

Morningstar® Portfolio Carbon Metrics Morningstar® Portfolio Carbon Risk Score™ Morningstar® Low Carbon Designation™

Frequently Asked Questions

Morningstar Research

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Executive Summary

Background

Investors and scientists increasingly agree that climate change presents one of the biggest economic challenges of the 21st century. "Climate-related risks and the expected transition to a lower-carbon economy affect most economic sectors and industries," according to the Financial Stability Board's Task Force on Climate-Related Financial Disclosures. For investors, climate change presents significant risks and opportunities. Mercer predicts that climate change will affect returns for nearly every asset class in the next 35 years. Fiduciary responsibility and increased regulations require investors to analyze and understand their risk exposures in a carbon-constrained future. To help investors address this challenge, Morningstar has introduced portfolio carbon metrics that measure the risk that companies in a portfolio face from the transition to a low-carbon economy.

Morningstar Portfolio Carbon Metrics

Morningstar Portfolio Carbon Metrics are a set of more than 70 indicators based on Sustainalytics' company carbon metrics that help investors evaluate a portfolio's exposure to carbon risk. These metrics include: Morningstar® Portfolio Low Carbon Designation™, Morningstar® Portfolio Carbon Risk Score™, Morningstar® Portfolio Fossil Fuel Involvement™, Carbon Exposure Score, Carbon Management Score, Carbon Products & Services Risk, Carbon Operations Risk, Carbon Intensity, Stranded Assets Risk, and Carbon Solutions. The metrics help investors monitor, manage, and reduce risks stemming from carbon exposure in portfolios and can help them achieve a positive environmental impact through their investments. The metrics can be used for investment due diligence, investment selection, portfolio construction, regulatory and client reporting, and product creation.

Morningstar Portfolio Carbon Risk Score

The Morningstar Portfolio Carbon Risk Score, which is based on Sustainalytics' innovative company carbon-risk ratings, extends beyond simple carbon footprinting to assess how effectively companies are managing carbon risk. The portfolio score is the asset-weighted carbon-risk score of holdings in a portfolio averaged over the trailing 12 months. It can be used to compare a portfolio with its benchmark, its Morningstar Category average, and other portfolios. It can also be monitored over time to evaluate whether a portfolio is increasing or reducing its carbon risk.

¹ TCFD. 2017. Recommendations of the Task Force on Climate-related Financial Disclosures. June, ii. https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf

² Mercer. 2015. Investing in a Time of Climate Change. https://www.mercer.com/content/dam/mercer/attachments/global/investments/mercer-climate-change-report-2015.pdf

Morningstar Low Carbon Designation

The Morningstar Low Carbon Designation is given to portfolios that have Morningstar Portfolio Carbon Risk Scores below 10 (indicating Low risk) and Morningstar Portfolio Fossil Fuel Involvement below 7% of assets, based on an average of their portfolios over the trailing 12 months. The designation is an indicator that the portfolio's holdings overall are in general alignment with the transition to a low-carbon economy. It can be used as an easy way for investors to identify low-carbon funds.

Frequently Asked Questions

Morningstar Portfolio Carbon Metrics

Can investors compare funds within categories based on their Morningstar Portfolio Carbon Metrics?

Yes. The following data points will receive Morningstar Category ranks and category averages:

Morningstar Portfolio Carbon Risk Score, Morningstar Portfolio Fossil Fuel Involvement, Carbon Exposure
Score, Carbon Management Score, Carbon Operations Risk, Carbon Products & Services Risk, Stranded
Assets Risk, and Carbon Intensity.

The following involvement data points will have category average calculations: thermal coal power generation, oil sands extraction, Arctic oil and gas exploration, carbon solutions, renewable energy, renewable energy supporting products and services, green transportation, oil and gas generation, oil and gas production, and oil and gas products & services. Category ranks will allow investors to compare similar funds.

Where are the Morningstar Portfolio Carbon Metrics available?

They are available within the grid view in all Morningstar Cloud editions. On April 19, key carbon metrics, including the Morningstar Low Carbon Designation, will become available in the Morningstar Fund Report beta. The Morningstar Fund Report beta is available on Morningstar.com, Morningstar.co.uk, and all Morningstar Cloud editions. In the next six months, carbon metrics will be added to additional platforms, including Morningstar® Advisor WorkstationSM, Morningstar® DirectSM, Morningstar® EssentialsTM portal, and Morningstar's European websites, as well as data feeds.

How many funds will receive Morningstar Portfolio Carbon Metrics?

Approximately 30,000 funds globally will receive these metrics.

How frequently are the carbon metrics updated?

Morningstar Portfolio Carbon Metrics are calculated quarterly, based on the most recent portfolios in the Morningstar database. Portfolio carbon-metrics calculations will be completed on the sixth business day in February, May, August, and November. Morningstar Portfolio Carbon Risk Score and Morningstar Portfolio Fossil Fuel Involvement 12-month trailing average scores are also calculated each quarter.

Will historical carbon metrics be available for funds?

Yes. As of April 11, 2018, carbon metrics covering March 31, 2017, to March 31, 2018, will be made available in Morningstar Cloud.

Can users view company data for the carbon metrics?

Currently, we provide company carbon-risk scores and fossil-fuel involvement details for the portfolio's five largest holdings and the five best- and worst-performing carbon-risk scores in the Morningstar Cloud grid view. We plan to expand carbon holdings data in Morningstar Cloud in the future to enable carbon portfolio analysis.

Morningstar Portfolio Carbon Risk Score

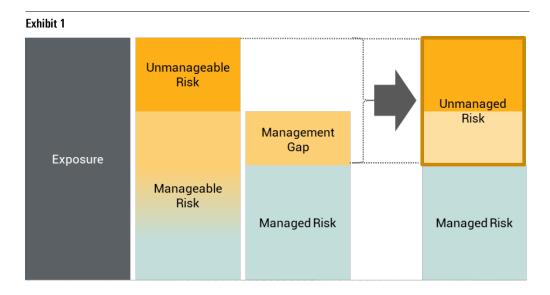
What is the Morningstar Portfolio Carbon Risk Score, and how is it calculated?

A Morningstar Portfolio Carbon Risk Score is the asset-weighted sum of the carbon-risk scores of a portfolio's holdings, averaged over the trailing 12 months. The carbon risk of a company is Sustainalytics' evaluation of the degree to which a firm's activities and products are aligned with the transition to a low-carbon economy. The assessment includes carbon intensity, fossil-fuel involvement, stranded assets exposure, climate risk mitigation strategies, and green-solutions involvement. The portfolio Carbon Risk Score is displayed as a number between 0 and 100 (a lower score is better).

What is Sustainalytics' methodology for the company carbon-risk rating?

There are five main components to the company carbon-risk rating:

- Carbon-Risk Exposure Reflects the potential risk for a company when moving to a low-carbon economy
- ► Unmanageable Carbon Risk Estimates how much of this risk cannot be managed away
- ► Manageable Carbon Risk Estimates how much of this risk can be managed away
- ► Managed Carbon Risk Reflects the degree to which a company's policies and management have reduced its Carbon Risk
- ► Unmanaged Carbon Risk This is the remaining carbon risk after taking into account the degree to which a company's carbon-risk exposure has been managed. It is the basis of the company's carbon-risk rating.



How is the Morningstar Portfolio Carbon Risk Score different from a portfolio carbon footprint? Traditional portfolio carbon footprint analysis is challenged by incomplete or inaccurate company reporting. Portfolio carbon footprint analysis focuses on carbon intensity based on scope 1 and scope 2 emissions. Scope 1 emissions include direct greenhouse gas emissions like fossil-fuel combustion, while scope 2 emissions include indirect emissions produced from another source such as purchased energy. By contrast, Morningstar Portfolio Carbon Metrics extend beyond carbon intensity to evaluate how the management of companies held in a portfolio address carbon risk in preparation for a low-carbon

How many companies does Sustainalytics cover with carbon-risk ratings? Sustainalytics covers approximately 4,100 companies.

How often does Sustainalytics update the company carbon-risk ratings?

Sustainalytics provides updates throughout the year for companies as they undergo major corporate actions. The entire universe is refreshed annually in February.

Morningstar Low Carbon Designation

economy.

Why did Morningstar create the Morningstar Low Carbon Designation?

The universe of global funds that intentionally aim to have low carbon exposure or exclude fossil fuels is less than 1%. Investors interested in having low carbon or fossil-fuel exposure may own conventional funds. Those investors may use the Morningstar Low Carbon Designation to identify conventional funds that have Low Morningstar Portfolio Carbon Risk Scores and below-average exposure to fossil fuels.

What is the Morningstar Low Carbon Designation methodology?

All Morningstar Portfolio Carbon Metrics are asset-weighted portfolio calculations based on Sustainalytics' carbon-risk research. Based on two metrics — Morningstar Portfolio Carbon Risk Score and Morningstar Portfolio Fossil Fuel Involvement percentage — funds may receive the Morningstar Low Carbon Designation, which allows investors to easily identify low-carbon funds within the global universe. To receive the Low Carbon designation, a fund must have a 12-month average Carbon Risk Score below 10 and a 12-month average Fossil Fuel Involvement less than 7% of assets, which is about one-third less than the global market average. For these metrics to be calculated, at least 67% of a portfolio's assets must be covered by Sustainalytics' company carbon-risk research. All Morningstar Portfolio Carbon Metrics are calculated quarterly.

Morningstar Portfolio Fossil Fuel Involvement is the portfolio's asset-weighted percentage exposure to fossil fuels, averaged over the trailing 12 months. Companies with fossil-fuel involvement are defined as those in the following subindustries: thermal coal extraction, thermal coal power generation, oil and gas production, oil and gas power generation, and oil and gas products & services.

How should investors use the Morningstar Low Carbon Designation?

The Morningstar Low Carbon Designation allows investors to assess how well companies in a fund are managing carbon risk as they transition to a low-carbon economy. Investors may use the designation in the following ways:

- ► To easily identify funds with low carbon risk and below-average exposure to fossil fuels
- ► To use as a tool alongside financial metrics and the Morningstar Sustainability Rating to support investment decisions
- ► To fulfill regulatory requirements, such as France's Energy Transition Law (Rule 173) or the Task Force on Climate-Related Financial Disclosures
- ► To reduce risk and have a positive impact by supporting the transition to a lower-carbon economy

How many funds will receive the Morningstar Low Carbon Designation?

When the first ratings are released in April 2018, approximately 6,000 funds, which is about 20% of the universe, will receive the Morningstar Low Carbon Designation.

What's the difference between the Morningstar Sustainability Rating and the Morningstar Low Carbon Designation?

The Morningstar Sustainability Rating measures how well holdings in a portfolio manage overall environmental, social, and governance risks and opportunities, relative to Morningstar Category peers. Sustainability Ratings are distributed normally within Morningstar Categories.

By contrast, the Morningstar Low Carbon Designation focuses solely on climate transition risk (or carbon risk) and is awarded to all funds that meet the criteria, regardless of category rank. The Low Carbon designation assesses how holdings in a portfolio handle risk associated with transitioning to a low-carbon economy.

Is the Morningstar Low Carbon Designation awarded relative to Morningstar Category? No. Morningstar assigns the Morningstar Low Carbon Designation to all funds that meet the criteria.

This parallels Sustainalytics' treatment of company carbon risk as an assessment that is comparable across industries, rather than as a purely industry- or sector-relative measure.

How did Morningstar arrive at the thresholds for the Morningstar Low Carbon Designation? Sustainalytics defines low carbon risk as below 10. Companies below 10 are the best at managing carbon risk and/or operate in industries with less carbon intensity. Morningstar set the Morningstar Portfolio Carbon Risk Score threshold as 10 to align company and portfolio assessments. Morningstar Portfolio Fossil Fuel Involvement below 7% represents approximately one-third lower fossil-fuel exposure than global markets overall.

Will the Morningstar Low Carbon Designation criteria change in the future?

The Morningstar Portfolio Carbon Risk Score and Morningstar Portfolio Fossil Fuel Involvement thresholds may be reduced in the future as more funds take carbon risk into account in their investment processes and reduce their Carbon Risk Scores.

Can funds that do not intentionally state that their portfolios are "low-carbon" or "fossil-fuel-free" receive a Morningstar Low Carbon Designation?

Yes. Any fund that has a Morningstar Portfolio Carbon Risk Score of less than 10 and Morningstar Portfolio Fossil Fuel Involvement less than 7% qualifies for the Morningstar Low Carbon Designation.

Are sector funds eligible to receive a Morningstar Low Carbon Designation?

Yes. Some sectors like technology and healthcare have Low exposure to carbon risk and fossil fuels, meaning all their funds will receive the Morningstar Low Carbon Designation. Other sectors like energy and natural resources have High exposure to these areas, meaning few or none of their funds will receive the Low Carbon designation. We structured the designation this way so that investors can better understand what parts of the market are more and less exposed to carbon risk.

For More Information

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