MORNINGSTAR | SUSTAINALYTICS

Controversy Ratings
Methodology: Version 2.0

September 2025

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Morningstar Sustainalytics' **Controversy Ratings**[1] assess companies' involvement in incidents with negative environment, social and governance (ESG) implications through the double materiality lens. To this end, our Controversy Ratings incorporate separate Impact and Risk signals that analyze the severity of each component. The rating is a valuable tool for investors to assess the impact on stakeholders and the environment, and potential financial risks to the company. Typical use cases include screening and engagement.

Highlights

Morningstar Sustainalytics' Controversy Ratings assess stakeholder and environmental impact as well as the financial materiality of ESG driven events via the lens of double materiality:

- The company-level Controversy Rating reflects the highest rating among 10 Controversy Indicators, which are based on 41 Event Indicators, clustered in 10 areas covering environmental (E), social (S) and governance (G) topics.
- For each Event Indicator, Impact and Risk signals are assessed separately and assigned rating categories.
- The highest Rating Category of Impact or Risk is selected as the overall Event Category.
- A Controversy Indicator's Rating is based on the highest overall Event Category pertaining to its cluster.

Our Controversy Ratings are determined by assessing the material impact and financial risk of ESG-driven events based on a bottom-up approach:

- Controversy Ratings are represented on a 0 to 5 Category scale.
- A rating of 0 expresses no evidence of relevant controversies, while 5 expresses the most severe impact on stakeholders or financial risk to the company.
- Each Event indicator has its own set of qualitative and quantitative criteria to measure financial risk and impact.
- The Controversy Ratings are a negative screening product: Research is triggered by incidents based on news and, in the absence of information, the rating is 0.

Controversy Ratings are absolute and company specific, as each event is analyzed in the context of the company involved. The rating does not assess the relative severity of a controversy compared to other companies.

Introduction

Controversy Ratings assess companies' involvement in real world incidents reported in the media, which have negative environmental, social and governance (ESG) implications. We review these ESG incidents through the lens of double materiality: The impact of an incident on the environment and stakeholders on the one hand, and the material financial risks to the company involved on the other hand. Controversy Ratings provide investors with the insights needed to inform their investment stance in relation to ESG incidents, whether this is from a stakeholder impact perspective, a financial materiality perspective, or both.

This methodology covers the principles and logic by which Events and Controversies are rated, the factors considered in the analysis and how information is sourced. This methodology does not cover how the Controversy Ratings or their components are used in other Morningstar Sustainalytics' methodologies.

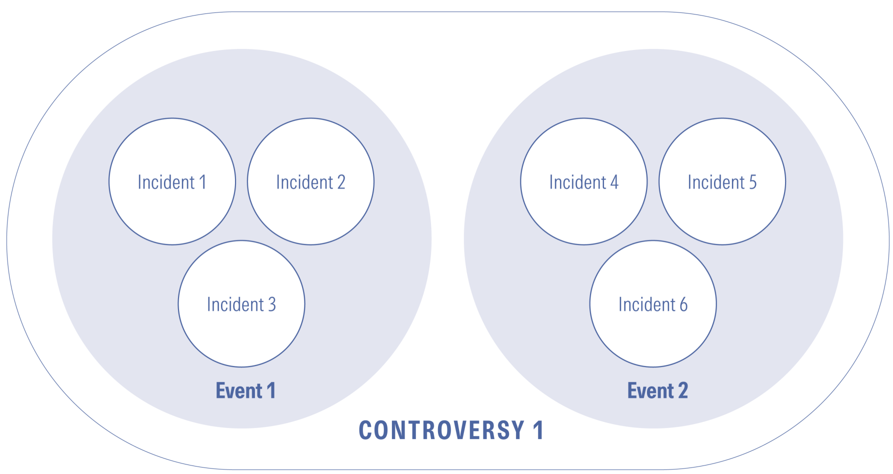
Methodology Description

Methodology Building Blocks

The Controversy Ratings reflect a company's level of involvement in ESG driven issues that are material to stakeholders and the environment or pose a financially material risk to the company. The first building block is an Incident, which represents a singular negative issue where the company has been involved. Incidents on the same topic are collected and combined to inform an Event on that topic. For each event, we assess two dimensions: Risk and Impact, each providing a distinct signal. 'Risk' speaks to the financial risk that the event poses for a company, whereas 'Impact' focuses on the negative impacts of the event on the environment and society. Finally, Controversy is a collection of multiple events that have the same theme and represent the building block of the rating.

Exhibit 1 illustrates these building blocks and the relationship between them.

Exhibit 1 Building Blocks of the Controversy Rating



Source: Morningstar Sustainalytics

Incidents

An incident is the starting point of a Controversy Rating. It is defined as any company activity that yields adverse effects on stakeholders and/or the environment. Incidents provide an initial indication about the materiality of the adverse event that is reported in the media.

Incidents are monitored through a range of media sources. We analyze cases if they fall within one of 58 incident types that address a broad array of environmental, social, and governance issues: Ranging from Emissions, Effluents and Waste to Data Privacy and Security and Business ethics. If an incident relates to a company's Supply Chain, this will be marked as such, to distinguish supply chain incidents from similar incidents that have occurred in the company.

We assess the stakeholder and environmental materiality of incidents by evaluating the negative environmental and/or social impacts resulting from the activity. This materiality assessment is done based on the research guidance on the severity and exceptionality of the incidents, as well as the accountability of the company in question. The incidents can arise from a singular negative occurrence (e.g., a mining explosion) or ongoing activity (e.g., the use of child labor in manufacturing).

Additionally, each incident is part of an **Incident Chain**, which links the initial incident to any subsequent developments or updates on the same issue. The first reporting of a company's negative activity initiates an incident, and updates are added to reflect the latest developments. While some updates alter the incident's impact score, others may simply offer supplementary information to provide context and continuity within the incident chain.

Incidents that are considered material to the company are assessed from a double materiality perspective: Impact and risk perspectives are analyzed as part of the relevant event indicator assessment. Non-material incidents are not further assessed.

Event Indicators

Event Indicators provide a Rating Category for 41 different thematic areas, based on an assessment of the underlying incidents, both from an impact as well as risk perspective, providing clear insight into double materiality. Each material **Incident** is mapped to the relevant **Event Indicator** built on their thematic relationship.

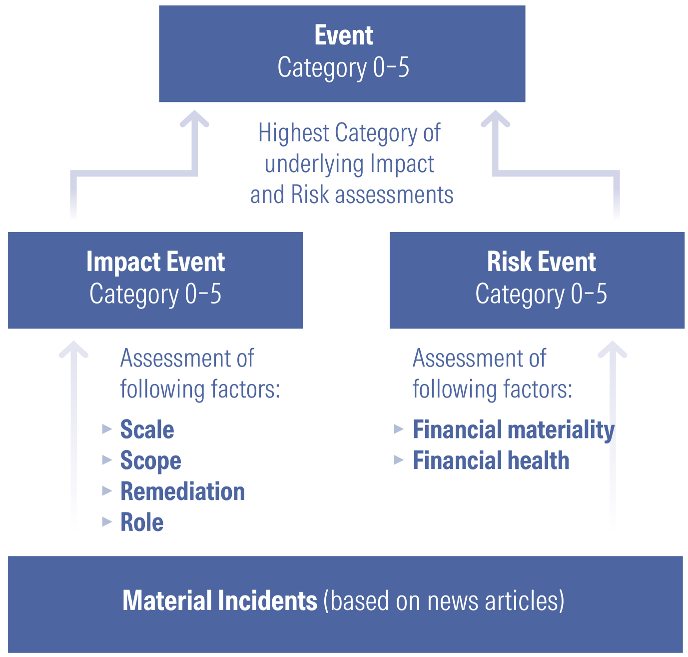
The outcome of the assessment for each Event Indicator is expressed using one of the six Rating Categories, as further explained for Impact Event Categories on page 10 and for Risk Event Categories on page 14. It reflects the highest Rating Category of the underlying Impact and Risk assessments that follow the same six categories.

The impact assessment of events, on the one hand, assesses the impact associated to the company on its external environment, which includes both the environment as well as stakeholders from a social perspective. It is assessed on four factors: Scale, Scope, Remediation and Role.

The risk assessment of events, on the other hand, considers the business risk to the company that the event might cause. It aggregates the business risk into financially material amounts from up to five 'risk' factors: Operational, financial, legal, regulatory and compliance, and reputational. The financial materiality risk assessment also considers the financial health of the company involved in the controversy.

Exhibit 2 below illustrates an overview of the two components of an event assessment.

Exhibit 2 Components of an Event Assessment



Source: Morningstar Sustainalytics

Impact Event Assessment

The Impact event scores are based on scoring of incident chains, aggregation of the scores and the decay considerations. The impact scores for incident chains are calculated centered on four factors: Scale, Scope, Remediation and Role.

To consistently, objectively and reliably measure Scope, Scale, Remediation and Role, their respective scores are calculated based on a combination of clearly defined event-specific qualitative criteria and quantitative metrics. The qualitative criteria and quantitative metrics are designed to measure the impact on the relevant stakeholders.

- **Scale** is based on the seriousness of the impact and is scored from 0 to 100; 0 corresponding to no Impact, 10 to low, 25 to medium, 50 to significant, 75 to high and 100 to severe impact. For example, in the case of a data breach, the scale factor reflects how harmful the breach is to the impacted stakeholders, based on the type of data breach, since different types of data carry different levels of harm potential when misused.
- **Scope** is based on the size or spread of the impact and is scored from 0 to 100; 0 corresponding to no impact, 10 to low, 25 to medium, 50 to significant, 75 to high and 100 to severe impact Scope is sometimes measured with quantitative metrics, measuring the spread of the harm. For example, in the case of a data breach, the scope factor covers how many people were affected or in the case of an oil spill, how many barrels have been spilled or in some cases the scope might be measured using a proxy measurement. In exceptional cases, scope might also be measured qualitatively, such as geographical spread of the event.

- **Remediation** is assessed in terms of the actions that have been taken to manage, reverse or compensate for the impact. To create a comprehensive picture, the remediation factor is composed of up to three elements: Incident management, compensatory remediation and physical remediation, the presence the compensatory and physical remediation is Event Indicator dependent:

1. *Incident management* refers to the actions a company can take to address and manage the impact of the incident, and the available discount can be a maximum of 20%. The assessment can include up to ten criteria that vary between event indicators, depending on the event category under assessment. Each criterion used in the assessment has a corresponding discount value attached to it.
2. *Compensatory remediation* looks at the actions a company has taken to compensate the impacted stakeholders, and the available discount can be a maximum of 40%. It is assessed through two criteria, partial and/or complete compensation, each having been assigned a corresponding discount percentage.
3. *Physical remediation* looks at the actions the company has taken to remediate the impact of the incident on the environment and the available discount can be a maximum of 40%. It is also assessed by means of up to two criteria that vary from indicator to indicator, with specific discount percentages attached to them. Notably the physical remediation factor is part of the assessment only when relevant for the event. For example, when assessing governance events, the physical remediation factor is not relevant and therefore is not part of the assessment.

The exact amount of available discount varies between the event indicators due to their special characteristics. For example, governance events do not contain a physical remediation dimension due to the nature of the events. Furthermore, the exact number of management actions that can be taken and the corresponding available discount varies according to the characteristics of the event indicator.

In the case of data breach incident, a social event, the remediation factor contains incident management and compensatory remediation: To what extent has the company investigated the breach and attempted to mitigate its impact on the stakeholders (incident management) and if it has taken actions such as compensating those affected (compensatory remediation).

Another example could be an oil spill, an environmental event. The remediation is composed of incident management, compensatory remediation and physical remediation.

Role: The extent to which the impact of an event is attributed to the company. This is assessed based on the following factors: the category of the company involved (i.e., the company, subsidiary, or part of the supply chain), the type of responsibility (direct, meaning the company is directly involved, or indirect, meaning involvement occurs through a subsidiary, business partner, supply chain, etc.), and the level of responsibility. These factors determine a role discount score, ranging from 0 to 100%, which reflects the appropriate level of attribution to the company. For example, in the case of a data breach, the role factor covers if any breaches happened at the company itself, or at its part owned subsidiaries, direct involvement by the company would yield no discount, whereas a direct involvement by a subsidiary that the company has moderate ownership in would yield a discount of 40%.

Morningstar Sustainalytics applies the following formula to calculate the score for the relevant incident chains. The **Incident Chain Score** is the average of Scope and Scale, discounted with Remediation and Role. The Incident Chain Score ranges from 0 to 100, the threshold for Low score is 0 points, 25 points for Moderate, 50 for Significant, 75 for High and 90 for Severe:

[C.1]

$$\text{Incident Chain Score} = (\text{Scope Score} + \text{Scale Score}) / 2 \times (1\text{-Remediation}) \times (1\text{-Role})$$

Incident Chain Aggregation

Incident Chain Aggregation is a process that creates an overall score for all incident chains under an Impact Event Indicator. Each incident chain is first adjusted for the time elapsed since the last incident in the chain. This is referred to as 'decay'. Second, incident chain scores have a weight applied to them that makes lower and higher severity incident chains comparable and summable. Third, these adjusted incident chain scores are summed to create the Event Score.

Decay is applied to account for the expectation that the impact caused by an incident decreases over time. The decay is applied so that the severity of an incident is reduced over time at a preset monthly rate. The Decay Factor starts impacting an incident chain after 36 months without new incidents, lowering the score in a linear fashion until it is removed. For higher severity incident chains, the decay factor is applied for a longer segment of time reflecting the more lasting impact of higher severity incidents. When the score reaches zero, the incident chain no longer is included in the calculation of the Impact Event Indicator Score. For a low severity incident chain, the backstop is 48 months, whereas for a severe incident chain it is 66 months. As incidents decay, this may eventually imply a change to the event assessments that are based on the incident. When a change in event assessment is warranted, we review the change before it gets published.

The product of the incident chain score and the decay factor is referred to as the **Post Decay Incident Chain Score**.

Severity-based Weighting is applied after decay; each incident chain has a category (low to severe) that applies to the post decay incident chain score.

To achieve a balanced aggregation, each incident chain is weighted, the low category incidents having lower weight and the higher category ones having higher weights applied. Incident Chain weighting factors are as follows: An incident chain scoring Low is assigned a weight of 0.005, Moderate 0.02, Significant 0.1, High 0.25 and Severe 1. By first applying decay and then weighing the incident chains, the **Weighted Incident Chain Score (WICS)** is produced. The sum of all WICS in the Impact Event Indicator creates the aggregated impact Event Score, as illustrated by the formula:

[C.2]

$$\text{WICS} = \text{Incident chain score} \times \text{Decay} \times \text{Weighting factor}$$

Aggregation is the last step required to arrive at the Impact Event Category for an event indicator. In this process, all the WICS are summed together. As the WICS are scored from 0 to 100, similarly to the individual chain scores, the maximum weighted score is capped at 100.

If the aggregated impact event score is lower than the highest scoring individual post decay incident chain score due to weighting, the higher of the two is selected as the Impact event score. This rule applies in a common scenario where an individual incident chain is the driver of the impact event category. For example, the aggregated score, the highest scoring incident chain category is Category 3. However, when weighed and aggregated with lower scoring incident chains, the aggregate category, which accounts for the number of incidents and the decay, might end up being lower than the standalone score of the highest scoring chain, thus the highest scoring incident chain, becomes the event category.

The aggregated score generates the Impact Event Category for the indicator. Morningstar Sustainalytics still has the possibility to adjust the category rating upwards or downwards, with the approval of an oversight committee. Adjustments are reserved for situations where relevant factors are not fully captured by the standard assessment, but the review supports a different outcome. For example, the Incident Chain that is responsible for the Impact Event Category, is still receiving news and incidents. Even though the issue has been largely resolved, the conclusion might be that the Event Category should be lower than calculated. Another type of example could be a new type of event that is not fully captured by the existing metrics and needs adjustment.

Measuring the Scale, Scope, Remediation and Role

The Scale, Scope, Remediation and Role are measured via a combination of quantitative and qualitative metrics as well as the use of proxies.

Qualitative metrics are normally focused on pre-described scenarios for impact or potential impact on the stakeholders or environment, that are differentiated by the severity of the harm. For example, when analyzing a data breach, the qualitative scenarios range from no data lost in a breach and having no impact on stakeholders to a loss of biometric details or medical records.

The quantitative metrics are based on numeric metrics, such as the barrels of oil spilled or number of impacted people, or the hectares of land impacted by an oil spill.

In some cases, when there are not publicly available quantitative or qualitative metrics, Morningstar Sustainalytics uses proxies to measure the potential impact. In these cases, the use of proxies is warranted. For example, we might use a qualitative scenario of company becoming unstable, such as having to downsize operations, conduct layoffs or restructure, as a proxy for impact, as it might lead to loss of employment for the company's employees.

Impact Event Categories

- Category 5 (Severe): The impact event scores the most severe considerations in the scale assessment, representing exceptionally egregious corporate behavior and widespread and critical repercussions in societies and the environment. On the scope assessment, the impact event scores reach the maximum thresholds in terms of people impacted, surface area affected, sums of disputed amounts or volume of released substances, among others. In these events, the company has failed to implement any actions to address, manage and mitigate the adverse impacts arising from the event.
- Category 4 (High): The impact events scores high or severe in the scale assessment, indicating major impacts on societies and the environment. On the scope assessment, the impact event

scores reach between significant to maximum thresholds in terms of people impacted, surface area affected, sums of disputed amounts or volume of released substances, among others. Lower scope thresholds will always offset higher scale scores, and vice versa. On the remediation side, it is possible that the company has implemented certain measures to mitigate the impact, although these are deemed insufficient.

- Category 3 (Significant): The impact event scores from significant to severe considerations in the scale assessment. While impacts are notable, they have not carried major or critical repercussions in societies and the environment. On the scope assessment, the impact event scores reach between moderate to high thresholds in terms of people impacted, surface area affected, sums of disputed amounts or volume of released substances, among others. Lower scope thresholds will always offset higher scale scores, and vice versa. On the remediation side, it is possible that the company has implemented certain measures to mitigate the impact.
- Category 2 (Moderate): The impact event scores from low to significant considerations in the scale assessment, having limited effects in societies or the environment. On the scope assessment, the impact event scores reach between low to significant thresholds in terms of people impacted, surface area affected, sums of disputed amounts or volume of released substances, among others.
- Category 1 (Low): The impact event scores from low to moderate considerations in the scale assessment, having limited to negligible effects in societies or the environment. On the scope assessment, the impact event scores reach between low to moderate thresholds in terms of people impacted, surface area affected, sums of disputed amounts or volume of released substances, among others. The company has either fully or partially mitigated impacts by effectively implementing remediation measures.
- No Evidence of relevant controversies: There are no recorded incidents under the indicator.

Risk Event Assessment

The rationale for the Risk Event analysis is that some ESG driven controversies carry a material financial risk to the company with them. The Risk Event category is determined by analyzing the financial materiality factor posed by the event and the potential erosion of the company's enterprise value, adjusted for the company's financial health risk considerations factor.

The financial risk derived from all the incidents assessed under the relevant event indicator is aggregated into material amounts. For example, there are two incident chains under an event indicator, incident chains 'a' and 'b'. Incident chain 'a' carries a risk of USD 10 million and the incident chain 'b' carries a risk of USD 20 million, the risk from the incident chains under the event indicator is thus aggregated into financial amount of USD 30 million. This amount represents the financial risk factor.

Financial Materiality Factor

The financial materiality factor is represented by material costs that are likely to be incurred by the company, discounted to their present value and compared to the company's market capitalization. The financial risk includes risk originating from the incidents under the specific Event Indicator being analyzed.

The financial materiality factor is calculated based on five components, summarized in Exhibit 3.

Exhibit 3 Components of the Financial Materiality Factor

Operational Risk

- Revenue losses or increased expenses that can originate from operational repercussions of controversies

Regulatory and Compliance Risk

- Negative implications to company's business model or operations due to regulatory or compliance action.

Legal Risk

- The litigation the company faces due to an event.

Financial Risk

- The potential a company might not be able to fulfill its financial obligations, often arises from the other risks.

Reputational Risk

- Negative publicity regarding the company.

Financial Materiality Factor

Source: Morningstar Sustainalytics

Financial Health Risk Factor

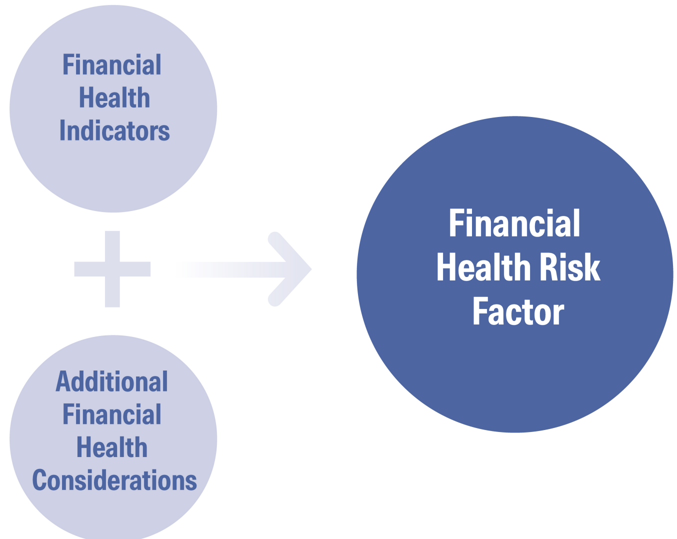
The Financial Health Risk Factor is assessed using a set of common financial health indicators, such as net debt / earnings before interest, taxes depreciation and amortization (EBITDA), current ratio, debt to equity, return on equity, etc., as well as additional financial health risk indicators such as Moat, Uncertainty and Capital Allocation that are created by the Morningstar Equity Research.

The Financial health risk factor consists of two components, as follows:

- The first section consists of the common financial health indicators and their average score that corresponds to 'Low', Medium', 'High' and 'Very High'.
- The second section consists of the additional financial health risk considerations developed by Morningstar Equity Research. The scoring range is 'Positive', 'Neutral', 'Negative'.

These two components are illustrated in Exhibit 4 below.

Exhibit 4 Financial Health Risk Factor Components



Source: Morningstar Sustainalytics

The financial amounts at risk might mean different things to different companies and therefore the financial health of the company is considered. The Financial health risk factor gives more context to the question of what the level of risk is that the company is facing, considering its financial health. The financial health risk factor has the potential to adjust the rating upwards or downwards. For example, should the financial health risk factor be considered 'Very High' and the additional financial health risk considerations be scored 'Negative', the methodology would suggest downgrading one category further. Whereas should the financial health risk factor indicate 'Low' risk and additional financial health risk considerations be 'Positive' the suggestion would be to adjust the category one category upwards.

To arrive at the Risk Event Category, the financial materiality is adjusted with the analysis of the company's financial health risk considerations. The Risk Event Category is calculated by dividing the material amounts by the company's market Capitalization and adjusting the outcome with Financial Health risk considerations. The assessment is conducted at the time when the event takes place and updated when new material information has come forth, thus the assessment is not dynamic and does not fluctuate with the stock market's daily movements.

[C.3]

$$Risk\ Event\ Category = ((Material\ amounts)/(Market\ Capitalization))Financial\ Health\ risk\ adjustment \pm 1\ \ Category$$

Morningstar Sustainalytics still has a possibility to—with the approval of an oversight committee—adjust the rating upwards or downwards. However, the adjustment is performed only in situations where the outcome of the analysis should be different due to issue related specifics, which are not captured by the standard assessment.

Life Cycle of a Risk Event

While the risk posed by events generally gets resolved over time, the resolution of the risk does not necessarily move linearly over time as the financial repercussions of an event can take a long time to get resolved. Therefore, instead of applying an automatic decay, the risk event assessment is updated when there are new developments in the risk the company is facing. The update takes place after new incidents are registered, or as a part of the regular update process, which typically takes place at least once per year.

When the assessment is revisited, we will reassess the financial risk factor arriving at the outstanding risk rate and complete the analysis with the updated numbers. Once the assessment indicates that the risk has decreased sufficiently to support an upgrade, the category is revised accordingly.

Should there have been an absence of development 36 months prior to the date when the event is being reassessed, the event is considered stagnant. Stagnant events will be entered on an upgraded path and should eventually be upgraded and removed from the company's controversies report.

Risk Event Categories

- Category 5 (Severe): The event poses a severe risk to the company in the form of fines, revenue losses or expense increases. It is likely the event will impact the company's financial performance for several years or, in extreme cases, it might even pose a risk to the company's going concern and lead to a need for sale of assets, debt or equity issuance to stay solvent, bankruptcy filing, restructuring or liquidation.
- Category 4 (High): The event poses a high risk in the form of fines, revenue losses or expense increases. The event should cause financial performance to be impacted for more than one fiscal year, and the company might have to raise funds or sell assets to mitigate the controversy, but the company's going concern should not be in question.
- Category 3 (Significant): The event poses a significant risk in the form of fines, revenue losses or expense increases. The event is likely to have a significant impact on the company's financial performance for one fiscal year. The event should not cause long-term financial difficulties for the company.
- Category 2 (Moderate): The risk posed by the event is immaterial to the company.
- Category 1 (Low): The risk posed by the event is immaterial to the company.
- No evidence of relevant controversies: There are no recorded incidents under the indicator.

Rating Change Scenarios

The rating change scenarios are a set of qualitative conditions we have set for the rating upgrade and downgrade. The rating change scenarios are set individually for both Impact and Risk Event categories, which are categorized as Category 3 or higher. The rating change scenarios are determined when the rating is approved, and the conditions are revised if the developments require adjustments. There is one set of conditions provided for an upgrade and one set of conditions for a downgrade. The rating change scenarios do not contain a time component to them, nor do they take a position on the likely direction of the event category.

For example, a company subjected to data breach may be upgraded when they have compensated impacted people or downgraded if the company became involved in a new highly impactful data breach.

Controversy Ratings

Controversy Rating's key signal is the **Rating Category**. It is expressed using one of six categories, ranging from most severe to least severe, as illustrated in Exhibit 5.

Exhibit 5 Rating Category Summary

Rating Category	Description
Category 5	Category 5 represents the most severe controversies. The category highlights the most material risk or most severe stakeholder/environmental impact.
Category 4	Category 4 represents a high stakeholder/environmental impact or high level of financial materiality for the company.
Category 3	Category 3 represents a significant stakeholder/environmental impact or significant financial materiality for the company.
Category 2	Category 2 represents moderate stakeholder/environmental impact and is financially immaterial to the company.
Category 1	Category 1 represents a low stakeholder/environmental impact and is financially immaterial to the company.
No Evidence of Relevant Controversies	Incidents involving the company have not been recorded during the relevant time period.

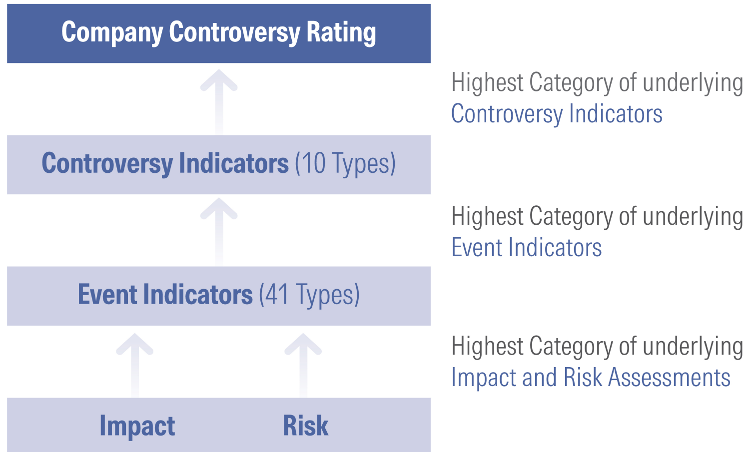
Source: Morningstar Sustainalytics

For each assessed company, Morningstar Sustainalytics provides a Company **Controversy Rating** using one of the six rating categories above.

The Company Controversy Rating is the highest Rating Category of the underlying assessments across thematic areas, with different levels of granularity. At a more general level, we distinguish between 10 thematic areas called **Controversy Indicators** (e.g., Operations Controversies or Employees Controversies). Each of these consist of a collection of underlying **Event Indicators**, representing a more detailed thematic area, of which there are 41, (for example, Water Use or Emissions, Effluents and Waste Events for Operational Controversies and Labour Rights, or Occupational Health and Safety Events for Employees Controversies). Each Event Indicator, in turn, is assessed from a double materiality perspective, providing distinct signals for Impact and Risk.

For each of these event's dimensions we express severity using one of the six rating categories shown in Exhibit 5. This rating category is determined by taking the highest Rating Category of the underlying assessments, as showcased by Exhibit 6. For example, if the Impact signal is rated at a Category 4 level and the Risk signal is rated Category 2, the Event Indicator rating is Category 4.

Exhibit 6 Structure of the Controversy Rating



Source: Morningstar Sustainalytics

The Rating Categories for Impact and Risk are based on an assessment of Incidents relevant to a given Event Indicator. Incidents represent a singular negative issue where the company has been involved, reported in the media and Non-Governmental Organization (NGO) sources. They form the starting point of our analysis and are the most granular component of our model. Our incidents' assessment is described in detail below.

Exhibit 7 shows that Controversy Indicators are a collection of Event Indicators, in a similar way that Events are a collection of Incident Types. Controversy Rating Categories are determined by the highest Event Category (most severe event), be it impact or risk event, automatically becoming the Controversy Rating Category for that Controversy Type. Accordingly, the controversy scores fall between No Evidence of Relevant Controversies and Category 5.

Additionally, Exhibit 7 depicts an example of the structure, where the Operations Controversy Type is made up of four Event Indicators, which in turn are comprised of seven Incident types. See the Appendix for a complete list of Controversy and Event types.

Exhibit 7 Example of Controversy Indicator and its Corresponding Event Indicators and Incident Tags

Controversy Type	Event Indicator	Incident Tags
Operations	Emissions, Effluents and Waste	Degradation & Contamination (Land)
		Discharges and Releases (Water)
		Emissions to Air
	Energy Use and GHG Emissions	Energy Use and Greenhouse Gas Emissions
	Land Use and Biodiversity	Land Use and Biodiversity
	Scarce Resource Use	Water Use

Source: Morningstar Sustainalytics

To demonstrate the scoring algorithm for the Operations controversy at a hypothetical company, let's assume the company has the following Event Scores:

- Emissions, Effluents and Waste = Category 1
- Energy Use and GHG Emissions = Category 0 (no incidents)
- Land Use and Biodiversity = Category 3
- Water Use = Category 0 (no incidents)

In this example, the company's Controversy score would be Category 3 as that is the maximum Event score of all events mapped to the 'Operations' controversy type.

Update Frequency and Methodology Reviews

Events are updated on an ongoing basis as new information becomes available. New material incidents with high impact or risk or new corporate developments may lead to either an upgrade or a downgrade at any point during the year. A full review of a company's Event scores is carried out as part of one of the quarterly or annual reviews and the material events are reassessed at a minimum annually, irrespective of the occurrence of the news. Any change to an event score may also be reflected in the Controversy score, if that event was the highest scoring Event in that Controversy category.

In addition, we periodically review the approach behind our model components, Event Indicators and Incident Tags, to ensure that it remains relevant and substantive. This process may result in changes such as the development of new Incident Tags or Event indicators, structural enhancements to existing indicators or changes to the methodological architecture of the rating. Such changes need to be reviewed and approved by Morningstar Sustainalytics.

Ineligible Incidents

The identification, classification and analysis of incidents are reliant upon there being a baseline of information from which objective data points may be extracted, and reasonably correlated conclusions drawn. Where a type of incident inherently does not lend itself to such objective data points or conclusions, such incidents are ineligible for Controversy Ratings research given the adverse impact on research rigor. A category of ineligible incidents is 'contiguous territorial disputes'.[2]

A territory is contiguous when it has a direct land or river border shared between disputing parties. International case law has viewed contiguity in two ways:

- Contiguity describes a territory that is all of one piece, in which all parts of the territory are connected to one another and contained within a single, continuous boundary line.
- The term can also be used to describe the relationship between two or more territories: Territories are contiguous if they directly border or touch one another. [3]

A list of contiguous territorial disputes that are ineligible for research within Controversy Ratings is available at the Morningstar Sustainalytics Knowledge Hub post Resources for *Understanding Territorial Disputes.* The list of ineligible incidents is also subject to continuous monitoring and internal updates.

The scope of the ineligible incidents category is on issues related to disputes where there is contention over contiguous territory Therefore, all other types of disputes will remain eligible for research. As such, the ineligible incidents category does not include other scenarios, such as situations in which insurgents attempt to gain control over a state's territory with the goal of overthrowing or disrupting the incumbent regime/government (e.g., Myanmar) or situations in which armed and/or political groups are attempting to seek greater autonomy from the central government within an existing state. Additionally, the scope will not include disputes pertaining to indigenous land rights or intercommunal violence (e.g., Ethiopia).

Controversy ratings assessments will also continue to include eligible research pertaining to all other types of human rights issues, which are not connected to contiguous territorial disputes and that do not raise the types of challenges set out in the preceding section.

Sources Eligibility

Controversy Ratings use news articles, civil society reports, government and public sector as well as private sector information and internal research and data as a source for its research.

The sources used for the assessments are assessed based on four criteria, as follows:

1. The sources are evaluated on their reliability, that is determined based on their factual reporting, objectivity, timeliness of the reporting, use of evidence in their reporting and political bias. This focusses on understanding the political bias of the sources, their accuracy and factual reporting. Only sources that are considered reputable qualify to be used in our research and the reputable sources are categorized in six types, based on their reach:
    - Leading media outlets with global reach, such as Reuters, Bloomberg, Financial times, The Guardian, BBC News, as well as national outlets with wide circulation, for example, The Globe and Mail, The Times, The New York Times, El Pais, Jerusalem Post, De Volksrant, etc.
    - Corporate Reporting and regulatory filings, regulators and state agencies, courts and inter-governmental organizations.
    - NGOs with global reach and presence, leading NGOs, these include Amnesty, Global Witness etc. Type 3 also includes leading academia and research institutes.
    - Smaller news outlets with regional, local or city level reach. For example, Detroit Free Press or Cleveland Plain Dealer.
    - Industry specific news outlets, Labour Unions, Industry Coalition reports. Examples are International Railway Journal, Responsible Business Alliance.
    - Small NGOs and think tanks. Examples could be, Amazon watch and Australian Strategic Policy Institute.
2. Only articles that have been published in the past three years can be used as grounds for downgrade.
3. An assessment must contain at least two reliable sources, of which at least one must be within the last three years. Older sources can be used as context. For Category 4 or 5 downgrades, the information must be corroborated by at least two reputable sources in the past three years.
4. All downgrades to Categories 4 or 5 require at least one of the following types of sources to be used. International media outlets with global reach, reliable national level media outlets, leading international NGOs with global reach, regulatory filings, judicial information or corporate reporting.

Additionally, Morningstar Sustainalytics uses in house research such as Morningstar Equity research and data from PitchBook in its controversies research. Our Controversy Ratings' research does not rely on Artificial Intelligence and as Controversy Rating is a negative screening product and based on publicly available information, a rating above Category 0, can only be produced when data is available.

Appendix

Controversy and Event Types

Controversy Type	Event Type
Operations	Emissions, Effluents and Waste
	Land Use and Biodiversity
	Energy Use and GHG Emissions
	Water Use
Environmental Supply Chain	Emissions, Effluents and Waste - SC
	Energy Use and GHG Emissions - SC
	Land Use and Biodiversity - SC
	Water Use - SC
Products & Services	Carbon Impact of Products
	Environmental Impact of Products
Employees	Occupational Health and Safety
	Employees – Human Rights
	Labour Relations
Social Supply Chain	Community Relations – SC
	Employee – Human Rights – SC
	Labour Relations – SC
	Occupational Health and Safety – SC
	Society – Human Rights - SC
Customers	Quality and Safety
	Anti-Competitive Practices
	Data Privacy and Security
	Marketing Practices
	Media Ethics
Society & Community	Community Relations
	Access to Basic Services
	Sanctions
	Social Impact of Products
	Society – Human Rights
	Weapons
Business Ethics	Accounting and Taxation
	Business Ethics
	Animal Welfare
	Bribery and Corruption
	Intellectual Property
Governance	Corporate Governance
	Animal Welfare – SC
	Bribery and Corruption - SC
	Business Ethics - SC
	Resilience
Public Policy	Lobbying and Public Policy

Glossary of Terms

Controversy	A controversy is one or more events involving a company that may negatively affect stakeholders, the environment or cause risks to the company.
Controversy Indicator	A controversy indicator is a thematic area that is comprised of a collection of event indicators.
Controversy Rating	Controversy rating is the highest Controversy indicator rating assigned to a company.
Decay	Decay is the rate at which the severity of an incident is reduced monthly after a period of inactivity.
Event Category	Event Category is the Category assigned to an event indicator, and it is the highest of the Impact and Risk Event Categories.
Event Indicator	An Event Indicator is a thematic area under which incidents concerning the thematic area are collected.
Event Score	A data point that provides a signal about the severity of a company's involvement in media reported controversies or about the severity of an event as it relates to the company's business. An Event Score is informed by the assessments for one or more Incidents that are mapped to that event. Event scores are Category 1 (low); Category 2 (moderate); Category 3 (significant); Category 4 (high); and Category 5 (severe).
Impact	Adverse Social or Environmental impact that an event has caused.
Impact Event	Impacts on the stakeholders or the environment from all incident chains are aggregated under a single event indicator to provide a unified assessment
Incident	Incident represents a singular negative issue that a company is involved in.
Incident Chain	A collection of incidents that all relate to the same incidence of misconduct.
Incident Chain Score	A data point that provides a signal about the severity of a company's involvement in an issue represented by an Incident Chain or an Incident, before decay has been applied. The Incident Chain Score. After applying for decay, informs the Event Score, which in turn translates to Event Category.
Post Decay Incident Chain Score	A data point that provides a signal about the severity of the company's involvement in an issue, represented by an Incident Chain or an Incident after the decay has been applied. The Post Decay Incident Chain Score informs the Event Score, which in turn determines the Event Category.
Rating Category	A data point that provides a signal about the severity of the risk to the company and impact on the stakeholders or the environment. Rating Categories correlate with Event Scores and are Category 1 (low); Category 2 (moderate); Category 3 (significant); Category 4 (high); and Category 5 (severe).
Remediation	Remediation refers to the actions taken by the company to mitigate the impact on stakeholders or the environment. Remediation is comprised of management actions, compensatory remediation and physical remediation.
Risk	Risk refers to the financially material risk that the company is facing due to an involvement in an event.
Risk Event	The aggregation of controversy-driven risk across all incident chains associated with the same event indicator.
Role	Role refers to the involvement or connection a company (the company, supplier, or subsidiary) has in relation to a specific event. It describes how the entity is linked to events such as being directly responsible or indirectly involved.

Scale	Scale is based on the seriousness of the impact.
Scope	Scope is based on the spread of the impact.
Severity-based Weighting	Severity-Based Weighting gives each incident chains a relative weight, based on severity, to facilitate a balance and not to overweight low scoring incident chains.
Weighted Incident Chain Score (WICS)	Incident chain score that has been weight to account for severity of the incident chain.

Endnotes

[1] Text that is highlighted in bold gray indicates a term that is explained in the Glossary of terms in the Appendix.

[2] Such disputes are ineligible as they are subject to broad geopolitical dimensions, divergent views amongst governments, civil society and other interested actors resulting in fragmented claims, partisan media reports and norm-driven contestations. Numerous experts have observed the ambiguity of norms governing disputed territory with parties using different norms to assert territorial claims. Companies that may not be involved in such disputes inadvertently become associated with them and are consequently embroiled in geopolitical and ideological disputes. The difficulty of collecting, measuring and assessing relevant data is amplified when combined with the complexity of territorial disputes, particularly considering contextual fluidity and political, social and economic dynamics at play. The general lack of contextualized and verifiable data, transparency and standardization in such contexts remains a continuous obstacle to objective research in this area. As such, contiguous territorial disputes will not be eligible as incidents under the Controversy Ratings methodology.

[3] Case Concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v Bahrain) Merits [2001] ICJ Reports 2001, 40 (International Court of Justice) 100, 170; accessed (03.06.2025) at: https://www.icj-cij.org/case/87.

Change Log

Version	Date	Initiator	Main items that changed	Main items that changed
1.0	05.12.2024	ESG Methodology	N/A	N/A
2.0	25.09.2025	ESG Methodology	▸ Removed incident scores. ▸ Introduced a dedicated impact event score. ▸ Introduced a dedicated risk event score. ▸ Removed Outlook Score. ▸ Introduced Category Change Scenario. ▸ Expanded event narratives.	▸ Clear distinction between the magnitude of risk and impact posed by specific events provide more granular insights into the rating and bolster double materiality considerations. ▸ Improving the existing event assessment framework by introducing more structured, data-driven assessments to enhance objectivity and consistency.

About Morningstar Sustainalytics

Morningstar Sustainalytics is a leading ESG research, ratings, and data firm that supports investors around the world with the development and implementation of responsible investment strategies. For 30 years, the firm has been at the forefront of developing high-quality, innovative solutions to meet the evolving needs of global investors. Today, Morningstar Sustainalytics works with hundreds of the world's leading asset managers and pension funds who incorporate ESG and corporate governance information and assessments into their investment processes. The firm also works with hundreds of companies and their financial intermediaries to help them consider ESG Risk in policies, practices, and capital projects. For more information, visit www.sustainalytics.com.

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