tiers with higher scores on the contribution hierarchy carry a heavier weight because we believe those projects are contributing the most environmental benefit regardless of the benefit ranking.

60. The environmental contribution hierarchies include carbon, land use, waste, and water. These hierarchies reflect the relative potential contributions of different projects to improving the natural environment, including natural capital, or the potential mitigation of

negative factors such as pollution and climate change over the project's lifecycle (see table 11).

Table 11

Environmental Contribution Hierarchy Scores And Weighting

Tier	Rationale	Carbon	Land use	Waste	Water	Hierarchy score	Hierarchy weight
1	Projects that preserve or restore the natural environment.		Maintenance of natural state of ecosystems			100	85
2	Projects that bring systemic changes/solutions to their industry and directly or indirectly increase the availability of fresh water. Low human-intervention projects create potential for carbon sequestration.	Systemic decarbonization	Low human intervention	Waste reduction	System enhancements	100	75
3	Sector-specific solutions, which are already compliant with a decarbonized, or green, economy.	Significant decarbonization through low-carbon solutions	Alternative farming practices	Waste management with material reuse		90	70
4	Projects that improve the efficiency of conventional technologies.	Decarbonization by alleviating emissions of carbon-intensive industries	Improvements in conventional agriculture and forestry	Waste management for energy recovery		80	65
5	Projects to improve the delivery of existing freshwater supplies.				Marginal system enhancements	75	70
6	Projects to increase the availability of fresh water but have a significant negative environmental impact				System enhancements with significant negative impacts	62.5	70
7	Measures that reduce the demand on potable water supplies				Demand-side improvements	50	65
8	Projects with significant environmental hazards not captured in the net benefit ranking.	Decarbonization technologies with significant environmental hazards	Intensive land use	Waste management and incineration with no energy recovery		50	60
9	Fossil-fueled activities get the lowest score because of their long-term negative environmental impacts.	Improvement of fossil-fueled activities' environmental efficiency				0	60

Combining the benefit ranking and contribution hierarchy scores

61. To determine the environmental benefit score, we calculate a weighted average of the benefit ranking and contribution hierarchy score of each project. The benefit ranking weight is equal to 1 minus the hierarchy weight.

62. Table 12 shows a simplified example of a best-in-class fossil fuel project and a worst-in-class green energy project before and after application of the hierarchy.

Table 12

Example: Best-In-Class Fossil Fuel Versus Worst-In-Class Green Energy Project

	Benefit ranking (0-100)	Benefit ranking weight (%)	Contribution hierarchy score (0-100)	Hierarchy weight (%)	Environmental benefit score (0-100)
Best clean coal project	100	40	0	60	40
Worst green energy project*	10	25	100	75	77.5

*Projects in the bottom decile ranking receive a score of 10.

Resilience benefit score

63. The resilience benefit score reflects our opinion of the potential increase in resilience the project is likely to provide for the covered geographical area or asset base (see chart 3). We assess a resilience level on a five-point scale, which maps to a score of 0-100 (see table 13).

Chart 3

Determining The Resilience Benefits Score

Determine resilience benefit ratio range

↓

Initial resilience level

↓

Potential adjustment for adequacy of quantification approach

↓

Potential adjustment for developing countries

↓

Final resilience level

↓

Resilience benefits score

Table 13

Deriving The Resilience Benefit Score

Resilience level	Resilience benefit score
1	100
2	75
3	50
4	25
5	0

64. The initial resilience level is based on a cost-benefit analysis of the project, where the benefit is the forecast reduction in the cost of expected damage caused by extreme weather events. If we think that the analysis may have materially overstated or understated the benefit, we may adjust it before finalizing the resilience level.

65. We may adjust the initial resilience level based on our qualitative view of the adequacy of an entity's quantification approach, or for projects in developing countries. These adjustments are considered sequentially (first adequacy of quantification approach, then developing countries).

Adjustment for adequacy of quantification approach

66. We may apply a qualitative adjustment to the initial assessment based on whether we view the quantification of the resilience benefit as robust, adequate, or less than adequate. This adjustment reflects the risk of overstatement and understatement of the benefit relative to the initial assessment. This adjustment could be used to reflect a smaller modeling uncertainty than in typical quantification approaches, which underlie the calibration of our resilience benefit scale.

67. Our qualitative assessment is adequate when no key factor is missed and there are no reasons to believe the benefit is overstated. The typical quantification approach is normally assessed as adequate and our resilience benefit ratio scale assumes a similar level of modeling uncertainty. We therefore make no adjustment when we assess the quantification analysis as adequate.

68. When we consider the quantification approach to be robust—implying that it incorporates less modeling uncertainty than typical quantification approaches—we would reduce the assessment by one (for example, to resilience level 2 from resilience level 3).

69. We may assess the quantification as less than adequate when some factors are not captured appropriately or not reflected at all. If we were to assess the quantification approach as less than adequate, we would increase the assessment by one because there could be a considerable risk that the resilience benefit is overstated.

Adjustment for developing countries

70. We may apply additional adjustments for projects in developing countries.

71. If we believe the benefits have not been adequately captured in the resilience analysis, or if no probabilistic analysis has been performed, we may adjust the assessment upward by one or more levels.

Additional disclosure for opinion on governance and reporting

72. Our opinion on governance and reporting is derived from our SPO analysis on the commitments made in the transaction documentation for use of proceeds, processes for project evaluation and selection, management of proceeds, and reporting disclosures.

73. When we would consider transaction documentation commitments as not equivalent to satisfactory in our SPO analysis, we assess governance and reporting commitments as weak.

74. When two or more opinions for use of proceeds, process for project evaluation, management of proceeds, and reporting are satisfactory, we view governance and reporting commitments as satisfactory.

75. When two or more opinions for use of proceeds, process for project evaluation, and reporting are strong or advanced, we view governance and reporting commitments as strong.

76. When all opinions for use of proceeds, process for project evaluation, and reporting are advanced, we view governance and reporting commitments as advanced.

Appendixes

Glossary

Asia Pacific Loan Market Association: The Asia Pacific Loan Market Association is a trade association in the Asia Pacific that maintains the GLP and SLP and associated guidance.

Environmental Contribution Hierarchy: The contribution hierarchy provides a relative ranking of the contribution made by different project types to positive environmental outcomes.

Entity: Refers to the party seeking green, social, or sustainability financing.

Environmental benefit: A project's environmental benefit reflects an improvement in the natural environment, including natural capital, or the mitigation of negative factors such as pollution and climate change over the project's lifecycle.

Environmental projects: Environmental projects aim to bring environmental benefits and target areas such as natural resources depletion, loss of biodiversity, pollution control, and climate change mitigation.

External Review: ICMA definition

Green Bond Principles or Green Loan Principles: These are voluntary guidelines developed by ICMA (GBP) and LMA, APLMA, and LSTA (GLP) that clarify the approach for issuance of a green bond or raising a green loan, respectively. An issuer or borrower can seek advice from consultants and institutions ("second party") with recognized expertise in environmental sustainability to review or to help in the establishment of its process for project evaluation and selection, including project categories eligible for green bond or loan financing.

ICMA: The International Capital Market Association is a nonprofit membership association that maintains the GBP and SBP and associated guidance.

Issuer: Issuer includes borrower, obligor, or seeker of finance.

Loan Market Association: The Loan Market Association is a trade association in Europe that maintains the GLP and SLP and associated guidance.

Loan Syndications & Trading Association: The Loan Syndications & Trading Association is a trade association in North America that maintains the GLP and SLP and associated guidance.

Resilience benefit: The forecast reduction in the cost of expected damages caused by extreme weather events.

Resilience projects: Resilience projects aim to strengthen the resilience of buildings, critical infrastructure, and communities against the risk of extreme weather or longer-term shifts and variability in weather patterns caused by climate change. Strengthening flood defenses in coastal areas—to protect against storm surges caused by rising sea levels, widely regarded as one consequence of climate change—is one example.

Social Bond Principles or Social Loan Principles: These are voluntary guidelines developed by ICMA (GBP) and LMA, APLMA, and LSTA (GLP) that clarify the approach for issuance of a social bond or raising a social loan. An issuer or borrower can seek advice from consultants and institutions ("second party") with recognized expertise in social sustainability to review or to help in the establishment of its process for project evaluation and selection, including project categories eligible for social bond or loan financing.

Sustainability Bond Guidelines: The SBG collectively refer to the Green Bond Principles and Social Bond Principles.

Sustainable Development Goals: The SDGs are a set of 17 goals adopted by the UN Member States in 2015 to establish a shared framework for sustainable human development and environmental protection. A number of specific targets are used to measure achievement of the goals.

Revisions And Updates

On Dec. 7, 2022, we changed the name of the article to " Analytical Approach: Second Party Opinions And Transaction Evaluations." This was a change to nomenclature only. There was no change to how Second Party Opinions or Transaction Evaluations are assessed.

On June 27, 2022, we updated the analytical approach to include our “Analysis of EU Taxonomy Alignment”. We also replaced “aligned, with satisfactory commitments” with “aligned” in the description of our alignment opinion on SPOs. Nothing changed as to how we reach conclusions on SPOs and Transaction Evaluations.

On Aug. 25, 2021, we added sustainability-linked principles for bonds and loans to the list of Principles and introduced strong and advanced opinions to some of the analytical components for all SPOs. We also changed the Transaction Evaluation by separating the net environmental benefit from the governance and transparency scores. Now the 1-100 score describes the relative net environmental benefit, and we provide a separate opinion on governance and reporting which is derived from our SPO analysis on the commitments made in the transaction documentation for use of proceeds, processes for project evaluation and selection, management of proceeds, and reporting disclosures.

On Nov. 12, 2020, we added the SLP to the list of Principles eligible for Framework Alignment Opinions, removed language pertaining to Social and Sustainability Transaction Evaluations consistent with the decision not to provide these opinions, and changed the name of Green Transaction Evaluations for resilience projects to Resilience Transaction Evaluations. We also removed a proposal to publish SDGs and SDG targets in Transaction Evaluation reports and made some nonsubstantive changes to the text.

On Nov. 12, 2020, we changed the name of the article to “Sustainable Finance External Reviews And Opinions Analytical Approach” to make clear that this was an analytic framework document. We proposed an analytical approach for assessing Social and Sustainability Transaction Evaluations and requested feedback on the proposed analytical approach. We also proposed changing the name of Green Transaction Evaluations for resilience projects to Resilience Transaction Evaluations and requested feedback on this proposal.

We also made a large number of changes as to how the article is structured and the nomenclature, and moved technical information about how the assessment is calculated to an external analytical supplement document "Analytical Supplement: Sustainable Finance External Reviews And Opinions Analytical Approach." There is no change to how Green Transaction Evaluations, Resilience Transaction Evaluations, or Framework and Transaction Alignment Opinions are assessed; all changes relate to how we describe the process. Among changes in nomenclature, we changed the benefit score for Green Transaction Evaluations from the “mitigation score” to the “environmental benefit score” and Resilience Transaction Evaluations from “adaptation score” to “resilience benefit score” to provide greater consistency throughout the document and reflect the expanded scope of Green Evaluations. Everything in the analytical approach pertaining to how we assess Green Transaction Evaluations, Resilience Transaction Evaluations, and Framework and Transaction Alignment Opinions is final.

On Oct. 16, 2020, we changed the name of this article to "Sustainable Finance External Reviews And Opinions" from "Green Evaluation Analytical Approach" to provide transparency on the range of offerings S&P Global Ratings provides. We also added S&P Global Ratings' new second-party opinion on a Social and/or Sustainability Framework's alignment with ICMA's SBP and/or the GBP, respectively (collectively the SBG).

On June 5, 2020, we republished this article to incorporate S&P Global Ratings' new second-party opinion on a Green Financing Framework's alignment with the Green Bond Principles and the Green Loan Principles.

On April 16, 2020, we republished this article to correct the labeling of the third and fourth tiers of the land use hierarchy in tables 2 and 3, and in table 2 some of the hierarchy weights, hierarchy scores, and net benefit scores. We also corrected the position of alternative farming technologies in our land use hierarchy in paragraphs 115-117, as well as chart and table references.

We previously republished this article on Dec. 4, 2019, to incorporate the agriculture and forestry and waste management sectors and the analysis of several new technologies within the existing green energy, water, and fossil fuel power plant sectors.

The Dec. 4, 2019, version supersedes "Green Evaluation Analytical Approach," published on April 26, 2017.

We made the following changes to the version published on April 26, 2017:

- We have incorporated two additional sectors—agriculture and forestry and waste management—and added several new technologies within the existing green energy, water, and fossil fuel power plant sectors.
- The green energy technology sector now includes biomass cogeneration and fuel cells.
- The water technology sector now includes improved irrigation, biofiltration wastewater treatment with energy recovery, and biofiltration wastewater treatment with no energy recovery.
- The fossil fuel power plants sector now includes flue gas desulfurization, cogeneration, oil refinery efficiency, and reduced-flaring technologies.
- We've incorporated three new environmental key performance indicators, including land pollution, eutrophication, and air emissions from sulfur oxides, which are used in the net benefit ranking for agriculture and forestry and waste management technologies.
- Hierarchies for agriculture and forestry and waste management projects were developed for technologies in these sectors.

Related Research

- Analytical Supplement: Second Party Opinions And Transaction Evaluations, Dec. 7, 2022
- Latin America Green, Social, Sustainability, And Sustainability-Linked Bonds 2022, Nov. 9, 2022
- Global Sustainable Bond Issuance Likely To Fall In 2022, Sept. 20, 2022
- Navigating The Strengths, Challenges, And Best Practices In Sustainable Finance Frameworks And Transaction Documentation, Jan. 18, 2022
- Transition Finance: Finding A Path To Carbon Neutrality Via The Capital Markets, March 9, 2021
- Sustainable Debt Markets Surge As Social And Transition Financing Take Root, Jan. 27, 2021
- Sustainable Finance External Reviews And Opinions Q&A: Transaction Evaluations And Transaction And Framework Alignment Opinions With The Green Bond, Green Loan, And Social Bond Principles, May 11, 2021
- Sustainable Finance Addresses Social Justice As COVID-19 Raises The Stakes, Nov .10 2020
- A Pandemic-Driven Surge In Social Bond Issuance Shows The Sustainable Debt Market Is Evolving, June 22, 2020
- Led By Green Bonds, The Sustainable Debt Market Looks To Surge Ahead, Feb. 13, 2020
- Could Agriculture And Forestry Be The New Frontier For Green Bonds?, Dec. 4, 2019
- Infrastructure Seeks A Circular Solution To Sustainability, Dec. 4, 2019
- Sink Or Swim: The Importance Of Adaptation Projects Rises With Climate Risks, Dec. 3, 2019
- Evaluating The Environmental Impact Of Projects Aimed At Adapting To Climate Change, Nov. 10, 2016

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