
In a Mixed Year for Sustainable Investing – Most Climate and Net Zero-Aligned Indexes Outperformed in 2024

Exposure to ‘Magnificent Seven’ stocks largely determined index winners and losers.

Morningstar Inc.

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The performance of sustainability indexes varied widely in 2024. On the one hand, climate indexes had a banner year, powered by exposure to Nvidia, Tesla, and other members of the “Magnificent Seven” (Alphabet, Amazon.com, Apple, Meta Platforms, Microsoft, Nvidia, and Tesla).¹ On the other hand, impact-aligned indexes—which generally select and overweight companies that contribute positively to the planet or society—struggled relative to the broad market.

Morningstar Indexes reports on the relative risk/return profiles of a range of sustainable investing approaches annually. In 2024, the relative performance of sustainability indexes improved compared with 2023 and 2022 but lagged from 2021 and 2020. Climate-focused indexes led the way, but only 45% of all sustainability indexes outperformed their broad market equivalents in 2024. Investments centered on environmental, social, and governance factors generally perform better during periods when less carbon-intensive sectors, such as technology and communication services, lead equity markets.

Concentration in global equity market leadership in 2024 led to uneven performance across sustainability indexes. Many of these indexes use a best-in-class selection methodology, meaning they include only the highest-rated stocks based on ESG risk within each sector. Since recent top market performers have been concentrated in just a few sectors, this approach often results in missing out on certain high-return securities. In these cases, the underperformance of sustainability indexes is driven more by idiosyncratic risk than systematic risk.

It is important to note that sustainable investing is not monolithic, which becomes more apparent when looking at the dispersion of returns within Morningstar’s sustainability index ranges. Approaches vary in motivation, implementation, and application. Indexes using ESG risk-focused security selection or tilting weight mechanisms slightly underperformed the broad equity market in 2024. Climate Indexes, which use similar mechanisms but largely utilize emissions intensity or forward-looking climate metrics, largely outperformed the market in 2024.

Similar to 2023,² underperformance in 2024 was primarily driven by security selection. Magnificent Seven members Meta Platforms and Alphabet faced serious ESG controversies, while Tesla and Amazon had higher ESG risk relative to their sector peers, leading to either exclusion from or unweighting in

¹ Amazon.com, Apple, Alphabet, Meta Platforms, Microsoft, Nvidia, and Tesla.

² For last year’s study, see: Edwards, R, “[Why Didn’t Sustainable Investments Thrive Amid 2023’s Tech Rebound](#)”, Jan. 23, 2024.

many ESG risk-focused indexes. Impact-aligned indexes continued to underperform after the pandemic due to high exposure to struggling industries like solar, chemicals, and biotechnology.

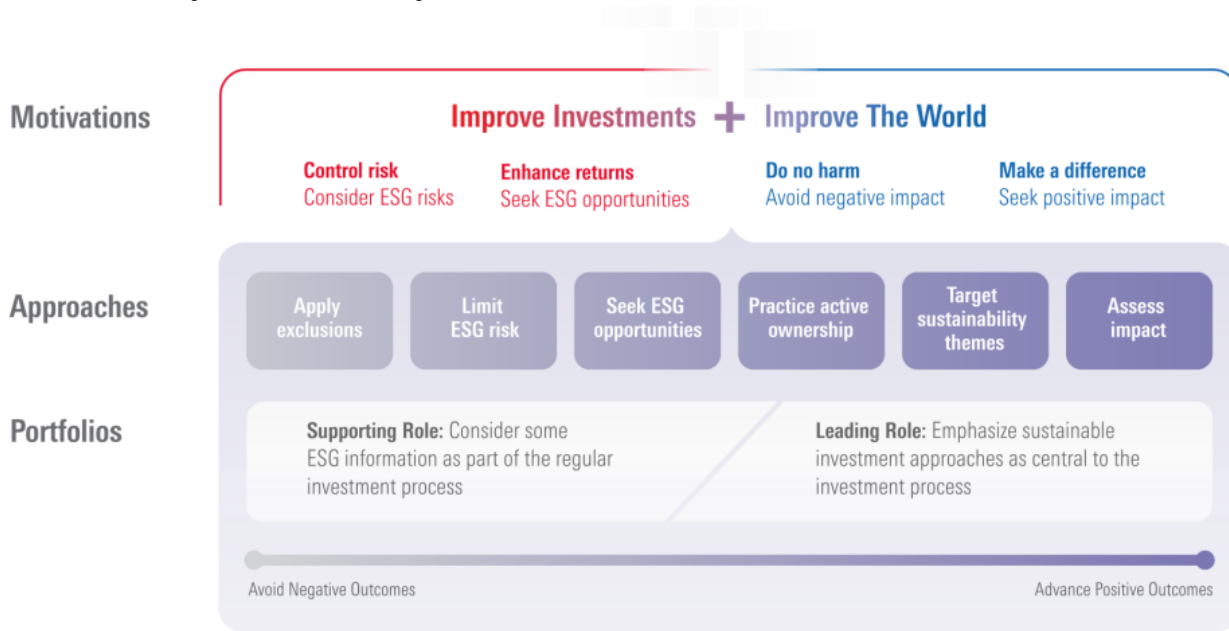
Among the findings of this report:

- ▶ In calendar-year 2024, 45% (60/133) of Morningstar's sustainability indexes outperformed their non-ESG equivalents, up from 44% outperformance in 2023 and 27% in 2022.
- ▶ From 2020 to 2024, 46% (57/124) of Morningstar's sustainability indexes beat their non-ESG equivalents. For the five-year period ended 2023, 61% outperformed. Three straight years of below 50% outperformance have been a drag on five-year numbers.
- ▶ Climate and net-zero-aligned indexes had a very strong year, with 77% (20/26) outperforming their broad-based benchmark. Tilts away from the energy sector and toward technology and consumer cyclicals were the main drivers of the outperformance.
- ▶ Morningstar's flagship climate benchmark family, the Morningstar Low Carbon Transition Leaders, or LCTL, Indexes, had a banner year, with 89% (8/9) beating their benchmark. Despite overweighting energy and underweighting technology, the Morningstar Global LCTL Index outperformed its benchmark by 4.14% in 2024.
- ▶ On the risk side, 42% (52/124) of Morningstar's sustainability indexes lost less than their non-ESG equivalents during down periods between 2020 and 2024, as measured by the downside capture ratio. This number is down from the five-year period through 2023 when 57% of sustainability indexes had lost less in down markets. It's worth noting if you remove the index families that feature a concentrated number of securities, such as the Morningstar Global Sustainable Activities Involvement Indexes, the numbers are closer to 50%.
- ▶ Indexes focused on ESG risk had above-average performance in 2024 with 52% (42/81) outperforming. Overweight exposure to technology stocks was beneficial but could not overcome negative security selection.
- ▶ Sustainability indexes focused on value stocks, dividends, and reasonably valued companies with economic moats (durable competitive advantages) generally underperformed the market in 2024 but generally outperformed their non-ESG equivalents. Here, too, higher technology exposure advantaged the sustainability indexes.
- ▶ Increasing costs of capital, high inflation, and difficulties in supply chains continue to be major factors in difficult renewable energy performance in 2024.
- ▶ Impact-aligned indexes, as measured by the Morningstar Global Sustainable Activities Involvement Indexes, had a challenging year, with eight of nine indexes underperforming the broad market. These indexes heavily tilted toward industries that struggled in 2024, including solar, real estate, and pharma.

Representing Sustainable Investing Approaches With Morningstar Indexes

Sustainable investments vary in their motivations, implementations, and applications. The Morningstar Sustainable-Investing Framework displayed in Exhibit 1 illustrates a broad spectrum of approaches with different goals and profiles. It is important to note that the approaches are not mutually exclusive. Many sustainable investments incorporate more than one approach — such as applying exclusions and limiting ESG risk.

Exhibit 1 The Morningstar Sustainable-Investing Framework



Source: Morningstar.

Morningstar Indexes' range of sustainable-investing index solutions covers most of the approaches within the framework. Many indexes screen companies using the Sustainalytics ESG Risk Rating, so they can be considered primarily focused on limiting ESG risk relative to the market. Sustainalytics, a Morningstar company specializing in ESG data and research, covers tens of thousands of companies across the globe with a range of investor solutions. Sustainalytics products employed for index selection and weighting include Product Involvement Research, ESG Risk Ratings, Low Carbon Transition Rating, Country Risk Ratings, Sustainable Activities Involvement, Impact Metrics, and Carbon Emission Data.³ This study focuses on several series of indexes that select and/or weight constituents on ESG criteria.⁴

A total of 133 unique indexes spanning equities and bonds were analyzed in 2024, all of which have five-year performance histories, except the Morningstar LCTL Indexes. Sustainability indexes are classified into three broad buckets: ESG Risk, Climate, and Impact-Aligned.

³ For a full discussion of Sustainalytics' data and research, see: <https://www.sustainalytics.com/>.

⁴ For a full methodological discussion of the indexes mentioned, refer to their construction rules and other documentation posted on the Morningstar Indexes website. <https://indexes.morningstar.com/>.

Exhibit 2 Morningstar Indexes' Sustainability Range (with count of unique indexes)

ESG Risk	Climate	Impact
Morningstar Sustainability (23)	Morningstar ex-Fossil Fuels Indexes (3)	Morningstar Sustainable Activities (6)
Morningstar Sustainability Leaders (10)	Morningstar Low Carbon Transition Leaders (9)	Morningstar Minority Empowerment
Morningstar Corporate Bond Sustainability (5)	Morningstar EU Climate (8)	Morningstar Women's Empowerment
Morningstar Sustainability Tilt (10)	Morningstar ESG Enhanced (6)	Morningstar Gender Diversity (8)
Morningstar Global Treasury Bond Sustainability (4)		Morningstar Renewable Energy (4)
Morningstar Sustainability Styles (12)		Morningstar Societal Development
Morningstar Sustainability Moat Focus (5)		Morningstar LGBTQ+ Leaders
Morningstar Sustainability Dividend Yield Focus (12)		

Source: Morningstar Indexes.

For the purposes of risk/return analysis, most sustainability indexes are compared with their parent indexes (the non-ESG broad market benchmarks from which they are derived). For example, the Morningstar Global Markets Sustainability Index is compared with the Morningstar Global Markets Index. But in some cases, the sustainability index is compared with a closer equivalent. For example, the Morningstar Sustainability Moat Focus Indexes and the Morningstar Sustainability Dividend Yield Focus Indexes are compared with their non-ESG equivalents, the Morningstar Moat Focus Indexes and Morningstar Dividend Yield Focus Indexes, respectively. The goal is to isolate the effect of the ESG considerations. For all indexes, gross return or total return index variants in US dollars are examined for purposes of apples-to-apples comparison.

Indexes are compared with their non-ESG parent indexes (or non-ESG equivalents) on three parameters:

- ▶ 2024 excess returns
- ▶ Five-year trailing excess returns through year-end 2024
- ▶ Five-year downside capture through year-end 2024

While the returns comparison is straightforward, downside capture is chosen from a variety of risk measures because it helps gauge a portfolio's ability to preserve capital in bad market conditions. Capital preservation is critical to long-term investment success. A downside capture ratio above 100% implies greater losses than the market during losing periods; a downside capture ratio below 100% suggests lesser losses.

As with any study, this one also has caveats:

- ▶ Attribution analysis will not be discussed for every index. Many of the contributors and detractors discussed regarding the Morningstar Sustainability Indexes will apply more broadly.
- ▶ In 2019, Morningstar Sustainability Indexes transitioned from the Sustainalytics' ESG Rating, which was industry-relative, to the ESG Risk Rating, which is an absolute gauge of ESG-related material financial risks to enterprise value. Returns until 2019 incorporate the ESG Rating, and from 2019, the ESG Risk Rating.
- ▶ Given the relatively recent development of sustainability indexes, the time periods assessed sometimes include back-cast returns. The oldest series studied, the Morningstar Sustainability Indexes, was launched in mid-2016, so its live history spans the entire five years. Analysis of other, newer indexes may use preinception returns, which are simulated based on historical sustainability data.
- ▶ Returns-based analysis is always deeply influenced by the nuances of the period studied. Readers will note that, in 2024, growth stocks beat value stocks by a wide margin, with the technology and communication sectors leading the market. For the five years through the end of 2024, growth stocks outperformed value, and the technology sector paced the market. Exhibit 3 shows the value of looking into which industries had strong headwinds and tailwinds. For example, many renewable energy indexes feature large exposure to solar, which had a very challenging 2024.

Exhibit 3 2024 Top- and Bottom-Performing Global Industry Indexes With Growth and Value Performance

Returns	Morningstar Global Semiconductor Index	Morningstar Global Solar Index	Morningstar Global Growth TME Index	Morningstar Global Value TME Index
2024	72.17%	-35.61%	22.05	13.18

Source: Morningstar Direct.

Exhibit 4 How Are the Magnificent Seven Stocks on ESG Risk, Controversies, and Climate?

Name	Annual Ret 2024 Base Currency	Sustainalytics ESG Risk Score (Lower is Better)	Highest Controversy Level (Lower is Better)	ESG Risk Subindustry % Rank (Lower is Better)	Low Carbon Transition Rating (LCTR) Management Category	LCTR Management Score Subindustry % Rank (Lower is Better)
Alphabet Inc Class A	35.94	Medium	4	61%	Strong	8%
Alphabet Inc Class C	35.56	Medium	4	61%	Strong	8%
Amazon.com Inc	44.39	Medium	3	61%	Average	15%
Apple Inc	30.58	Low	3	30%	Strong	27%
Meta Platforms Inc Class A	65.98	High	4	99%	Average	20%
Microsoft Corp	12.91	Low	3	4%	Strong	1%
Nvidia Corp	17.24	Low	2	1%	Strong	58%
Tesla Inc	62.52	Medium	3	32%	Strong	2%

Source: Morningstar Direct and Sustainalytics as of Dec. 31, 2024.

Much of the performance of ESG risk-based and climate indexes in 2024 can be explained by the ESG Risk Ratings of the technology and communication services sector — especially the Magnificent Seven market leaders of 2024. Exhibit 4 shows the latest sustainability metrics for each of these companies, as of the end of 2024. Amazon, Meta Platforms, and Telsa are poor ESG risk performers in their sectors, which leads to them being excluded from, or heavily underweighted within, most ESG risk-based indexes. In summary, much of Tesla's and Amazon's ESG risk contribution comes from poor scores in product governance and business ethics. Meta Platforms and Alphabet have both high ESG controversy scores, which means they are excluded from the majority of Morningstar's ESG risk-based indexes. Meta Platforms' ESG controversies are largely driven from customer incidents in data privacy, security, and quality. Alphabet's highest controversy stems from its main subsidiary, Google, which remains the subject of multiple anticompetitive allegations and investigations globally and has received fines in multiple jurisdictions, including from the European Commission, or EC.

Climate-based indexes tend to tilt toward companies and industries that are either emitting less carbon relative to their peers or have better policies and practices for managing future emissions, which led to higher-than-normal exposure to companies like Nvidia. Showcasing the difference in approaches, Tesla has a high Low Carbon Transition Rating Management Score and lower emissions than most auto manufacturing peers, making it a staple in many climate-focused indexes.

Section 1 – ESG Risk

Morningstar Sustainability Indexes

The Morningstar Sustainability Indexes represent broad equity market exposure while limiting ESG risk. After excluding companies exposed to tobacco, controversial weapons, and civilian firearms, as well as companies experiencing serious ESG-related controversies, the indexes select companies in order of their ESG Risk Rating until 50% coverage by market cap of the parent index is reached. Sector and regional weights are kept within 2 percentage points of their equivalent market weight. Index constituents are weighted by market capitalization.

Exhibit 5 Morningstar Sustainability Indexes

Broad Regional Markets	Developed Markets	Emerging Markets	Single Country
Global Markets	Developed Markets	Emerging Markets	United States
Global Markets ex-US	Developed Markets	Emerging-Markets Americas	Japan
Asia	Developed Markets ex-North America		United Kingdom
Asia ex-Japan	Developed Markets ex-US		Germany
Asia Pacific			Canada
Asia Pacific ex-Japan			Australia
Europe			India
Eurozone			Brazil
Nordics			

Source: Morningstar Indexes.

Launched in 2016, the Morningstar Sustainability Indexes are derived from the large- and mid-cap segment of the equivalent Morningstar Global Market Indexes. Indexes include back-cast returns before 2016 based on historical Sustainalytics' company-level assessments.

As displayed in Exhibit 6, 15 of the 23 sustainability indexes outperformed in calendar-year 2024. The outperformers included the Australia and Europe versions of the index. On a five-year basis, 13 of 23 sustainability indexes outperformed their parent indexes. In terms of risk, eight of 23 sustainability indexes lost less than their broad-market equivalents during down markets over the past five years.

Exhibit 6 Morningstar Sustainability Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Sustainability	2024 Excess	5-Year Excess Return	5-Year Down
Morningstar Asia Pacific	5.71	0.85	101.93
Morningstar Asia Pacific ex-Japan	5.31	0.73	98.61
Morningstar Asia	5.93	1.06	101.92
Morningstar Asia ex-Japan	5.75	0.80	102.52
Morningstar Australia	2.61	0.12	99.19
Morningstar Brazil	-2.36	-3.99	103.63
Morningstar Canada	3.80	-1.38	99.68
Morningstar Developed Europe	-0.04	0.10	101.67
Morningstar Developed Markets	-2.48	-0.30	100.89
Morningstar Developed Markets ex-North America	1.59	0.38	103.05
Morningstar Developed Markets ex-US	0.46	0.01	104.11
Morningstar Emerging Markets	0.91	-0.61	99.34
Morningstar Emerging	5.54	0.47	103.87
Morningstar Europe	0.45	0.50	100.31
Morningstar Eurozone	2.70	1.20	95.63
Morningstar Global	-1.50	-0.08	101.97
Morningstar Global ex-US	2.87	0.72	102.22
Morningstar Germany	-0.78	-2.09	99.91
Morningstar India	-0.15	-0.91	98.17
Morningstar Japan	2.08	1.11	101.73
Morningstar Nordic	0.91	-1.62	98.59
Morningstar UK	-3.99	-1.31	107.51
Morningstar US	-3.86	-0.64	102.90

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Security selection and the exclusion of high-performing technology and communications stocks explain much of the underperformance for the sustainability indexes in 2024. In the global and US versions of the index, above-market exposure to stocks like Microsoft and Nvidia boosted performance returns but could not make up for missing out on Tesla, Alphabet, and Amazon. Alphabet was dropped in 2019

because of controversy, and Tesla and Amazon were not included because of their relatively high ESG Risk Rating.

Outside the US, the story was very different. Overweighting Taiwan Semiconductor and Tencent and avoiding Samsung were a big boost for performance in the Asia-Pacific region. In Europe, the biggest wins were avoiding Novo Nordisk and Nestle and underweighting the energy sector across the board. The Morningstar UK Sustainability Index struggled mightily in 2024 primarily owing to security selection in the consumer defensive and financial services sectors. A strong overweight in Diageo and Prudential hurt performance as did avoiding banking giants HSBC and Barclays.

Morningstar Sustainability Leaders Indexes

The Morningstar Sustainability Leaders Indexes are similar to the Morningstar Sustainability Indexes but more concentrated. They can deviate further from market weights by sector and region, and they exclude more classes of companies. The indexes exclude nuclear products and companies with significant exposure to gambling, alcohol, or adult entertainment, as well as those exposed to tobacco, controversial weapons, and civilian firearms. Companies experiencing serious ESG-related controversies according to Sustainalytics are excluded, as are companies that are not compliant with the United Nations Global Compact.

The Morningstar Sustainability Leaders Indexes are derived from the large-cap segment of the equivalent Morningstar region/country index. They select a fixed number of companies in order of their ESG Risk Ratings, as shown in Exhibit 7. Index constituents are weighted by market cap.

Exhibit 7 Morningstar Sustainability Leaders Indexes—Membership and Constituent Counts

Broad Regional Markets		Developed Markets		Emerging Markets		Single Country	
Global Markets	100	Developed Markets	75	Emerging Markets	50	United States	50
Global Markets ex-US	75	Developed Markets ex-US	50			Japan	25
Asia ex-Japan	50	Developed Europe	50				
		Nordics	50				

Source: Morningstar Indexes.

As displayed in Exhibit 8, eight of 10 indexes outperformed their parent benchmarks in 2024, and seven of 10 beat their parent indexes over the five-year period through the end of 2024. All 10 lost more in down markets than their non-ESG equivalents. The indexes are much more concentrated and less constrained in their sector weights than the Morningstar Sustainability Indexes, increasing their margins of outperformance/underperformance. The concentrated nature of the indexes can be seen in 2024 as large positions in Nvidia and SAP SE for the Morningstar Global Sustainability Leaders Index drove the year's overperformance. Exposures to Nvidia and Microsoft were not enough for the Morningstar US

Sustainability Leaders Index, as the other five Magnificent Seven stocks were not selected for index inclusion.

Exhibit 8 Morningstar Sustainability Leaders Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Sustainability Leaders Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Asia ex-Japan	-4.10	-1.50	106.44
Morningstar Developed Europe	6.98	3.93	108.47
Morningstar Developed Markets	0.54	3.38	121.49
Morningstar Developed Markets ex-US	4.80	3.21	115.07
Morningstar Emerging Markets	1.54	-1.18	104.47
Morningstar Global	0.93	3.97	117.97
Morningstar Global ex-US	4.28	3.37	113.11
Morningstar Japan	2.49	1.21	104.99
Morningstar Nordic	5.54	-4.92	108.74
Morningstar US	-5.77	0.31	112.28

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar Corporate Bond Sustainability Indexes

The Morningstar Corporate Bond Sustainability Indexes are essentially the fixed-income equivalents of the Morningstar Sustainability Indexes. After excluding issuers exposed to tobacco, controversial weapons, and civilian firearms, as well as companies experiencing serious ESG-related controversies according to Sustainalytics, the indexes select securities reflecting the top 50% of the parent universe by market value of securities with the lowest ESG Risk Ratings across 27 distinct categories. The indexes maintain similar interest-rate sensitivity, yield, sector weights, and credit quality as the corporate bond index parents from which they are derived. The Morningstar US Corporate Bond Sustainability Index launched in 2019, and the other indexes launched in 2021 with performance back-cast to 2016. The indexes are:

- ▶ Morningstar Global Corporate Bond Sustainability Index
- ▶ Morningstar US Corporate Bond Sustainability Index
- ▶ Morningstar Eurozone Corporate Bond Sustainability Index
- ▶ Morningstar UK Corporate Bond Sustainability Index
- ▶ Morningstar Canada Corporate Bond Sustainability Index

As displayed in Exhibit 9, two of the five indexes outperformed their parent benchmarks in calendar-year 2024. On a five-year basis, four of the five indexes outperformed their parents. In terms of risk, four of the five corporate bond sustainability indexes lost less than their non-ESG equivalents during down markets over the past five years. The margins of underperformance and outperformance are small by design, in line with the indexes' mission to provide marketlike exposure. Small differences in sector weights, yield-curve positioning, credit quality, and other factors contribute to divergence.

Exhibit 9 Morningstar Corporate Bond Sustainability Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Corporate Bond Sustainability Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Canada	-0.15	-0.01	101.50
Morningstar Eurozone	0.13	0.09	98.85
Morningstar Global	-0.10	0.07	98.62
Morningstar UK	0.15	0.00	99.92
Morningstar US	-0.25	0.06	98.41

Morningstar Sustainability Tilt Indexes

The Morningstar Sustainability Tilt Indexes aim to minimize portfolio-level ESG risk while delivering diversified exposure similar to their parent indexes, the Morningstar Global Markets Indexes. The tilt indexes exclude companies exposed to tobacco, controversial weapons, and civilian firearms, as well as severe ESG-related controversies and companies that are out of compliance with the U.N. Global Compact. Each eligible company is weighted according to market capitalization modified by the ESG Risk Rating. The indexes' sector and regional weights are constrained to within 2 percentage points of their parent indexes. The indexes were launched in 2022 with performance history back-cast to December 2015 based on historical Sustainalytics ratings. The indexes are:

- ▶ Morningstar Global Markets Sustainability Tilt Index
- ▶ Morningstar Developed Markets Sustainability Tilt Index
- ▶ Morningstar US Sustainability Tilt Index
- ▶ Morningstar Global Markets ex-US Sustainability Tilt Index
- ▶ Morningstar Developed Markets ex-US Sustainability Tilt Index
- ▶ Morningstar Asia Pacific Sustainability Tilt Index
- ▶ Morningstar Developed Markets Europe Sustainability Tilt Index
- ▶ Morningstar Emerging Markets Sustainability Tilt Index
- ▶ Morningstar Japan Sustainability Tilt Index
- ▶ Morningstar Canada Sustainability Tilt Index

As displayed in Exhibit 10, seven of 10 indexes outperformed in 2024, while seven of 10 indexes outperformed over the five-year period, and four of 10 lost less in down markets than their non-ESG equivalents for the trailing five-year period.

Exhibit 10 Morningstar Sustainability Tilt Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Sustainability Tilt Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Asia Pacific	1.47	0.62	98.51
Morningstar Canada	1.68	0.51	95.71
Morningstar Developed Markets Europe	0.47	0.31	101.28
Morningstar Developed Markets	-1.65	-0.44	102.42
Morningstar Developed Markets ex-US	0.70	0.29	101.74
Morningstar Emerging Markets	1.50	0.72	98.25
Morningstar Global	-1.05	-0.17	101.90
Morningstar Global ex-US	1.00	0.50	99.75
Morningstar Japan	1.42	0.62	100.42
Morningstar US	-3.18	-1.03	102.79

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar Global Treasury Bond Sustainability Indexes

Morningstar Global Treasury Bond Sustainability Indexes include developed-markets, investment-grade Treasury bonds issued in each country's home currency. The indexes leverage Sustainalytics Country Risk Ratings, which are applied to 172 countries. The rating measures risk to a country's long-term prosperity and economic development by assessing how sustainably it is managing its natural, human, and institutional capital. Sustainalytics assesses more than 30 indicators to score three areas that correspond to the E, S, and G pillars. Meanwhile, an event rating assesses incidents that might have a negative impact, such as state corruption or violent conflict. The indexes are tilted toward those countries with lower country sustainability risks and incorporates environmental, social, or governance criteria. The indexes are:

- ▶ Morningstar Global Treasury Bond Sustainability Index
- ▶ Morningstar Global ex-US Treasury Bond Sustainability Index
- ▶ Morningstar Global ex-Japan Treasury Bond Sustainability Index
- ▶ Morningstar Eurozone Treasury Bond Sustainability Index

The indexes launched in 2021 with returns back-cast to 2014 based on Sustainalytics' ratings. As displayed in Exhibit 11, one of four indexes outperformed in 2024, while one of four indexes with five-year histories outperformed over the five-year period, and one of four lost less than their non-ESG equivalents for the trailing five-year period.

Exhibit 11 Morningstar Global Treasury Bond Sustainability Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Global Treasury Bond Sustainability Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Eurozone	-0.40	-0.24	100.43
Morningstar Global	0.79	0.26	98.88
Morningstar Global ex-Japan	-0.39	-0.02	101.03
Morningstar Global ex-US	-1.00	-0.27	102.82

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar Sustainability Styles Indexes

The Morningstar Sustainability Styles Indexes represent broad equity market-style segments while reweighting constituents of their parent indexes to favor companies with lower ESG risk, as measured by their ESG Risk Rating. The indexes are derived from the Morningstar Global Style Indexes or Morningstar Broad Style Indexes (US only). They exclude companies exposed to tobacco, controversial weapons, or civilian firearms, those deemed noncompliant with the U.N. Global Compact, and those with severe ESG-related controversies. Each eligible company is weighted according to market capitalization modified by ESG Risk Rating. Weights at the security, region, and sector levels are constrained to within 5 percentage points of parent index weight. The indexes launched in 2022 with back-cast returns to 2015 based on historical Sustainalytics data. The indexes are:

- ▶ Morningstar Global Sustainability Large-Mid Cap Growth Index
- ▶ Morningstar Global Sustainability Large-Mid Cap Value Index
- ▶ Morningstar Global Sustainability Large Cap Growth Index
- ▶ Morningstar Global Sustainability Large Cap Value Index
- ▶ Morningstar Global Sustainability Mid Cap Growth Index
- ▶ Morningstar Global Sustainability Mid Cap Value Index
- ▶ Morningstar US Sustainability Large-Mid Cap Broad Growth Index
- ▶ Morningstar US Sustainability Large-Mid Cap Broad Value Index
- ▶ Morningstar US Sustainability Large Cap Broad Growth Index
- ▶ Morningstar US Sustainability Large Cap Broad Value Index
- ▶ Morningstar US Sustainability Mid Cap Broad Growth Index
- ▶ Morningstar US Sustainability Mid Cap Broad Value Index

It is useful to compare the Morningstar Sustainability Styles Indexes to both their broad equity market parents and to their style-specific equivalents. The latter comparison is the one that contributes to this study's overall results. Comparing the sustainability styles indexes to their non-ESG equivalents isolates the risk/return effect of the sustainability screens.

First, as we observe in Exhibit 12, five of 12 outperformed the broad equity market in 2024. In a year in which large growth stocks outperformed value stocks by a large margin, it is unsurprising to see the sustainability growth indexes outperform the broad equity market. Continuing the trend, a large overweight in technology led to eye-popping returns in the large-growth segment. For the five-year period, four of 12 outperformed. Downside capture ratios versus the broad market are not computed.

Exhibit 12 Morningstar Sustainability Styles Indexes Return Record Versus Broad Equity Market Index

Morningstar Sustainability Styles Indexes	2024 Excess	5-Year Excess Return
Morningstar US Large Broad Value	-15.58	-5.69
Morningstar US Large Broad Growth	37.35	5.21
Morningstar US Mid Broad Value	-2.76	-1.58
Morningstar US Mid Broad Growth	-0.48	-0.57
Morningstar US Large-Mid Broad Growth	20.35	2.73
Morningstar Global Large Value	-5.31	-1.49
Morningstar Global Large Growth	9.98	2.04
Morningstar Global Mid Value	-1.68	-0.84
Morningstar Global Mid Growth	0.58	-0.12
Morningstar Global Large-Mid Growth	7.52	1.23
Morningstar Global Large-Mid Value	-4.67	-1.67
Morningstar US Large-Mid Broad Value	-11.95	-4.56

Source: Morningstar Direct. Data as of Dec. 31, 2024.

But in Exhibit 13, when we compare the Morningstar Sustainability Style Indexes with their available non-ESG style equivalents, there is a similar story, with five of 12 outperforming in 2024. Over the five-year period, four of 12 indexes outperformed their non-ESG screened equivalents, and four of 12 lost less during down periods. We observe that, even compared with their style index equivalent, there tends to be even more of an overweight in technology, especially Nvidia.

Exhibit 13 Morningstar Sustainability Styles Indexes Risk/Return Record Versus Morningstar Style Index Equivalent

Morningstar Sustainability Style Indexes	2024 Excess	5-Year Excess Return	5-Year Down
Morningstar US Large Broad Value	-6.18	-1.38	105.06
Morningstar US Large Broad Growth	27.92	1.81	96.92
Morningstar US Mid Broad Value	0.09	-0.21	99.66
Morningstar US Mid Broad Growth	-3.24	-1.21	104.51
Morningstar US Large-Mid Broad Growth	12.38	-0.10	100.73
Morningstar Global Large Value	-8.29	-2.22	84.33
Morningstar Global Large Growth	7.00	1.31	98.97
Morningstar Global Mid Value	-4.30	-2.64	120.82
Morningstar Global Mid Growth	-10.91	-4.77	109.95
Morningstar Global Large-Mid Growth	3.18	0.11	100.85
Morningstar Global Large-Mid Value	-0.15	0.06	102.02
Morningstar US Large-Mid Broad Value	-4.04	-0.91	104.61

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar Sustainability Moat Focus Indexes

The Morningstar Sustainability Moat Focus Indexes target the shares of a select set of companies with durable competitive advantages, relatively attractive valuations, and moderate to low exposure to ESG risks. The principal sustainability screen, the ESG Risk Rating, focuses on the issues most likely to affect a company's financial results. The other two inputs rely on Morningstar's team of stock analysts, who assign Morningstar Economic Moat Ratings and fair value estimates to each company they cover. The indexes exclude companies exposed to tobacco, controversial weapons, companies with ESG Risk Ratings of High or Severe, those that have experienced serious ESG-related controversies over the past three years. The indexes also screen out securities in the bottom 20% in terms of negative share price momentum. Every quarter, the indexes select a target number of companies with wide or narrow Morningstar Economic Moat Ratings that carry the lowest current price/fair value ratios that meet the ESG criteria. The indexes launched in 2020 with back-casted returns to 2014. The indexes are:

- ▶ Morningstar Global Markets Sustainability Moat Focus Index
- ▶ Morningstar Developed Markets Sustainability Moat Focus Index
- ▶ Morningstar US Sustainability Moat Focus Index
- ▶ Morningstar Global Markets ex-US Sustainability Moat Focus Index
- ▶ Morningstar Developed Markets Europe Sustainability Moat Focus Index

Although the Morningstar Sustainable Moat Focus Indexes are derived from their all-capitalization market equivalents, we compared both with their broad equity market parents and their equivalent Morningstar Moat Focus Index. The latter comparison is the one that contributes to this study's overall results. Comparing Morningstar Sustainable Moat Focus Indexes with their non-ESG equivalents isolates the risk/return effect of the sustainability screens.

First, we observe in Exhibit 14 that zero of the five Sustainable Moat Focus Indexes outperformed their broad equity market equivalents in 2024 or for the five-year period. Downside capture ratios versus the broad market are not computed.

Exhibit 14 Morningstar Sustainability Moat Focus Indexes Risk/Return Record Versus Broad Equity Market Index

Morningstar Sustainability Moat Focus Indexes	2024 Excess	5-Year Excess Return
Morningstar Developed Europe	-3.54	-0.55
Morningstar Developed Markets	-11.09	-2.10
Morningstar Global	-8.28	-1.98
Morningstar Global ex-US	-5.41	-1.29
Morningstar US	-12.22	-3.08

Source: Morningstar Direct. Data as of Dec. 31, 2024.

But in Exhibit 15, when we compare the Morningstar Sustainability Moat Focus Indexes with their non-ESG moat focus equivalents, we see that three of five outperformed in 2024. Over the five-year period, one of five indexes outperformed its non-ESG screened equivalent, and three of five lost less during down periods.

Exhibit 15 Morningstar Sustainability Moat Focus Indexes Risk/Return Record Versus Morningstar Moat Focus Equivalent Index

Morningstar Sustainability Moat Focus Indexes	2024 Excess	5-Year Excess Return	5-Year Down
Morningstar Developed Europe	0.21	-0.71	98.83
Morningstar Developed Markets	-0.36	-0.07	101.32
Morningstar Global	1.80	0.51	100.39
Morningstar Global ex-US	-3.55	-0.08	96.56
Morningstar US	0.57	-2.08	98.91

Source: Morningstar Direct. Data as of Dec. 31, 2024.

What explains the outperformance of the Sustainability Moat Focus Indexes versus their non-ESG equivalents? In the US, the moat focus index outperformed the non-ESG version, thanks to overweighting technology, which included ServiceNow, and overweighting financial services, including American Express. Outside the US, positive security selection in healthcare was negated by poor selection in consumer defensive, including Meiji and Asahi.

Morningstar Sustainability Dividend Yield Focus Indexes

The Morningstar Sustainability Dividend Yield Focus Indexes select the shares of dividend-paying companies that are competitively advantaged and financially healthy. To be eligible, a security must have paid a dividend in the past 12 months, be assigned a Morningstar Economic Moat Rating or a Quantitative Economic Moat Rating, an ESG Risk Rating, a Sustainalytics Controversy Rating, and a Morningstar Distance to Default score. The indexes exclude companies exposed to tobacco, controversial weapons, and those with serious ESG-related controversies. Eligible securities that are assigned wide or narrow moat ratings must rank in the top 50% of their Morningstar region-sector cohort by Distance to Default score. The portfolio of securities passing the screens is optimized to achieve a high Portfolio Corporate Sustainability Score. To maximize yield, the index is weighted based on trailing 12-month available dividends, which considers dividend per share and number of shares. The indexes launched in 2020 with back-cast returns to 2012. The indexes are:

- ▶ Morningstar Global Markets Sustainability Dividend Yield Focus Index
- ▶ Morningstar Developed Markets Sustainability Dividend Yield Focus Index
- ▶ Morningstar US Sustainability Dividend Yield Focus Index
- ▶ Morningstar Global Markets ex-US Sustainability Dividend Yield Focus Index
- ▶ Morningstar Developed Markets ex-US Sustainability Dividend Yield Focus Index
- ▶ Morningstar Emerging Markets Sustainability Dividend Yield Focus Index
- ▶ Morningstar Japan Sustainability Dividend Yield Focus Index
- ▶ Morningstar Developed Markets Asia Pacific ex-Japan Sustainability Dividend Yield Focus Index

- ▶ Morningstar Developed Europe Sustainability Dividend Yield Focus Index
- ▶ Morningstar Nordic Sustainability Dividend Yield Focus Index
- ▶ Morningstar UK Sustainability Dividend Yield Focus Index
- ▶ Morningstar Canada Sustainability Dividend Yield Focus Index

Although the Morningstar Sustainability Dividend Yield Focus Indexes are derived from their all-capitalization broad market parents, they are compared both with their parent indexes and their equivalent Morningstar Dividend Yield Focus Indexes. The latter comparison is the one that contributes to this study's overall results. Comparing Sustainability Dividend Yield Focus Indexes to their non-ESG equivalents isolates the risk/return effect of the sustainability screens.

First, we observe in Exhibit 16 that five of the 12 Sustainability Dividend Yield Focus Indexes outperformed their broad equity market equivalents in 2024. For the five-year period, four of 12 outperformed. Downside capture ratios versus the broad market are not computed.

Exhibit 16 Morningstar Sustainability Dividend Yield Focus Indexes Risk/Return Record Versus Broad Equity Market Index

Morningstar Sustainability Dividend Yield Focus Indexes	2024 Excess Return	5-Year Excess Return
Morningstar Developed Asia Pacific ex-Japan	-1.03	4.44
Morningstar Developed Markets ex-US	2.49	4.69
Morningstar Developed Europe	0.73	-2.49
Morningstar Canada	-2.04	-6.33
Morningstar Developed Europe	-1.86	-5.69
Morningstar Emerging Markets	1.52	-3.71
Morningstar Global	-0.38	-0.40
Morningstar Global ex-US	3.46	5.66
Morningstar Japan	2.73	-1.97
Morningstar Nordic	-1.12	4.55
Morningstar US	-3.10	-7.75
Morningstar UK	-3.10	-6.74

Source: Morningstar Direct. Data as of Dec. 31, 2024.

But in Exhibit 17, when we compare the Morningstar Sustainability Dividend Yield Focus Indexes with their non-ESG Morningstar Dividend Yield Focus Index equivalents, we see that seven of 12 outperformed in 2024. Over the five-year period, results are also stellar: 11 of 12 indexes outperformed their non-ESG screened equivalents, and eight of 12 lost less during down periods. We observe that compared with non-ESG versions, there are much larger portions of the indexes allocated to dividend payers within technology such as Broadcom and Taiwan Semiconductor.

Exhibit 17 Morningstar Sustainability Dividend Yield Focus Indexes Risk/Return Record Versus Morningstar Dividend Yield Focus Equivalent Index

Morningstar Sustainability Dividend Yield Focus Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Developed Asia Pacific ex-Japan	0.59	-0.77	106.49
Morningstar Developed Europe ex-US	0.66	1.94	97.10
Morningstar Dev Europe	-1.06	1.43	101.12
Morningstar Canada	-0.16	0.89	93.25
Morningstar Developed Europe	-0.06	2.23	95.41
Morningstar Emerging Markets	-0.59	2.02	94.05
Morningstar Global	4.18	2.64	94.76
Morningstar Global ex-US	2.80	2.08	104.58
Morningstar Japan	8.42	2.03	86.88
Morningstar Nordic	4.14	0.83	95.57
Morningstar US	3.10	4.39	82.41
Morningstar UK	-6.16	0.29	106.68

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Section 2: Climate

Morningstar Low Carbon Transition Leaders Indexes

The Morningstar LCTL Indexes are designed to provide diversified, broad market exposure to companies leading their sector peers in their commitment to climate transition. Eligible companies from the large-mid-cap parent index are grouped by sector and ranked according to their composite LCTL score, which is based on a combination of a company's current carbon intensity and its management score, as measured by Sustainalytics' Low Carbon Transition Rating. The indexes target the best-scoring 50% of companies from each sector (by market cap). The indexes also seek to emphasize companies that report carbon emissions and are reducing their carbon intensity, as well as those whose business activities contribute positively to the environment. For each sector, companies are ranked by their LCTL composite score in ascending order, and their cumulative weight is calculated. Securities with the best scores are selected for membership until a maximum of 50% of the parent benchmark sector weight is achieved.

Exhibit 18 Morningstar Low Carbon Transition Leaders Indexes

Broad Regional Markets	Developed Markets	Emerging Markets	Single Country
Global Markets	Developed Markets	Emerging Markets	United States
Asia Pacific	Developed Markets ex-North America		Japan
	Developed Europe		
	Nordics		

Source: Morningstar Indexes.

The Morningstar Low Carbon Risk Indexes were launched in 2024, but the indexes have returns back-cast to December 2021, meaning we do not currently perform the five-year tests. The Morningstar LCTL Indexes are derived from the large- and mid-cap segments of the equivalent region/country index.

As displayed in Exhibit 19, seven of the eight Morningstar LCTL Indexes outperformed in 2024. As seen in Exhibit 4, many of the Magnificent Seven feature strong Low Carbon Transition Rating Management scores and have relatively low carbon intensity. Nvidia and Tesla were a big reason why many of the Morningstar Low Carbon Transition Rating Indexes outperformed. Looking at the emerging markets, technology was also a boost. Above market exposure to Taiwan Semiconductor, MediaTek, and Infosys proved to be beneficial to performance.

Exhibit 19 Morningstar Low Carbon Transition Risk Indexes Risk/Return Record Versus Equivalent Large/Mid-Cap Index

Morningstar Low Carbon Transition Leaders Indexes	2024 Excess Return
Morningstar Asia Pacific	2.86
Morningstar Developed Europe	0.41
Morningstar Developed Markets	3.23
Morningstar Developed Markets ex-North America	-0.55
Morningstar Emerging Markets	2.00
Morningstar Global	4.14
Morningstar Japan	2.57
Morningstar Nordic	9.41
Morningstar US	6.30

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar EU Climate Indexes

The Morningstar EU Climate Indexes achieve the EU Carbon Transition Benchmark, or CTB, and EU Paris-Aligned Benchmark, or PAB, requirements by providing a decarbonization trajectory to limit the global increase in temperatures to below 1.5 degrees Celsius while minimizing tracking error to their parent indexes. The indexes are powered by Sustainalytics' carbon emissions data and Impact Metrics. The CTB indexes target a 30% minimum reduction in average emissions versus their parent benchmarks, while the PAB indexes target a 50% minimum reduction. Both follow an ongoing decarbonization trajectory of at least 7% per year. The indexes are derived from the large- and mid-capitalization segment of the equivalent Morningstar Global Markets Index. They exclude companies involved in controversial weapons, those deemed noncompliant with the U.N. Global Compact, and those experiencing ESG-related controversies according to Sustainalytics. For the PAB indexes, companies are also excluded if they earn more than 5% of revenue from thermal coal extraction, 10% or more from oil sands extraction, oil and gas production, arctic oil extraction, or more than 50% of revenue from shale extraction, oil and gas generation, or thermal coal power generation. The weights of remaining constituents are tilted based on decarbonization goals, corporate target-setting, and whether they are aligned with a transition to a low-carbon economy. The indexes launched in 2021 with back-casted returns to December 2014 based on historical Sustainalytics data. The indexes are:

- ▶ Morningstar Global Markets EU Climate Transition Benchmark Index
- ▶ Morningstar Global Markets Paris Aligned Benchmark Index
- ▶ Morningstar Developed Markets EU Climate Transition Benchmark Index
- ▶ Morningstar Developed Markets Paris Aligned Benchmark Index
- ▶ Morningstar Developed Europe EU Climate Transition Benchmark Index
- ▶ Morningstar Developed Europe Paris Aligned Benchmark Index
- ▶ Morningstar Emerging Markets EU Climate Transition Benchmark Index
- ▶ Morningstar Emerging Markets Paris Aligned Benchmark Index

As displayed in Exhibit 20, six of eight outperformed in 2024. For the five-year period, six out of eight outperformed, and six of eight lost less than their parent index during down periods. The indexes that had exposure to the US benefited from strong tilts toward the lower-emitting technology sector and away from energy and basic materials. In Europe, avoiding energy helped performance, but security selection in industrials, technology, and consumer defensive hurt performance relative to the benchmark.

Exhibit 20 Morningstar EU Climate Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar EU Climate Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Developed Markets EU CTB	1.64	0.93	99.89
Morningstar Developed Markets PAB	2.62	0.98	99.51
Morningstar Developed Europe CTB	-2.08	-0.32	100.33
Morningstar Developed Europe PAB	-2.32	-0.57	101.55
Morningstar Emerging Markets CTB	1.16	0.4	98.06
Morningstar Emerging Markets PAB	1.68	0.46	97.8
Morningstar Global CTB	1.39	0.84	99.93
Morningstar Global PAB	2.26	0.89	99.35

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar ex-Fossil Fuels Indexes

The Morningstar ex-Fossil Fuels Indexes are derived from the large- and mid-capitalization segment of the equivalent Morningstar Global Markets Index for equity and the Morningstar Global Core Bond Index for fixed income. The indexes exclude companies that derive more than 5% of revenue from thermal coal extraction, thermal coal power generation, oil and gas production, oil and gas power generation, oil sands extraction, or arctic oil and gas exploration and extraction. The index also excludes companies that derive more than 50% of revenue from oil- and gas-supporting products/services.

As displayed in Exhibit 21, two of the three indexes outperformed in 2024, while two of the three indexes outperformed over the five-year period, and two of the three lost less than their non-ESG equivalents for the trailing five-year period.

Exhibit 21 Morningstar ex-Fossil Fuel Indexes Risk/Return Record Versus Non ESG Parent Index

Morningstar Global Ex-Fossil Fuel Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Canada	2.42	0.65	98.86
Morningstar Global Core Bond	-0.13	-0.03	99.57
Morningstar Global	0.75	0.26	100.05

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar ESG Enhanced Indexes

The Morningstar ESG Enhanced Indexes aim to minimize portfolio-level ESG risk and reduce carbon emissions intensity while delivering diversified exposure similar to their parent indexes, the Morningstar Target Market Exposure Indexes, which target 85% of equity market capitalization. The indexes exclude companies exposed to tobacco, controversial weapons, and civilian firearms, as well as those experiencing severe ESG-related controversies and companies out of compliance with the U.N. Global Compact. They aim to minimize portfolio-level ESG risk as measured by aggregated ESG Risk Ratings. The indexes limit tracking error versus their parents by constraining active weights at the security level, sector, and country levels, employing the Morningstar Global Industry Standard Risk Model. The indexes were launched in 2021 with performance history back-cast to December 2015 based on historical Sustainalytics ratings. The indexes are:

- ▶ Morningstar US Markets ESG Enhanced Index
- ▶ Morningstar UK ESG Enhanced Index
- ▶ Morningstar Developed Europe ex-UK ESG Enhanced Index
- ▶ Morningstar Japan ESG Enhanced Index
- ▶ Morningstar Developed Asia Pacific ex-Japan ESG Enhanced Index
- ▶ Morningstar Emerging Markets ESG Enhanced Index

As displayed in Exhibit 22, four of the six indexes outperformed in 2024, while two of the six indexes outperformed over the five-year period, and four of six lost less than their non-ESG equivalents for the trailing five-year period.

Exhibit 22 Morningstar ESG Enhanced Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar ESG Enhanced Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Developed Europe ex-UK	2.10	0.63	98.64
Morningstar Developed Markets Asia Pacific ex-Japan	0.34	-0.03	100.01
Morningstar Emerging Markets	-0.96	-0.65	98.89
Morningstar Japan	1.56	0.27	100.02
Morningstar UK	0.23	-0.39	104.22
Morningstar US	-0.85	-0.38	102.56

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Section 3: Impact Aligned

Morningstar Sustainable Activities Involvement Indexes

The Morningstar Sustainable Activities Involvement, or SAI, Indexes are designed to deliver exposure to companies whose business activities contribute positively to the United Nations Sustainable Development Goals. Index constituents must pass stringent ESG screens and derive at least 50% of revenues from one or more of the following Sustainalytics' Impact Themes: Human Development, Climate Action, Healthy Ecosystems, Resource Security, and Basic Needs. There are indexes built to capture each of the individual themes, and in these cases, a threshold of 25% is used. To emphasize

companies signaling positive contribution, index weights are tilted toward those with the greatest percentage of revenue derived from SDG-aligned activities, as measured by Sustainalytics' SAI data, which is part of Sustainalytics' Impact Metrics products. The indexes were launched in 2023, with returns back-cast to 2018 based on historical Sustainalytics data. All of the SAI are compared with the Morningstar Global All Cap Target Market Exposure Index, which serves as the starting point for SAI index construction.

As displayed in Exhibit 23, all but one SAI index underperformed in 2024, while two of the nine indexes outperformed over the five-year period. Eight of the nine SAI indexes lost less than their non-ESG equivalents for the trailing five-year period. The Morningstar SAI Indexes are predominately composed of stocks within industrials, healthcare, real estate, and utilities. Given the sector exposure, it is a difficult comparison versus the broad market, especially when there was strong performance from financials and communication services, which are typically not eligible for this type of index.

Exhibit 23 Morningstar Sustainable Activities Involvement Indexes Versus Non-ESG Parent Indexes

Morningstar Sustainable Activities Involvement Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Developed Europe SAI	-22.76	-10.05	129.18
Morningstar Developed Markets SAI	-2.37	-1.08	109.23
Morningstar Global Basic Needs SAI	-8.66	-4.48	81.86
Morningstar Global Climate Action SAI	-2.95	0.24	113.61
Morningstar Global Healthy Ecosystems SAI	-9.69	-4.57	103.63
Morningstar Global Human Development & Resource Security SAI	-15.13	-9.42	118.59
Morningstar Global Resource Security SAI	-14.15	-9.37	119.28
Morningstar Global SAI	0.83	-0.84	101.68
Morningstar Transatlantic SAI	-1.06	0.79	115.65

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar Societal Development Index

The Morningstar Societal Development Index includes 200 companies from developed and emerging markets that are contributing to the 17 SDGs, which target global challenges such as poverty, inequality, and stewardship of land, air, and sea. Its scoring considers policies and programs related to human rights, labor protection, environmental protection, and corruption, as assessed by Sustainalytics. The index has an emphasis on companies that are contributing to global development, so companies active in lesser-developed countries are emphasized.

Morningstar Minority Empowerment Index

The Morningstar Minority Empowerment Index targets the shares of 200 US companies selected for their commitment to diversity and inclusion. Its scoring leverages indicators researched by Sustainalytics, including board diversity, discrimination policies, and support for community development programs.

Morningstar Women's Empowerment Index

The Morningstar Women's Empowerment Index is similar, in that it also targets 200 companies listed in the US, but its focus is a commitment to gender equity. Companies are assessed by specialist researcher Equileap on 19 criteria, including gender balance within a company's workforce, board, and executive ranks, as well as equal compensation and policies such as paid maternity leave.

Morningstar LGBTQ+ Leaders Index

The Morningstar Developed Markets LGBTQ+ Leaders Index is designed to deliver exposure to 100 large- and mid-cap companies with strong LGBTQ+ inclusive policies and practices from a range of regions and sectors. The index is underpinned by data from Morningstar Sustainalytics and ExecuPride, a socially focused enterprise that harnesses data science to monitor advancements and provide insights on LGBTQ+ inclusion.

All of the above indexes are derived from their equivalent large- and mid-cap market segment indexes. For all of the indexes, except the LGBTQ+ index, the sector and regional weights are kept to within 4 percentage points of their market weight.

As displayed in Exhibit 24, one of the four impact indexes outperformed in 2024, while one of the four indexes outperformed over the five-year period. Two lost less than their non-ESG equivalents for the trailing five-year period.

Exhibit 24 Morningstar Socially Focused Risk/Return Record Versus Non-ESG Parent Index

Morningstar Socially Focused Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Developed Markets LGBTQ+ Leaders	0.19	0.30	97.75
Morningstar Minority Empowerment	-2.66	-0.60	101.31
Morningstar Societal Development	-5.12	-1.86	103.06
Morningstar Women's Empowerment	-7.61	-1.10	97.79

Source: Morningstar Direct. Data as of Dec. 31, 2024.

Morningstar Gender Diversity Indexes

The Morningstar Gender Diversity Indexes use Equileap assessments, like the Women's Empowerment Index discussed above, but hold most of the same constituents as their parent indexes with weights tilted toward better-scoring companies. Companies embroiled in legal cases involving gender-based violence and discrimination are excluded. The indexes are tightly constrained against their parent indexes, the equivalent large/mid-cap broad equities segment indexes. The regional gender diversity indexes were launched in 2020, with back-cast history from 2014 based on historical Equileap data.

As displayed in Exhibit 25, four of the nine gender-diversity-focused indexes outperformed in 2024. For the five-year period, five of the nine outperformed, and eight of nine lost less during down markets over the last five years.

Exhibit 25 Morningstar Gender Diversity Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Gender Diversity Indexes	2024 Excess Return	5-Year Excess Return	5-Year Down
Morningstar Canada Gender Diversity	1.70	0.24	99.77
Morningstar Developed Markets Asia Pacific	-0.16	0.14	102.15
Morningstar Developed Europe	0.28	0.53	95.23
Morningstar Developed Markets	-1.18	-0.26	99.49
Morningstar Developed Markets ex-Japan	-1.31	-0.44	99.95
Morningstar Japan	1.86	0.66	99.82
Morningstar Japan ex-REIT Gender Diversity Tilt	0.91	0.34	98.81
Morningstar UK	-0.11	-0.22	98.37
Morningstar US	-1.83	-0.53	98.47

Source: Morningstar Direct. Data as of Dec. 31, 2024.

For Developed Markets Gender Diversity Indexes, overweighting healthcare, consumer defensive, and energy in 2024 hurt performance. Technology companies tended to score worse, which also led to underweighting and underperforming relative to the benchmark. In Japan, performance continued to be strong. Modest overweight in communication services and financial services improved performance the most.

Morningstar Renewable Energy Indexes

The Morningstar Renewable Energy Indexes highlight the shares of companies leading the transition to the low-carbon economy. The indexes select companies exposed to renewable energy or green transportation and include companies that meet a significant percentage of their energy needs from renewable sources. The 30-stock indexes focus solely on renewable energy and green transportation. The indexes rely on Sustainalytics' Sustainable Product Research and Carbon data using the revenue to determine a company's involvement. For the indexes that include both producers and users of renewable energy, there are two index sleeves. The first sleeve, which selects companies that generate revenue from renewable energy or green transportation involvement, represents 75% of the index weight. The second, which highlights heavy consumers of renewable energy, represents 25% of the index weight. Companies are equally weighted within their sleeves.

The Morningstar North America Renewable Energy Index was launched in 2019, with back-cast returns to June 2018 based on historical Sustainalytics data. The other indexes launched in 2020 with back-cast returns to December 2015 based on historical Sustainalytics data. The indexes are derived from their equivalent all-capitalization market segment. The indexes are:

- ▶ Morningstar Global Markets Renewable Energy Index
- ▶ Morningstar Developed Markets Renewable Energy Index
- ▶ Morningstar North America Renewable Energy Index
- ▶ Morningstar Developed Europe Renewable Energy Index

As displayed in Exhibit 26, none of the four renewable-energy-focused indexes outperformed in 2024. For the five-year period, none of the four indexes with five-year performance histories outperformed, and one of four lost less than its broad market equivalent in down periods.

Exhibit 26 Morningstar Renewable Energy Indexes Risk/Return Record Versus Non-ESG Parent Index

Morningstar Renewable Energy	2024 Return Excess	5-Year Excess Return	5-Year Down
Morningstar Developed Europe	-11.76	-2.14	116.82
Morningstar Developed Markets	-20.02	-6.46	103.20
Morningstar Global	-17.20	-4.10	98.00
Morningstar North America	-12.86	-4.40	104.65

Source: Morningstar Direct. Data as of Dec. 31, 2022

The Morningstar Renewable Energy Indexes suffered from another challenging year in 2024. Despite progress, performance has struggled⁵ for a variety of reasons. It's worth noting that the index has significant exposure to solar, which, as seen in Exhibit 3, was the worst performing Morningstar Global Industry Index.

Understanding Sustainable Investments Performance Requires Understanding Broader Market Drivers

Investors should look at longer-term performance as well as calendar-year returns, and keep in mind that sustainable investing encompasses a broad range of strategies, some of which are riskier or more volatile than others. Morningstar Indexes' annual sustainability performance study began in 2018. For many years, sustainability indexes posted strong relative returns, supporting the view that investing based on E, S, and G factors does not necessarily entail sacrificing returns—and may enhance them.

On the flip side, three straight years of mixed performance shows that “doing good” doesn't always lead to “doing well.” The year 2024 is a good reminder that, to understand the performance of any portfolio, you must fully recognize and understand any active risk you are taking versus the broad market. In past years, an overweighting in technology boosted sustainability index performance, but 2024 illuminated the complexity in understanding the idiosyncratic risks of sustainability investing.

What is certain now is that any deviation from a market portfolio will produce a different outcome. Some market environments will favor sustainable investment strategies, and others won't. Studying past behavior can help guide sustainability-focused investors going forward. ■■

⁵ “Clean Energy is the Future. So Why Have Investors Struggled?” Baseli. D. April 18, 2024.

About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors — and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

Please visit indexes.morningstar.com for more information.



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