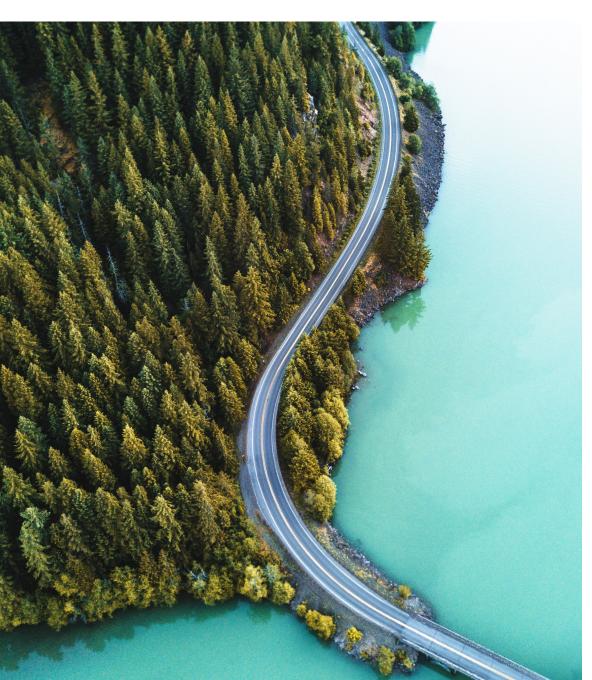


Environmental, Social, And Governance Evaluation

Analytical Approach

Sept. 20, 2022

This report does not constitute a rating action



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Executive Summary

S&P Global Ratings' environmental, social, and governance (ESG) Evaluation is a cross-sector, relative analysis of an entity's capacity to operate successfully in the future and is grounded in how ESG factors could affect stakeholders, potentially leading to a material direct or indirect financial impact on the entity. ESG factors typically incorporate the entity's impact on the natural and social environment and the quality of its governance. Our ESG analysis goes beyond a traditional financial analysis and includes some risks and opportunities that are more qualitative. Our definition of stakeholders for a particular entity goes beyond shareholders to include employees, the local community, government, regulators, customers, lenders, borrowers, policyholders, voters, members, and suppliers, among others. A high ESG Evaluation score indicates an entity is relatively less prone to experiencing material ESG-related events, and relatively better-positioned to capitalize on ESG-related growth opportunities, compared to entities with lower ESG Evaluation scores.

First, we establish an ESG Profile for a given entity, which assesses the exposure of the entity's operations to observable ESG risks and opportunities, and how the entity is mitigating these risks and capitalizing on these opportunities. Our ESG Profile analysis starts with an assessment of the entity's ESG-related exposure by sector and location.

Second, we assess the entity's long-term Preparedness, namely its capacity to anticipate and adapt to a variety of long-term plausible disruptions. These disruptions are not limited to environmental and social scenarios, but could also include technological or regulatory changes where relevant, among other factors. This is because, in our opinion, high-quality corporate governance includes the full spectrum of current and potential risks and opportunities an entity faces beyond typical financial planning horizons.

The ESG Evaluation is not a credit rating, a measure of credit risk, or a component of our credit rating methodology. However, the information we gather for an ESG Evaluation can inform our credit analysis of rated entities.

Chart 1

ESG Evaluation



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Our final ESG Evaluation ranking combines an entity's ESG Profile with our long-term

Preparedness opinion (see chart 1), thereby indicating our view of an entity's relative exposure to observable ESG-related risks and opportunities, and our qualitative opinion of the entity's long-

term sustainability and readiness for emerging trends and potential disruptions. We will monitor public ESG Evaluations to account for new data points, updated strategies, and events that affect the entity, subject to materiality. When monitoring ESG Evaluations we may choose to use the term 'Under Review' (and the label 'UR') to identify certain ESG Evaluations as being potentially impacted by changing events. Prior identification of a particular ESG Evaluation as potentially being subject to change through an 'Under Review' action is not a condition precedent to a change in an ESG Evaluation.

Approach To Ranking

- 2. The ESG Evaluation is a ranking on a 100-point scale. A higher ranking expresses our view that the entity is more likely to be sustainable, based on active management of ESG-related risks and opportunities, relatively strong governance, and the entity's ability to adapt to change and take advantage of long-term trends and disruptive opportunities. Similarly, we typically associate lower scores with greater exposure to ESG-related risks, comparatively weaker governance, and not being as well equipped to handle or exploit potential long-term business disruptions and opportunities.
- 3. Within the ESG Profile, we assess the contribution of the individual environmental, social, and governance profiles and explain our opinions and analysis of each factor in our ESG Evaluation Report.
- 4. The Preparedness opinion is described as one of the following: Best In Class, Strong, Adequate, Emerging, or Low. The combination of the ESG Profile and Preparedness reflects the relativity of the two assessments at different points in their scales. The principles we use to combine the ESG Profile score with our Preparedness opinion are:
 - The highest ESG Evaluations generally reflect Best-In-Class or Strong Preparedness.
 - The lowest ESG Profile scores are unlikely to be significantly offset by favorable Preparedness.
 - Best-In-Class Preparedness is rare and will generally have a significantly positive effect on the evaluation.
 - Strong Preparedness will typically have a positive effect.
 - Adequate Preparedness typically has minimal impact except when the ESG Profile score is greater than 85.
 - Emerging Preparedness will typically have a negative effect.
 - Low Preparedness is rare and will generally have a significantly negative effect.
- We may also raise or lower the final ESG Evaluation score to reflect a risk or opportunity not fully captured under the individual Profile or Preparedness factors, or to ensure comparability with the ESG Evaluation scores of other entities.

Materiality And Value Chain

- 6. Our ESG Evaluation analysis is grounded in how ESG factors could affect stakeholders, potentially leading to a material direct or indirect financial impact on the entity.
- For the purposes of our ESG Evaluation we assess the materiality of ESG related events or issues by looking at the likely financial impact on the entity, including potential impacts from environmental and social externalities. Events and issues are material for the ESG Evaluation when in our view they could meaningfully affect the entity's business operations, cash flows, legal or regulatory liabilities, access to capital, reputation, or relationships with key stakeholders and society more generally, either directly or through its value chain (upstream or downstream).

In our assessment we balance different issues that may lead to financial impacts qualitatively and on a likelihood versus impact basis. More likely or near-term issues are typically driven by changes in regulations, laws, and customer behavior. Less certain or longer term issues could have a significant impact, such as a pandemic, or scarcities of natural resources that could lead to structural shifts in market forces and operating dynamics.

- 8. Our analysis considers what we see as ESG relevant risks and opportunities that exist and could arise in the entity's whole value chain (upstream and downstream), and whether they could affect the entity in the future. In our ESG Evaluation [our analysis considers the potential for significant disruptions outside an entity's own operations but within its value chain. Often, factors in an entity's supply chain, or in its lending, investments, or underwriting, may be more influential than factors it can control directly.
- 9. We assess exposure to ESG risks and opportunities coming directly from the entity's fully-owned operations, but also indirectly from its partially-owned subsidiaries, suppliers, franchisees, licensees, lenders or underwriters, customers, taxpayers, and residents, to determine if there could potentially be a material financial impact on the entity. An entity that positively influences ESG factors across its supply chain and customer base--or through lending, investments, underwriting, or investment policy--is likely to be viewed by us as having less exposure, all else being equal.

The ESG Profile

- 10. The ESG Profile reflects our view of the current and near-term exposure of an entity to observable ESG risks and opportunities, relative to other entities. This analysis also takes into account our view of the near-to-medium-term effectiveness of the entity's current governance and policy framework and trends in its performance against selected ESG indicators. We assess 12 separate ESG factors for their potential to lead to a material financial impact on the entity, either directly or indirectly, if not mitigated.
- 11. We rank an entity's ESG Profile on a 100-point scale. Entities with higher scores are, in our opinion, more likely to operate in sectors and locations with relatively lower ESG-related exposure, are more successful in managing their ESG exposures, have faced comparatively fewer ESG events, and are more likely to capitalize on ESG-related opportunities resulting from changes in their natural and social environments. They are also more likely to demonstrate stronger governance standards.
- 12. The ESG Profile is the combination of our assessment of three profiles: Environmental, Social, and Governance (see chart 2). In assessing each of these three profiles, we consider the following:
 - A weighted sector- and region-based analysis of financially material ESG exposure;
 - The entity's specific ESG exposure, if different from that of other entities within its sector or globally;
 - For several factors, a qualitative and quantitative analysis of the entity's effectiveness at managing ESG-related risks and opportunities relative to other entities within its sector or globally, as well as its policies;
 - Additional risks and opportunities not fully captured under factor scores; and
 - The forward-looking effects of material ESG Events.

Chart 2

ESG Profile Building Blocks

Environmental Social Governance Greenhouse Workforce Structure gas emissions and diversity and oversight Waste and pollution Safety management Code and values Water use Customer Transparency engagement and reporting Land use Communities Financial and operational risks

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ESG Events

ESG events include disruption to operations or negative stakeholder attention related to a controversy, which we define as an adverse development that plays out in the public domain and could lead to material financial or reputational damage. In our analysis we assess the materiality of ESG events that have been reported by one or more reputable organization or governmental agency, or are self-disclosed. Once identified as having a potential material financial impact, we attribute an event to the relevant ESG factor (for instance, workforce and diversity, or waste) or profile (for example, social or environmental)—as a flag to the report reader. We may flag ESG events that have happened over the past 10 years. These events have no automatic or direct impact on the ESG Evaluation. Instead, past ESG events, if likely to have future impacts, could be a reason to adjust a factor or profile score.

A repeat or similar event is likely to lead us to make a negative adjustment because the entity may not have learned lessons and not effectively implemented remedies, which could result in reputational or regulatory harm. By contrast, an entity that has faced adverse events and actively mitigated the effects might benefit from its actions, so we could consider a smaller negative adjustment, or even, in rare cases, a positive adjustment.

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Material ESG events could include the following examples:

- Climate hazards and natural disasters
- Labor disputes
- · Financial restatements
- Misdeeds of management
- · Other disruptions to operational activities

Environmental Profile

- The environmental profile (E Profile) describes the relative sustainability of an entity based on its environmental risks and opportunities compared to its sector or industry.
- 14. To determine the E profile of an entity, we first conduct a macro sector and regional analysis of material environmental risks and opportunities. From this analysis, we derive a sector-region score, weighted by the entity's business mix.
- 15. Then we consider four key entity-specific factors (greenhouse gas [GHG] emissions, waste, water, and land use) to determine whether the entity is actively and effectively managing its environmental risk exposures compared with peers in its sector globally.
- 16. Finally, we combine the sector-region score with our assessments of these four environmental factors to create the E Profile, on a 100-point scale. The final E Profile is subject to a general adjustment to account for any relevant entity-specific considerations not already captured in the entity-specific analysis.

Sector And Regional Analysis

- 17. From our macro sector and regional analysis, we derive sector and region scores. A sector score reflects a sector's exposure to material environmental risks and opportunities, while a region score reflects a region's exposure to natural disasters and vulnerability to physical impacts of climate change.
- 18. We then derive a blended sector-region score, weighted by the entity's sector and regional business mix. We can adjust the score to capture the entity's exposure to specific sector or regional risks, if different from those of other entities in its sector or globally. Examples of such factors include rising sea levels and other physical climate risks.
- 19. To determine the entity's business mix, we review the breakdown of its revenue, assets, employees, or any other relevant proxy by sector and region and use the proportions that more accurately describe the entity's exposure to environmental risks and opportunities as well as natural disasters and vulnerability to physical impacts of climate change. As a result, the proxy we use to determine the business mix could vary between entities within a sector.

Entity-Specific Analysis

- 20. To assess whether the entity is actively and effectively managing its exposures relative to other comparable entities in its sector, we consider its policies and selected key environmental indicators. In this part of our analysis we could reflect shortcomings in the data, recent or past controversies associated with a factor, or additional exposures or mitigations not addressed in the policy or key indicator analysis.
- 21. Selected indicators are specific to each factor. The policy analysis and adjustments by factor are similar (see table 1).

Table 1

Selected Indicators, Policy Analysis, And Adjustments By Factor

Selected Indicators

Policy Framework

Adjustments

For each factor in the E and S Profiles, we compare the relative performance of the entity against sector data (where possible). When the sector data are not reliable or comparable, we rely on a more qualitative analysis of the entity-specific data. For each selected indicator, we consider the current performance as well as the actual and future trend.

We assess the policy framework for a factor by considering, among other things, the entity's commitment to its policy, how compliance with the policy is measured, how breaches are remediated, whether the policy aims to improve environmental outcomes and, if so, how progress is tracked, and who is accountable for delivering on the policy.

Typical factor-level adjustments could reflect shortcomings in the data; publicly reported controversies associated with the factor; or additional exposures or mitigations not addressed in the policy or key indicator analysis. The degree of influence across the entity's entire value chain, upstream and downstream, can also support adjustments.

- 22. We express the relative assessment for each factor compared with the sector average as one of five outcomes:
 - Leading (in few cases, when performance is quantitatively and consistently better than Strong)
 - Strong (when performance is stronger than industry standards)
 - Good (when performance is in line with industry standards)
 - Lagging (when performance is weaker than industry standards)
 - Weak (in few cases, when performance is significantly and consistently worse than Lagging)

GHG Emissions

- 23. We assess how actively and effectively the entity is managing its direct and indirect exposure to GHG emissions risks and opportunities relative to other comparable entities in its sectors.
- 24. In addition to our analysis of policies and mitigation strategies, typical key indicators are the intensity of Scope 1 and Scope 2 carbon dioxide equivalent (CO2e) emissions. CO2e intensity is measured by emissions divided by revenue or by sector-specific CO2e intensity metrics, which we then compare to the CO2e intensity of other entities in the same sector. Lower-than-average intensity and a falling trend that is likely to persist could lead us to a more favorable assessment.
- 25. Other considerations include:
 - The methodology used for carbon accounting
 - The use of carbon offsets
 - The importance of Scope 3 emissions, both upstream and downstream
 - Energy use, renewables, tracking, and targets

Waste And Pollution

- ²⁶. We look at how actively and effectively the entity is managing its direct and indirect exposure to waste and pollution risks and opportunities relative to other comparable entities in its sectors.
- 27. In addition to our analysis of policies and mitigation strategies, key indicators are the proportion of waste recycled and the current level of recycling. Greater-than-average recycling for a sector and a consistently increasing trend are likely to indicate a more favorable assessment.
- 28. Other considerations may include:
 - Proportion of hazardous waste

- · Air, water, and land pollution
- · Use of sustainable packaging

Water Use

- 29. We analyze how actively and effectively the entity is managing its direct and indirect exposure to risks and opportunities related to water scarcity or competition for resources relative to peers in its sector.
- 30. In addition to our analysis of policies and mitigation strategies, key indicators are the entity's water intensity, the proportion of water recycled or reused, and amount of water drawn from the natural environment and from stressed water regions in particular. Lower-than-average water intensity or a higher proportion of recycled water than sector peers generally lead to a more favorable assessment.
- 31. Other indicators to consider include:
 - Measurement of water consumption
 - Units of water used per unit of production

Land Use And Biodiversity

- 32. We look at how actively and effectively the entity is managing its direct and indirect exposure to risks and opportunities related to land development and the potential effects on biodiversity relative to peers in its sector.
- Due to the lack of consistent data available to analyze an entity's land use and biodiversity performance, we weight our assessment more toward our analysis of policies (see table 1) and mitigation strategies than key indicators. Other important factors we may consider are the entity's:
 - Direct and indirect operations in sensitive areas for plant, animal life, sea life, and other natural ecosystems
 - Greenfield development activity
 - Deforestation activity, especially related to soy, palm oil, timber, or cattle

Final E Profile And General Adjustment

- 34. The E Profile combines the entity-specific assessments with the sector-region score to produce a ranking on a 100-point scale. A higher rank reflects our view that the entity is operating in sectors and regions with lower environmental exposures, more effectively managing its exposures, more likely to take advantage of changes in the natural environment, and less likely to experience negative financial and reputational consequences from its environmental exposure. The four environmental factors might carry different weights by sector or region to capture their relative importance in our E Profile assessment.
- 35. The general E Profile adjustment is available to reflect risks and opportunities affecting the E Profile not fully captured in the four factors. Typical reasons to apply a general adjustment include:
 - Relative strengths or weaknesses in the entity's environmental management system
 - Significance or severity of environmental risks or opportunities not fully captured elsewhere

- General policy strengths or deficiencies
- The use of natural capital protocols or recognized environmental certifications
- Significant outperformance or underperformance not fully captured in the factor assessments
- Any environmental factor not specifically reflected in the factor assessments
- Major events or controversies affecting multiple factors
- Comparisons with the E Profiles of other entities

Social Profile

- 36. The social profile (S Profile) describes our view of the relative sustainability of an entity and its key stakeholders based on risks and opportunities relating to its social license to operate, compared to its sector or industry. A social license to operate reflects the public's ongoing acceptance of an entity's practices.
- 37. To determine the S profile of an entity, we first conduct a macro sector and regional analysis of material social risks and opportunities. From this analysis, we derive a sector-region score, weighted by the entity's business mix.
- 38. Then we consider four key entity-specific factors (workforce and diversity, safety management, customer engagement, and communities) to determine how the entity is actively and effectively managing its exposure to social risks and opportunities compared with other sector peers globally.
- Finally, we combine the sector-region score with our assessments of these four social factors to create the S Profile, on a 100-point scale. The final S Profile is subject to a general adjustment to account for any relevant considerations not already captured in the entity-specific analysis.

Sector And Regional Analysis

- 40. We start with a macro sector and regional analysis that captures the relative exposure of sectors and regions to significant social risks and opportunities.
- 41. We then derive a blended sector-region score, weighted by the entity's sector and regional business mix. We can adjust the score to capture the entity's exposure to specific sector or regional risk factors, if different from those of other entities in its sector or globally.
- 42. To determine the entity's business mix, we review the breakdown of its revenue, assets, employees, or any other relevant proxy by sector and region and use the proportions that more accurately describe the entity's exposure to social risks and opportunities. As a result, the proxy used to determine the business mix could vary between companies within a sector.

Entity-Specific Analysis

- 43. To analyze whether the entity is actively and effectively managing its exposure compared with similar entities, we assess existing social policies and performance in terms of selected key social indicators. We may then selectively adjust these factors as needed to ensure consistency and comparability. We express the same five possible outcomes in the S Profile entity-specific analysis:
 - Leading (in few cases, when performance is quantifiably and consistently better than Strong)
 - Strong (when performance is stronger than industry standards)

- Good (when performance is in line with industry standards)
- Lagging (when performance is weaker than industry standards)
- · Weak (in few cases, when performance is significantly and consistently worse than Lagging)

Workforce And Diversity

- 44. Our analysis incorporates how actively and effectively the entity is managing its direct and indirect exposure to risks and opportunities related to its employees and workforce diversity relative to other comparable entities.
- 45. In addition to our analysis of policies and mitigation strategies, we analyze data that indicate the entity's strategy in terms of diversity and inclusion, and talent. For the latter, key indicators comprise employee retention and turnover rates as well as training hours per employee. We also consider:
 - · Labor standards, pay, benefits, and rewards
 - Employee engagement
 - Proportion of contracted and unionized labor
 - Engagement in promoting fair and humane labor standards across the value chain

Safety Management

- ⁴⁶. We evaluate how actively and effectively the entity is managing its direct and indirect exposure to risks and opportunities related to safety among its workforce, customers, suppliers, and communities local to its operations, relative to other comparable entities.
- 47. In addition to our analysis of policies and mitigation strategies, key indicators are the entity's frequency and severity of workplace incidents and its number of fatalities. Other considerations include:
 - Occupational health and safety for all employees (permanent, temporary, and contractors)
 - Product safety
 - Engagement in promoting safety management across the value chain

Customer Engagement

- 48. We look at how actively and effectively the entity is managing its direct and indirect exposure to risks and opportunities related to how it engages with customers, constituents, or residents relative to other comparable entities.
- 49. Due to a lack of consistent data available to analyze an entity's Customer Engagement performance, our assessment is weighted more to our policy analysis (see table 1). We use trend analysis for our quantitative analysis, and combined available sector data to compare entity-specific performance. Important factors that we consider in our qualitative and quantitative analysis include:
 - Trends in customer satisfaction, retention, and complaints
 - Anticipation of changing customer preferences
 - Ability to ensure reliability and affordability of products
 - Protection of customer information
 - Potential for misleading or misselling to customers

Communities

- 50. We evaluate how actively and effectively the entity is managing its direct and indirect exposure to risks and opportunities related to its engagement with local communities relative to other comparable entities. In our opinion, less-exposed entities have built up social capital in local communities and are less likely to lose their social license to operate following a controversy with a plant, mine, or operation.
- Due to lack of consistent data available to analyze an entity's Communities performance, we weight our assessment more to our policy analysis for human rights and social standards in the supply chain (see table 1). As above, we use trend analysis for our quantitative analysis and available combined sector data to compare entity-specific performance. Important factors that we consider in our qualitative and quantitative analysis to complement the policy analysis include:
 - Direct operations and suppliers' engagement with local communities, including contributions to and support of local communities, including local hires and donations
 - Exposure to war, other conflicts, and terrorism

Final S Profile And General Adjustment

- 52. As with the E Profile, the S Profile combines the entity-specific assessments with the blended sector-region score to produce a ranking from 1-100. A higher rank indicates our view that the entity is operating in sectors and regions with relatively lower social exposure, more effectively managing its exposure, more likely to take advantage of changes among stakeholders, and less likely to experience negative financial and reputational consequences from its social exposure relative to other entities. The four social factors might carry different weights by sector to capture their relative importance in our assessment. For example, the importance of communities might be weighted more toward high street retailers than the business services sector.
- 53. The general adjustment reflects risks and opportunities affecting the S Profile that the four factors might not fully capture. Typical reasons we would apply a general adjustment include:
 - Relative strengths or weaknesses in the entity's social management system
 - Materiality or severity of social risks or opportunities not fully captured elsewhere
 - General policy strengths or deficiencies
 - Use of third-party protocols or recognized certifications for social standards
 - Significant outperformance or underperformance not fully captured in the factor assessments
 - Any social factor not specifically captured in the factor assessments
 - Major events or controversies impacting multiple factors
 - Comparisons with the S Profiles of other entities

Governance Profile

- 54. The governance profile (G Profile) reflects our view of the extent to which observable governance standards and practices could indicate that the entity is likely to experience a significant governance failure relative to other entities on a global basis. It also reflects our view of the effectiveness of the entity's governance framework.
- 55. Our analysis of corporate and institutional governance is a fundamental element of the ESG Evaluation. Our focus in the G Profile is on the near-term governance structure and facts that we can observe about governance today. Separately, we assess the influence of governance on the

entity's long-term strategy, planning, and resulting culture in Preparedness, as discussed further below.

- ^{56.} First, we apply the jurisdiction-based scores to the entity based primarily on the location of its head office. We can adjust this head office-led score to account for potential risks of operating in countries with weaker governance standards.
- Then we consider four key entity-specific factors (structure and oversight, code and values, transparency and reporting, and financial and operational risks) to determine whether the entity is actively and effectively managing its exposure to governance risks and opportunities. We weight the entity-specific analysis in the G Profile more than for E Profile and S Profile because entities with strong governance standards can more than offset any potential weakness in a country or region.
- 58. Finally, we combine the blended region score with the assessments on the four aforementioned governance factors to create the G Profile on a scale of 1-100. This combination of regional and entity-specific analysis aims to provide a comparison with all entities on a globally consistent basis. The final G Profile is subject to a general adjustment to account for any relevant considerations not already captured entity-specific analysis.

Regional Analysis

- 59. To assess an entity's exposure to governance risks and opportunities, we start from the country where its head office is located. We then derive a region score, based on governance standards, practices, and the country's quality of ESG-focused regulation. We start our analysis with the head office location because we believe the laws and practices governing the entity where it is based are the most influential. However, we may adjust the region score of entities operating in multiple jurisdictions to capture risks associated with doing business in those regions.
- 60. Higher region scores reflect our view that strong entity-level governance is supported by laws and regulations and strong domestic public institutions, either at the national or subnational level, that are effective in monitoring compliance, defending the rule of law, and reducing corruption.

Entity-Specific Analysis

- To assess whether entity-specific governance standards and practices are aligned with global governance principles, standards, and best practices or, conversely, weaker-than-globally-accepted local norms, we review the entity's policies, governance features, and attempt to understand financial and operational vulnerabilities. Unlike Environmental and Social analyses, Governance analysis is more globally consistent in nature but we might, when relevant, factor in the entity's size, ownership type, or sector. We might then selectively adjust these factors as needed to ensure consistency and comparability, particularly when local norms and/or standards are weaker than internationally recognized norms and standards.
- 62. We assess the first three factors (Structure and Oversight, Code and Values, Transparency and Reporting) as one of the following:
 - Leading (in few cases, when standards are consistently higher than for entities with Strong standards)
 - Strong (when practices and standards are stronger than local norms, and in line with global governance principles, standards, and best practices. If local norms are very weak: when practices and standards are significantly stronger than local norms, and close to global governance standards and best practices)
 - Good (when practices and standards are in line with local norms, with no severe deficiency)

- Developing (when practices and standards are weaker than local standards and when the entity is working on improving its governance practices)
- Weak (in few cases, when standards are significantly weaker than for entities with Developing standards)
- 63. We assess the fourth Governance factor (Financial & Operational Risks) as Neutral or Negative.

Structure And Oversight

- 64. In our analysis, we review what features of the entity's governance structure and oversight suggest that the entity has relatively stronger or weaker standards than other entities in the same jurisdictions or sectors. Our focus is on the governing body and its influence on the operating entity.
- 65. For the purposes of our ESG Evaluation we have identified what we view as key features of bestpractice governance structure and oversight. We look at how many of these features are present to assess the entity relative to global best practices.
- 66. Key features we look for include:
 - Composition, skills, tenure, diversity, and independence of the governing body
 - Committee structures and their membership
 - Degree of commitment to board duties
 - · Succession planning and unexpected changes
 - · Comprehensiveness of board oversight
 - Auditors' independence

Code And Values

- 67. Compared to accepted governance standards and practices, we evaluate the features of the entity's code and values that suggest that the entity has stronger or weaker standards than entities in the same jurisdiction or global sector.
- 68. For the purposes of our ESG Evaluation we have identified what we view as key features of bestpractice governance codes and values. We look at how many are present to assess the entity relative to best practices.
- 69. Key features we look for include:
 - Comprehensiveness of the policy framework
 - Code of conduct and its application across the value chain
 - Public statements about ethics and values
 - Extent of training in code and values
 - Executive remuneration and incentives

Transparency And Reporting

- 70. We also look at whether transparency and reporting is stronger or weaker than normal, especially compared with best practices.
- 71. Key features we look for include:
 - Level and quality of disclosure of ESG indicators

- Publication of a detailed annual sustainability report or of an integrated report that contains detailed sustainability information
- Level of disclosure regarding taxation issues

Financial And Operational Risks

- 72. We attempt to understand the entity's vulnerabilities to present and near-term financial and operational risks that could impair its ability to continue operating in the future. Our focus is on the executive management, officers, and employees. Vulnerabilities are not limited to, but could be related to, any of the following areas:
 - Internal controls and audit
 - Financial health and execution risks
 - Cybersecurity
 - Contingent liabilities
 - · Disaster recovery
 - General supply chain management

Final G Profile And General Adjustment

- 73. The G Profile combines the entity-specific assessments with the region score to produce a ranking from 1-100. A higher ranking indicates our view that the entity operates in jurisdictions with stronger governance standards and practices; has features that are closer to best practices in terms of structure, values, and reporting; is less exposed to present and near-term financial and operational risks; and is less likely to experience negative financial or reputational consequences from governance failures.
- 74. The general adjustment is available to capture risks and opportunities we see as affecting the G Profile that are not fully captured in the four entity-specific factors. Typical reasons to apply a general adjustment include:
 - The significance or severity of governance strengths or failures not captured elsewhere
 - General policy strengths or deficiencies
 - · Any observable governance factor not specifically captured in the factor assessments
 - Major events or controversies affecting multiple factors
 - Other participants in the value chain who might have particularly weak or strong governance attributes
 - Limitations based on relationships with parent companies, sponsors, or governmentrelated entities
 - Comparisons with the G Profiles of other entities

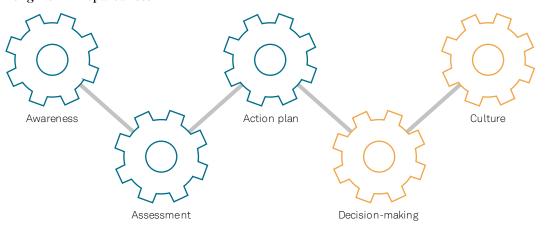
Long-Term Preparedness

Long-term Preparedness reflects our qualitative view of an entity's capacity to anticipate and adapt to a variety of plausible long-term disruptions, and therefore supports the entity's long-term sustainability (see chart 3). These disruptions are not limited to environmental and social scenarios, but could also include technological, political, or other events. This is because, in our opinion, high-quality corporate or institutional governance includes evaluating the full spectrum of potential risks and opportunities an entity faces. Our Preparedness assessment is, in part, informed by a meeting with the management team and board representation.

76. First, we expect to assess senior management's and the board's capabilities with respect to their awareness and assessment of emerging trends and potential business disruptors, as well as associated long-term planning. We also consider the extent to which the entity's board and management (or, in the case of public entities, elected and appointed leadership) have embedded environmental, social, and other long-term strategic considerations and potential scenarios into their decision-making; and the extent to which this is evident in the entity's culture.

Chart 3

Long-Term Preparedness





Capabilities



Embeddedness

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- 77. We score each factor as Developing, Good, or Excellent. We expect to assess most factors as Good, and use Excellent and Developing to capture demonstrable strengths and weaknesses by factor. Various combinations of these assessments lead to our overall Preparedness opinion as one of the following:
 - Best in class
 - Strong
 - Adequate
 - Emerging
 - Low
- 78. Awareness is the most important factor and is weighted more significantly as a result. Any Developing score constrains our Preparedness opinion significantly and cannot be averaged out by Excellent scores in other factors.
- 79. For all factors in Preparedness, we assess both the role and impact of the oversight or governing body (board or elected officials) and senior management (c-suite or appointed leadership). The oversight or governing body and how it is connected with senior management carries more weight in Awareness and Assessment. Senior management carries more weight in Decision-Making and Culture.

Capabilities

80. We base our analysis of the three Capabilities factors (Awareness, Assessment, and Action Plan) on the belief that successful action requires first acknowledging and understanding the risks and opportunities ahead. No amount of scenario planning or action planning can fully compensate for a lack of awareness of emerging and strategic risks and opportunities.

Awareness

In Awareness, we assess how capable and effective the entity's management is in recognizing potential strategic and emerging risks and opportunities. Our premise is that entities that proactively and routinely identify risks to their strategic vision should be better prepared to navigate uncertainty. We expect an entity, including board members, to discuss with us material emerging and strategic risks to fulfilling their strategy, the process for risk identification, and how often they conduct their long-term strategic reviews. In our opinion, high awareness is a prerequisite for a stronger Preparedness opinion; that is, if management is unaware of emerging risks, it cannot realistically mitigate them. For instance, a retail company that has yet to consider how greater environmental awareness might affect consumer preferences could receive a Developing assessment.

Assessment

For Assessment, we look at how capably and effectively the entity's management examines the potential range of impacts that the issues identified in Awareness could have on the entity's operations and strategy. We explore how the entity uses scenario planning or similar techniques to understand these potential operational and strategic effects and to self-assess which organizational capabilities might need to change. We also consider the comprehensiveness of the entity's risk-optimization process and tools as well as its ability and willingness to prioritize certain risks. For instance, an entity that has identified climate change as a material issue and considers a number of long-term climate scenarios--such as a 2°C scenario and higher emitting scenarios of 3°C and 4°C--to size potential exposures and opportunities could be Good or Excellent. We might consider a different entity that has identified climate change as an issue and is in the early stages of quantifying or measuring any potential impact on operations as Developing. The Assessment analysis is not limited to environmental and social scenarios, but could include technological, political, or other scenarios where relevant.

Action Plan

In Action Plan, we assess how capable and effective senior management is in planning to manage, mitigate, or exploit risks and opportunities already identified in Awareness and measured in Assessment. We believe entities that have identified contingency plans for optimizing operations under various plausible scenarios will be more successful. Clear decision-making processes, and a common understanding of roles, responsibilities, and risk tolerance levels, are key to ensuring effective action. If provided, we consider examples of management's track record of actions taken in line with action plans previously developed and linked to its long-term strategy. A heavily carbon-intensive company that is executing a decarbonization plan developed in response to a strategic review of how carbon pricing could affect operations could be considered Excellent. However, a company that has significant exposure to potential emissions costs in the coming years but has yet to develop a plan to divest assets or migrate to cleaner assets might be Developing.

Embeddedness

84. The Embeddedness factors (Culture and Decision-Making) demonstrate how adaptable and agile the entity is to any change, which indicates whether an entity is likely to take advantage of the opportunities and avoid or limit the impact of emerging or strategic risks.

Culture

In Culture (bottom up), we assess how embedded and effective are strategic objectives, particularly those related to ESG, across the entire organization and its key stakeholders. We consider how management motivates the right behavior across the organization to achieve its long-term goals, such as through training and communication. This could indicate agility in an organization. The extent to which an entity can respond and adjust to changes based on feedback from all levels can make it more adaptable. The manner and tone in which an entity demonstrates its ESG focus through engagement with stakeholders provide further insight. For instance, an entity whose employees are actively engaged in developing good relations with local communities or reducing energy use or waste in line with strategic objectives could be Good or Excellent. On the other hand, one in which management has yet to train employees on potential cyber-risks or which is only just beginning to engage staff and the community in developing ideas to reduce water consumption and improve recycling could be Developing. This could indicate that management has some way to go before being fully connected with the organization and its key stakeholders with its strategic objectives.

Decision-Making

For Decision-Making (top down), we assess how embedded and effective strategic objectives, particularly those related to ESG, are in influencing senior management decisions. An explicit focus on integrating high-quality ESG factors into day-to-day decision-making processes can differentiate an entity. We develop an opinion on management's track record by considering examples of recent actions and their alignment with the long-term strategy, such as decisions on capital expenditure, acquisitions, and R&D spending. We also view the extent to which the board has linked management's long-term compensation to ESG measures as an indicator of the importance the organization places on ESG factors. For instance, a power company or utility that is considering purchasing coal-fired generation assets might be Developing because this does not seem to be consistent with its ESG-related goals. On the other hand, an entity that can point to data that show successful efforts to diversify its workforce in recent years according to its stated strategy, especially if c-suite compensation is linked to diversity outcomes, could be assessed as Excellent.

Climate-Related Financial Disclosures

- 87. At the entity's request, we will indicate to what extent the entity has adopted the Financial Stability Board's Taskforce on Climate-related Financial Disclosures' (TCFD) recommendations. We will not opine on the quality of the entity's disclosure or the climate change scenario assumptions, if any. However, we will comment on the proportion of metrics and targets disclosures made, based on the TCFD's suggested disclosure list.
- ^{88.} The outcome of our assessment is either Adopted, Partially Adopted, or Not Adopted. Adopted reflects our belief that the entity has made 11 of the recommended disclosures and will continue to report them. Not Adopted indicates that the entity has made none of the TCFD's 11 recommended disclosures (in its financial filings or other public reports). Where we believe the entity has partially adopted the recommendations, we will indicate which recommendations it has implemented.

Table 2

TCFD Sample Alignment Assessment

Governance	Strategy	Risk management	Metrics and targets
Describe the board's oversight of climate-related risks and opportunities.	Describe the climate-related risks and opportunities identified over the short, medium, and long term.	Describe the organization's processes for identifying and assessing climate-related risks.	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
Not adopted	Adopted	Adopted	Adopted
Describe management's role in assessing and managing climate-related risks and opportunities.	Describe the impact of climate- related risks and opportunities on the organization's businesses, strategy, and financial planning.	Describe the organization's processes for managing climate-related risks.	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks.
Adopted	Adopted	Adopted	Adopted
	Describe the resilience of the organization's strategy, taking into consideration different climaterelated scenarios, including a 2°C or lower scenario.	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.
	Adopted	Adopted	Adopted

Revisions And Updates

This minor update indicates that we conduct monitoring on public ESG Evaluations only. There is no impact on outstanding ESG Evaluations nor on the analytical approach for assigning new ESG Evaluations.

On Dec. 15, 2020, we updated the definition of the region score to include more explicitly a reference to physical risk. We also clarified that product safety should be included in Safety Management and not in Customer Engagement. We also added language about monitoring and being able to place ESG Evaluations under review.

On June 17, 2020, we amended the Governance Profile by replacing the Cyber Risk & Systems factor with Financial And Operational Risks. We made an explicit reference to externalities in the section on Materiality and Value Chain and we removed the direct reference to the ESG Risk Atlas from the Analytical Approach and explained how it works for the sector and region scores in Environmental, Social, And Governance: How We Apply Our ESG Evaluation Analytical Approach: Part 2. There was no impact on outstanding ESG Evaluations.

On April 10, 2019, we published this analytical approach for the first time.

Related Research

Analytical Approach

- Environmental, Social, And Governance: How We Apply Our ESG Evaluation Analytical Approach: Part 2, June 17, 2020
- Environmental, Social and Governance: How We Apply Our ESG Evaluation Analytical Approach, April 10, 2019

Risk Atlas

- Regional Governance Risk Scores Update Part Of The ESG Risk Atlas, Aug. 19, 2022
- Environmental, Social, And Governance: The ESG Risk Atlas: Sector And Regional Rationales
 And Scores, July 22, 2020
- Environmental, Social, And Governance: Our Updated ESG Risk Atlas And Key Sustainability Factors: A Companion Guide, July 22, 2020
- The ESG Risk Atlas: Sector And Regional Rationales And Scores, May 13, 2019
- Environmental, Social and Governance: How To Navigate The ESG Risk Atlas, April 11, 2019

Key Sustainability Factors

- ESG Evaluation Key Sustainability Factors: Agribusiness, July 26, 2021
- ESG Evaluation Key Sustainability Factors: Real Estate, July 20, 2021
- ESG Evaluation Key Sustainability Factors: Transportation, July 13, 2021
- ESG Evaluation Key Sustainability Factors: Chemicals, July 13, 2021
- ESG Evaluation Key Sustainability Factors: Technology, July 8, 2021
- ESG Evaluation Key Sustainability Factors: Leisure and Sports, June 23, 2021
- ESG Evaluation Key Sustainability Factors: Materials, June 17, 2021
- ESG Evaluation Key Sustainability Factors: Capital Goods, May 11, 2021
- ESG Evaluation Key Sustainability Factors: Retail and Restaurants, April 16, 2021
- ESG Evaluation Key Sustainability Factors: Metals And Mining, March 19, 2021
- ESG Evaluation Key Sustainability Factors: Financial Services, Jan. 21, 2021
- <u>Electric Grids And Gas & Water Utilities: ESG Evaluation: Key Sustainability Factors</u>, Oct. 14, 2020
- Power Generators: ESG Evaluation: Key Sustainability Factors, Oct. 20, 2020
- ESG Evaluation Key Sustainability Factors: Paper & Forest Products, Sept. 25, 2020
- ESG Evaluation Key Sustainability Factors: Telecom, Sept. 25, 2020
- ESG Evaluation Key Sustainability Factors: Oil And Gas, Sept. 25, 2020
- Consumer Goods Key Sustainability Factors For ESG Evaluations, July 22, 2020

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