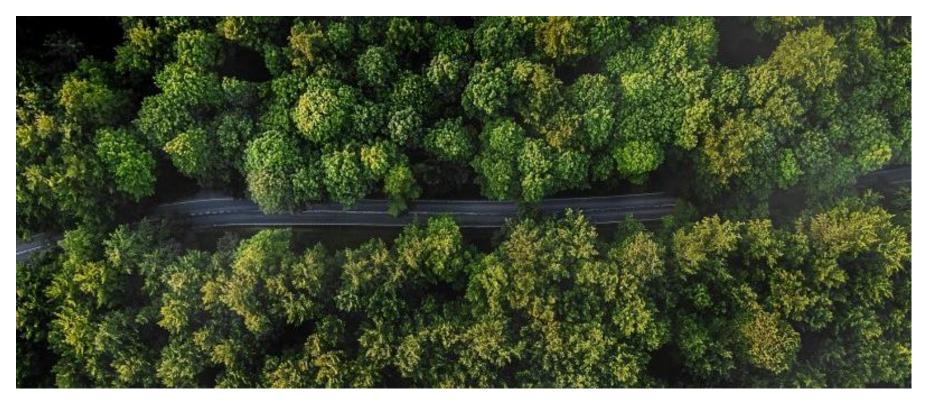
ESG at S&P Global Ratings

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April 1, 2019





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<u>Agenda</u>

- How does S&P incorporate ESG factors in ratings?
- What are the challenges to integrate ESG factors in investment decision?
- A general analytic framework of S&P ESG Evaluation



ESG in Ratings





Investor Focus is Driving Growth of ESG Data & Insights

Responsible Investment Strategy Assets by Region; Total

Associated AuM (LHS, USD \$ Trillion) AuM \$23 Trillion, 2016 **Total AuM** 90.0 \$516_ \$474 \$1,086 up 25% 80.0 AuM tied to UN PRI signatories grew by since 2014 70.0 >12x since 2006 60.0 50.0 40.0 \$12,040 \$8,723 30.0 20.0 10.0 0.0 2006 · 2018 2008 200 2010 2011 2012 2013 2014 2015 2016 2011 2001 🔲 AO AUM (\$ US trillion) United States 38.1% Europe 52.6% Assets under management (US\$ trillion) Canada 4.7% ■ Australia/New Zealand 2.3% ----- Number of Signatories Asia ex Japan 0.2% Japan 2.1% Number of AOs

Number of Signatories (RHS) and

2500

2000

1500

1000

500

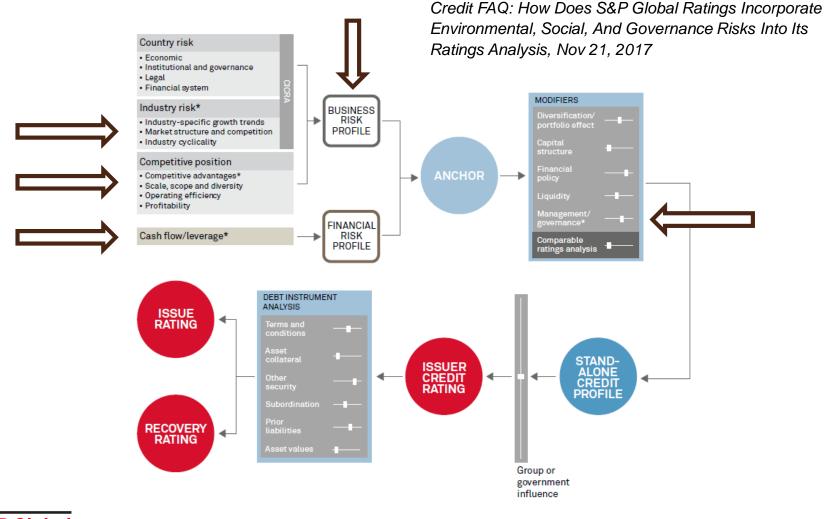
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Source: Global Sustainable Investment Alliance (GSIA) Global Sustainability Investment Review 2016; UN Principles for Responsible Investment 2018

S&P Global Ratings

ESG in Credit Ratings

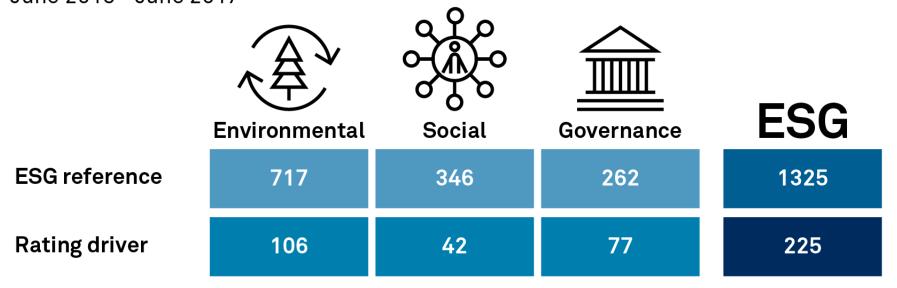
There around **100 references** to ESG factors **across 40 sectors** in the sector level Key Credit Factors.



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*Factors most likely to include consideration of environmental, social, and governance risks.

Corporate Ratings Impacted By ESG Factors June 2015 - June 2017





ESG & Credit – The Trend and Impact Seem to be Changing

Rating impacts of environmental factor (June 2015 - June 2017):

| Positive rating actions | | Negative rating actions | |
|---|-----|---|-----|
| CreditWatch Positive placement | 5 | CreditWatch Negative placement | 4 |
| Outlook Revised to positive | 11 | Outlook revised to negative | 9 |
| Outlook revised to stable from negative | 11 | Outlook revised to stable from positive | 3 |
| Upgrade | 20 | Downgrade | 43 |
| Total | 47 | Total | 59 |
| Percentage of total actions in the positive direction | 44% | Percentage of total actions in the negative direction | 56% |

Relatively balanced impact (compared with 79% negative last review) indicating potential increased awareness and mitigation actions.



ESG & Credit – Transparency in Rating Reports

- We are planning to add an ESG section to about 2,000 corporate credit reports.
- We are making it easier for those who use our opinion to see how ESG figures in the credit equation.
- We've been analyzing E, S, and G factors in credit for a long time. We're not asking for anything in addition to what issuers already disclose to us.
- We will be highlighting ESG exposure that might affect cash flow, profitability, debt levels, or business risk and how severe that exposure is and the likelihood of a problem occurring from it:
 - We will state if a company has no notable material credit exposure to ESG factors



S&P Launches E&G Sections in Corp. Credit Rating Reports

Continental AG: Global Auto Supplier

Environmental, Social, and Governance Factors

Example "Environmental factors are important to our analysis on Continental and could have negative credit implications over the medium term. The global auto industry will be subject to tightening government regulations in Europe that address environmental risks, vehicle safety, and energy independence. The profitability of Continental and the industry in general is further constrained by high-cost new technologies to improve fuel economy and make future vehicles more environmentally sustainable, as well as the available resources needed to deploy these technologies on a large scale. As a tier one supplier, Continental sells lightweight components, green tires, and powertrain components that help to reduce CO2 emissions. These accounted for about 40% of the company's €44 billion sales in 2017.

Although the transition from internal-combustion-engine (ICE) vehicles to pure EVs is still in the early stages, traditional suppliers like Continental need to participate in this emerging market to secure their future market position. We expect margin pressure through high R&D spending (about 10% of sales in the auto group) in the next few years given the extensive upfront development costs that Continental will need to absorb until EVs achieve sufficient scale. However, we do not see negative credit implications at the moment as the company has a track record of high R&D spending in recent years (see chart 1).

Social factors do not play a major role in our credit assessment, however we monitor the risk related to product liability issues linked to road and vehicle safety. This is particularly relevant for the company's auto and tire divisions because Continental was forced to recall steer tires for commercial vehicles in 2018. However, these recalls have not significantly affected the company's operating results, reputation, or creditworthiness.

We do not view governance factors as a credit concern because Continental's public disclosure and governance framework is consistent with accepted standards and there are no other governance related issues."

S&P Global Ratings

Challenges In ESG Investing





What Are Investors Asking For?

"Which of the following factors limit your firm's ability to use ESG information in your investment decisions?"

| | It is all about data! | All (N = 368) | | | | Region | | |
|----|--|------------------|-------|-------|-------|--------|--------|-------|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| _ | Response | | Large | Small | Diff. | US | Europe | Diff. |
| 1 | Lack of comparability across firms | 44.8% | 49.2% | 42.7% | | 45.8% | 49.3% | |
| 2 | 2 Lack of standards in reporting ESG information | | 51.6 | 39.0 | * | 42.1 | 48.6 | |
| 3 | 3 The cost of gathering and analyzing ESG information | | 41.8 | 39.8 | | 40.2 | 45.0 | |
| 4 | 4 ESG information disclosed by firms is too general to be useful | | 45.1 | 36.6 | | 42.1 | 42.1 | |
| 5 | 5 Lack of quantifiable ESG information | | 43.4 | 35.0 | | 40.2 | 40.0 | |
| 6 | 6 Lack of comparability over time | | 38.5 | 32.9 | | 38.3 | 35.7 | |
| 7 | 7 The disclosure of ESG information by firms is too infrequent to be useful | | 27.9 | 28.5 | | 31.8 | 28.6 | |
| 8 | 8 Lack of reliability of data/lack of audit and assurance | | 46.7 | 16.3 | ** | 31.8 | 27.1 | |
| 9 | 9 There is too much disclosure, making it difficult to filter out what is material | | 16.4 | 16.7 | | 14.0 | 20.0 | |
| 10 | 10 Our clients' mandates prevent us from using ESG information | | 0.8 | 1.6 | | 1.9 | 1.4 | |

Source: Amel-Zadeh & Serafeim, "Why and How Investors Use ESG Information: Evidence from a Global Survey," 2017

What Are The Challenges?

- Entities do not report ESG data in a standardized manner.
- E&S data often does not cover all the company's operations.
- Entities tend to change their ESG reporting indicators over time, which may limit analysis of historical performance.
- Some entities don't require independent assurance of their ESG data.
- Some sustainability reports are used more as a communication tool than a reporting tool.



Current State of ESG Reporting – An Example of Health & Safety

employees

Total days of work missed due to occupational accidents1 \rightarrow T 4.21 Number 20,000 11,073 10,813 9,542 8,711 8,164 2013 2015 2017 2014 2016



| | | | 2017 |
|-------------|------------------------|--|-----------------------------|
| | Fatal accidents (=) | Accidents with at least one day of medical absence ^[a] | Frequency Rate 1 (FR1) 💷 |
| By Business | | | |
| | 1 | 207 | 2.4 |
| | 1 | 99 | 1.1 |
| | - | 54 | 1.1 |
| | - | 49 | 3.4 |
| Total | 2 | 409 | 1.7 |

| Safety indicators | 2017 | |
|---|----------------------|--|
| TRIR ^(a) : number of recorded injuries per million hours worked | 0.88 | |
| Group company employees | 0.89 | |
| Employees of external contractors ^(b) | 0.88 | |
| LTIR ^(a) : number of lost time injuries per million hours worked | 0.58 | |
| SIR ^(d) : average number of days lost per lost time injury | 27.57 ^(e) | |
| Number of occupational fatalities | 1 | |
| (a) TRIR: Total Recordable Injury Rate. | | |

(b) As defined in point 5.4.4.1 of this chapter.

- (c) LTIR: Lost Time Injury Rate.
- (d) SIR: Severity Injury Rate.
- (e) Excluding Saft Groupe.



S&P Global Ratings

2017

ESG Evaluation







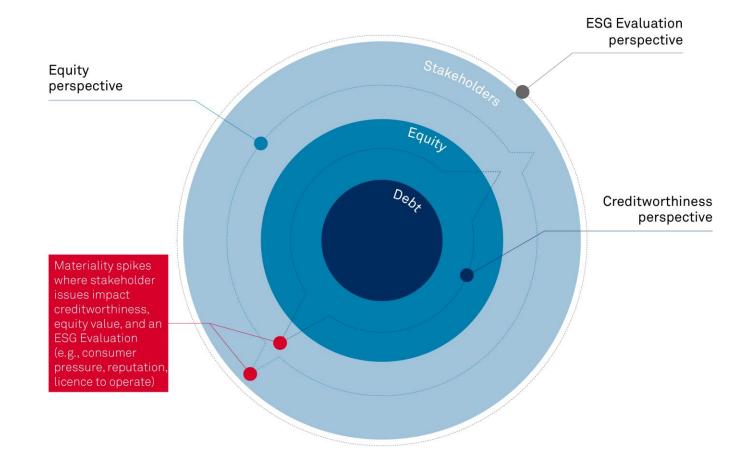
ESG Evaluation is a **cross sector relative analysis** of an entity's capacity to operate successfully in the **future** and optimize long-term **stakeholder** value in light of its natural and social environment and quality of its governance.

Our analysis is **grounded in financial materiality** by assessing the potential of **ESG risks and opportunities** to effect stakeholders that can have a financial impact, either directly or indirectly, on an entity.



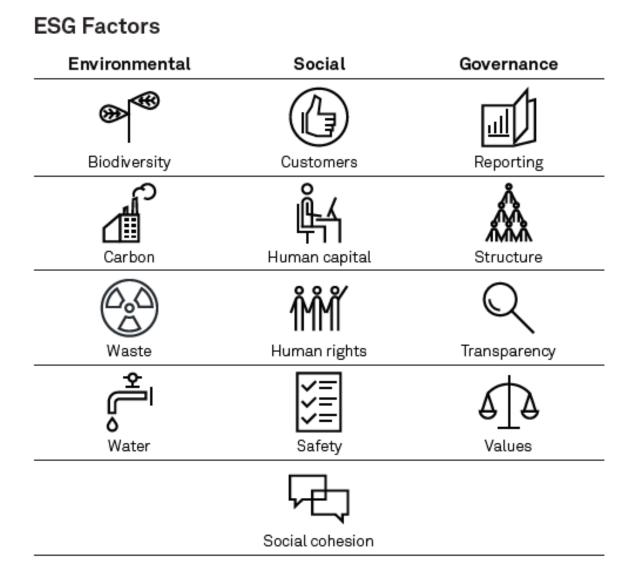
ESG Evaluation - A Broader Perspective

ESG Evaluation Perspective, Creditworthiness Perspective and Equity Perspective.



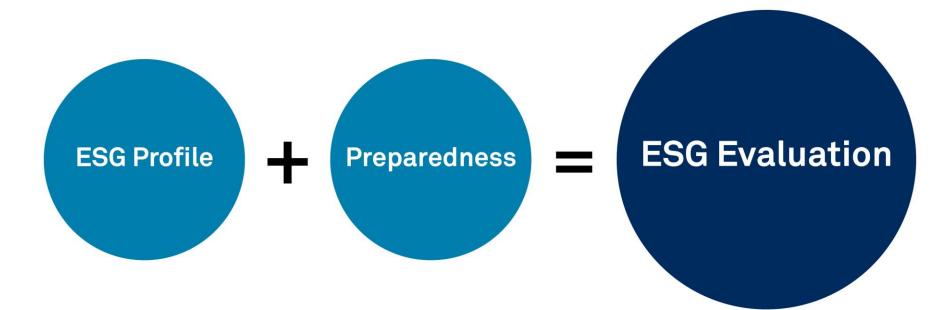


ESG Factors





ESG Evaluation - Proposed Analytical Approach



Focus on

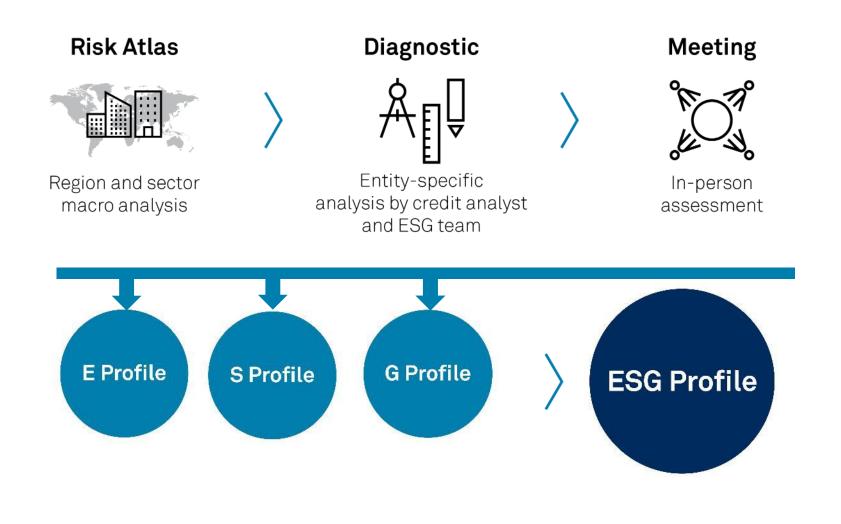
- Financial Materiality
- Stakeholder Value

Differentiators

- Analyst knowledge of companies
- Meeting with management
- Forward looking
- Preparedness assessment

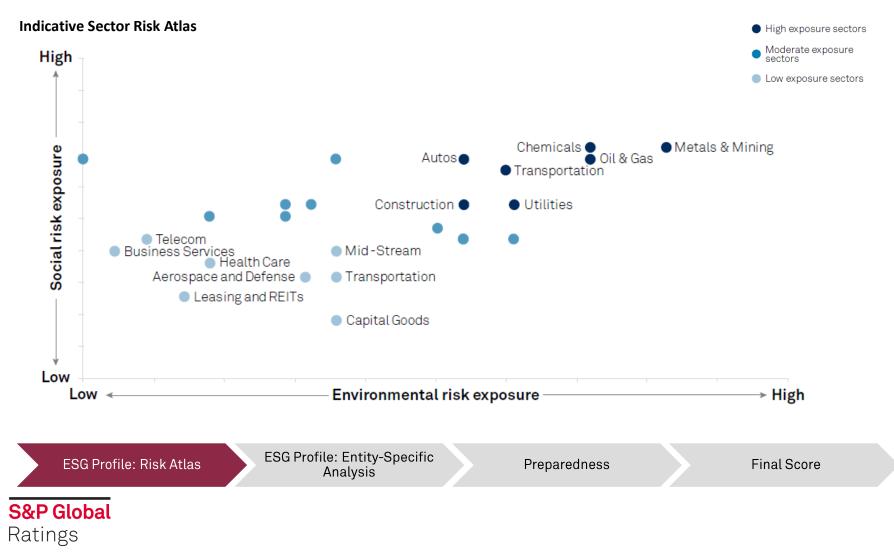


ESG Evaluation - Profile



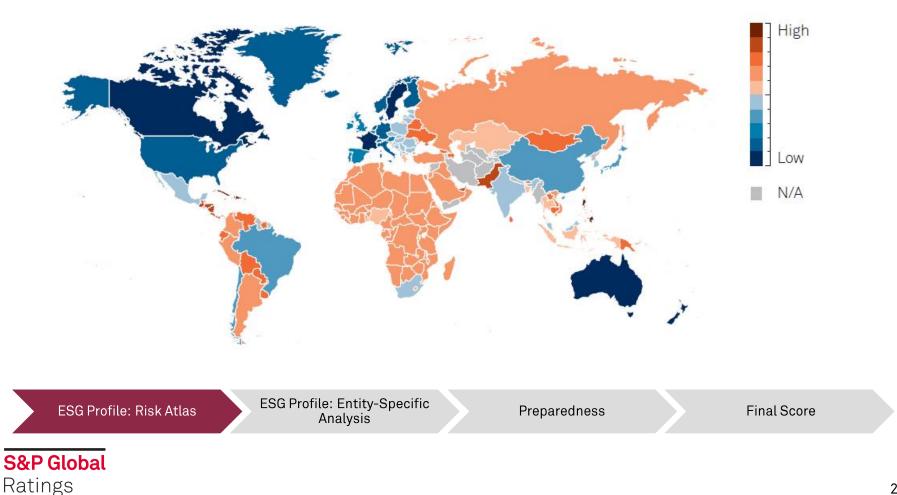


Sector Exposure Score reflects our assessment of the relative potential environmental & social risk exposures for a sector.



Regional Exposure Score considers **regulatory**, **institutional and physical risks** inherent in a region and draws on our analytical opinions of institutional strength of a jurisdiction and relevant external data.

Indicative Country Risk Atlas



ESG Diagnostic

The ESG Diagnostic is our main tool to collect comparable environmental, social and governance data on companies.



Focuses on collecting comparable and consistent data across sectors and geographies to inform our ESG Evaluation score



Draws on, but is not limited to, existing sustainability reporting frameworks such as the Global Reporting Initiative (GRI)



Leverages S&P internal data on the business, environmental and governance profiles of companies



Includes a "Not applicable" option to take into account sector and company specificities



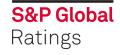
May inform our credit rating analysis, if relevant

ESG Profile: Risk Atlas



Preparedness

Final Score

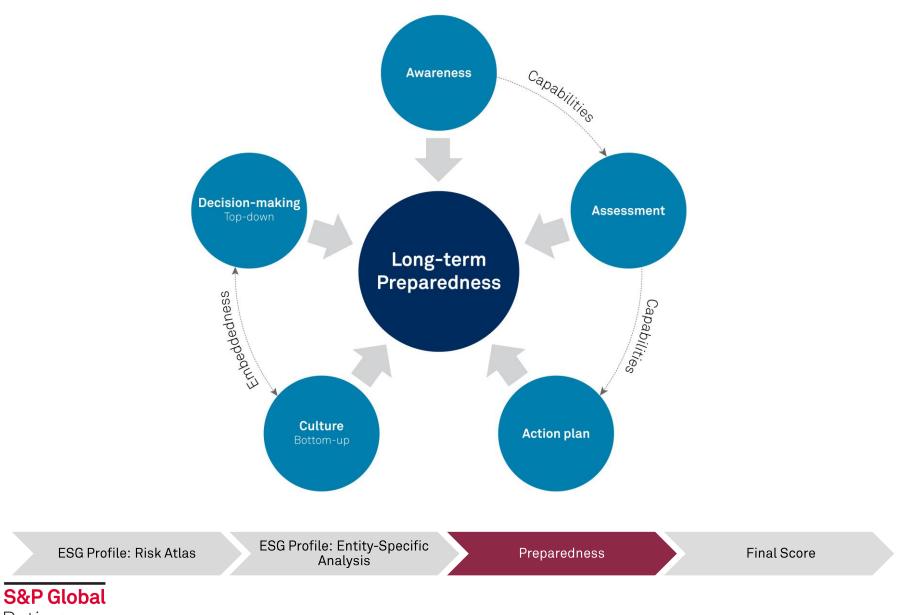


Preparedness – Emerging & Strategic Risks

| Climate | Energy & Fuel | Water | Wealth |
|---|--|----------------------|-------------------|
| Change | | Scarcity | Distribution |
| Urbanization | Material Resource Scarcity | Ecosystem Decline | Deforestation |
| Food Security | Cyber | Childhood | Ageing & |
| | Security | Obesity | Wellbeing |
| ESG Profile: Risk Atlas S&P Global Ratings | ESG Profile: Entity-Specific Analysis | Preparedness | Final Score 23 |

Preparedness - Two Concepts; Five Factors

Ratings



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ESG Evaluation – Final Score



Preparedness

ESG Evaluation

- Assesses exposure to observable ESG risks & opportunities
- Considers governance structure in mitigating risks & capitalizing on opportunities

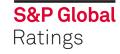
- Assesses the capacity to anticipate and adapt to a variety of long-term plausible disruptions
- Disruptions not limited to environmental or social scenarios

ESG Profile: Risk Atlas

ESG Profile: Entity-Specific Analysis

Preparedness

Final Score

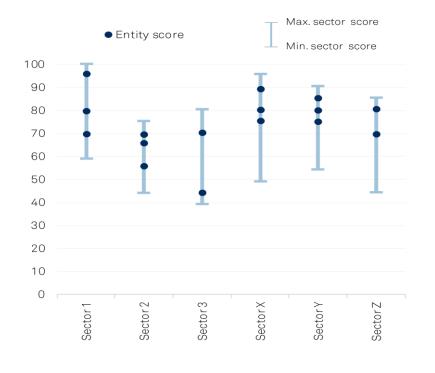


ESG Evaluation – How Can We Respond To Data Limitation?

- Collect standardized ESG data that allows us to perform cross-sector and peers comparison.
- Leverage existing S&P ESG databases.
- Leverage existing knowledge in our analytical base on ESG.
- Create a quality experience for issuers by pre-populating the ESG diagnostic.
- Create a centralized ESG database to inform our credit ratings, ESG Evaluations and other research.
- Rely on analytical judgment rather than quantitative analysis while we develop a consistent and comprehensive ESG database.



ESG Evaluation – Comparability & Alignment









TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES



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