Morningstar® Low Carbon Risk Index Family℠

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For more information about all of Morningstar's indexes, please visit:
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Powered by Sustainalytics
Morningstar uses company-level sustainability research provided by Sustainalytics, a firm with global reach and a reputation for insightful environmental, social, and governance-oriented research. The firm covers more than 10,000 companies across roughly 150 industry groupings with its ESG research. Analysis spans dimensions of preparedness, disclosure, quantitative datapoints, and performance.

From rising sea levels to droughts, floods, hurricanes and heatwaves, climate change poses existential threats. Its economic impact can be measured in the trillions. Governments, civil society, and the private sector are all acting to combat rising global temperatures by reducing the emissions of greenhouse gases that scientists believe cause climate change. Carbon dioxide is the primary culprit.

For investors, climate change presents a variety of risks. Businesses of all kinds are threatened by the physical effects of rising temperatures. And as the global economy moves away from its dependence on fossil fuels, carbon-intensive businesses are under pressure. Fossil fuel-related industries like integrated oil and gas and coal face myriad risks—from policy and legislation to new technologies to changing customer preferences. Companies in the steel or automotive industries might need to adapt their carbon-heavy operations. Simply put: Some companies will survive and thrive in the economy of tomorrow, while others won't.

The Morningstar Low Carbon Risk Index Family provides diversified exposure to equities across regions, emphasizing companies that are aligned with the transition to a low-carbon economy. The indexes go beyond carbon footprinting, which reflects current emissions. Rather, they look forward to gauge a company's positioning for a world less dependent on fossil fuels.

Low Carbon Designation

Sustainalytics' Carbon Risk Rating gauges the extent to which a company's economic value is at risk in the transition to a low-carbon economy. The rating is based on an assessment across two dimensions: exposure and management. Exposure is a measure of the degree to which carbon risks are material across the value chain—in the company's own operations, its products and services, and its supply chain. It is dependent on both the industry—Sustainalytics assesses 146 global industries—and a company's unique circumstances. Management measures a company's ability to reduce emissions and related carbon risk. The rating represents the unmanaged carbon risk after taking into account the company's management efforts. Carbon Risk Ratings are assigned to 4,000 companies globally and fall into five buckets: Negligible, Low, Medium, High, and Severe.

To gauge fossil fuel exposure, they use the Morningstar Portfolio Fossil Fuel Involvement; a weighted average of constituent-level exposure to fossil-fuel-intensive industries: thermal coal extraction and power generation, oil and gas production and power generation, and oil and gas products/services. The score is averaged over the trailing 12 months.

The Morningstar Low Carbon Risk Index Family is designed to achieve the Morningstar low carbon designation.

Index Eligibility

The Morningstar Low Carbon Risk Indexes are derived from the large- and mid-cap segment of their equivalent broad market benchmark. For example, the constituents of the Morningstar Global Markets Low Carbon Risk Index come from the Morningstar Global Large-Mid Index, which targets 90% of global equity market capitalization across developed and emerging markets. To be eligible, a company must have undergone a carbon risk assessment by Sustainalytics (see sidebar). Securities deemed to face "Severe Risk" are excluded.

Morningstar Low Carbon Risk Index Family

Broad Regional Markets	Developed Markets	Emerging Markets	Single Country
Global Markets	Developed Markets	Emerging Markets	United States
Global Markets ex-U.S.	Developed Markets ex-U.S		Japan
Asia ex-Japan	Developed Europe		
	Nordics		

Index Construction

The indexes are created through an optimization process that targets low portfolio-level carbon risk and fossil fuel exposure. The number of stocks in each index is variable, subject to eligibility requirements, the results of the optimization process, and weighting considerations.

Optimization Objective

To minimize tracking error of the portfolio wrt benchmark, subject to the following constraints:

- Portfolio carbon risk score <= 9.5.
- Portfolio fossil fuel involvement (by weight) < 6.5%.
- Max weight of security <= 5 times its benchmark weight, subject to a cap of 10%.
- One-way turnover should be less than 10%.
- Regional and sector weight set at +/-4% wrt that of benchmark

Rebalancing and Reconstitution

The indexes are rebalanced (weights reset) quarterly in March, June, September, and December, and reconstituted (membership reset) semiannually in June and December, on the Monday following the third Friday of the month. If Monday is a holiday, rebalancing and reconstitution are effective on the following business day. The Carbon Risk score data used for reconstitution is as of the last trading day of May and November.

Morningstar Low Carbon Risk Index Construction Process

Investable Universe

- Select large- and mid-cap constituents from the parent index

Security Selection

- Assign carbon risk scores
- Eliminate constituents having Severe Carbon Risk

Morningstar Low Carbon Risk Index

- Weight companies based on carbon risk scores through an optimization process, while enforcing weight constraints