Morningstar's ESG Indexes Exhibit Attractive Investment Attributes

Not only have sustainability indexes posted strong returns, they also score well on measures of quality, financial health, and volatility.

Morningstar Inc.
February 2019

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Performance is a key concern for investors when it comes to sustainable investing. "Does screening based on environmental, social, and governance criteria lead to a return sacrifice?" tops the list of frequently asked questions posed by investors, advisors, and institutions around the world. In theory, limiting an investor's opportunity set could have negative consequences. But in practice, sustainable investments have performed well as a group.

Morningstar's range of sustainability-focused indexes provides a useful lens through which to view the impact of ESG screens on returns and portfolio characteristics. The indexes—entirely equity at this point—tend to be deliberately constrained in their sector and regional weights in order to offer market-like exposures and serve as credible alternatives to conventional market indexes. Because sector and regional bets are minimized, performance of the indexes can help answer the question: How do companies that score well on ESG criteria compare with their peers in terms of returns and holdings-based attributes?

This study concludes that Morningstar's ESG-screened indexes have generally outperformed their mainstream counterparts. They also exhibit superior exposure to measures of quality, financial health, and volatility—factors linked to a positive long-term investor experience. The findings are consistent with other Morningstar studies that conclude that ESG screens lead to positive investment outcomes.[1]

The findings support the view that ESG considerations are material to a company's financial results. Environmental stewardship is not just good for the planet, it can also help a company control costs, avoid damaging incidents, and position itself for tomorrow's economy. Treating workers well benefits society, but it also helps attract and retain talent—critical in the knowledge economy. Good governance leads to better corporate decision-making. Companies that consider ESG are likely strategic in nature. They focus less on beating next quarter's earnings and more on creating an enduring franchise.

Researching Morningstar's ESG-Screened Indexes

This study will focus on six groups of Morningstar equity indexes whose selection criteria are driven by ESG considerations. A total of 56 unique indexes are analyzed. The study includes four large families:

- The Morningstar Sustainability Index family
- The Morningstar Sustainability Leaders Index family
- The Morningstar Sustainable Environment Index family
- The Morningstar Low Carbon Risk Index family

1 Hale, J. "Sustainable Investing Research Suggests No Performance Penalty." Morningstar. Nov. 10, 2016.
Hale, J. "Does Sustainable Investing Help or Hurt Returns?" Morningstar. Dec. 7, 2017.
Hale, J. "Sustainability and Quality Go Hand in Hand." Morningstar. March 16, 2017.
Wolfstetter, Natalia, "Global Large-Cap Equity Managed Strategies with High Morningstar Sustainability Ratings Exhibit Above Average Exposure to Volatility, Economic Moat, and Financial Health." Morningstar.

The study also includes three "impact"-oriented indexes—Morningstar Minority Empowerment, Morningstar Women's Empowerment, and Morningstar Societal Development—as well as three focused indexes targeting different regional groupings—the Morningstar Global Markets Sustainability 50, Morningstar Developed Markets Sustainability 200, and Morningstar Developed Markets Asia Pacific Sustainability 60 indexes. It does not include a quality-dividend index family with an ESG overlay, because its performance is only partially driven by sustainability screens.

For a full methodological discussion of these indexes, refer to their construction rules, fact sheets, and other documentation posted on Morningstar Indexes' website.[2] Each section will contain a brief discussion of index methodology.

Except where mentioned, the indexes discussed use company-level assessments provided by Sustainalytics, Morningstar's partner for ESG research. Sustainalytics assigns Sustainability Scores to more than 10,000 companies across the globe and Carbon Risk Ratings to 4,000 companies. Companies are scored relative to their global peers in one of 42 industry groupings. Up to 150 indicators can be assessed, with Sustainalytics selecting the most-relevant criteria by industry. Sustainalytics rates environmental, social, and governance pillars discretely with indicators spanning dimensions of preparedness, disclosure, quantitative performance, and qualitative performance. Controversy Scores, which are factored into a company's Sustainability Score, are ESG-related incidents with internal and external impact. Thus, assessments are based on both words and deeds.

For returns-based analysis, sustainability indexes are compared with their parent index, typically the large-capitalization or the large- and mid-capitalization segments of the equivalent broad equity market. Sustainalytics' coverage is strongest for large- and mid-cap companies. Gross return or total return index variants in U.S. dollars are examined, for purposes of apples-to-apples comparison.

Holdings-based analysis relies on the Morningstar Global Risk Model, launched in 2016, which tracks stocks' exposure to 36 different factors, or sources of return. Three factors are examined: economic moat, financial health, and volatility. The Morningstar Economic Moat Rating is a proprietary measure of quality. Morningstar equity analysts assign moat ratings to companies they believe possess a sustainable competitive advantage capable. A machine-learning algorithm then extrapolates from the 1,500-stock coverage universe to assign quantitative measures of competitive advantages to a universe of 45,000 stocks. A superior score indicates stronger competitive positioning.

The financial health factor assesses the strength of a firm's financial position and ranks companies on the likelihood that they will experience financial distress. It relies on the distance to-default measure, which considers leverage and equity volatility. A superior score means lower risk of bankruptcy.

2 https://indexes.morningstar.com/

Finally, the volatility factor measures the maximum observed spread in long-term returns. Unlike standard deviation, the volatility factor doesn’t focus on daily or monthly variance of returns but rather on the range of possible long-term returns. A superior score means lower volatility.

As with any study, this one has limitations. Relative return comparisons are time-period dependent. Performance results will inevitably fluctuate over time. Holdings-based attributes, for their part, tend to be more stable. The study applies a "scorecard" system, which asks binary questions: Did the ESG index outperform or underperform? Did the ESG index register a higher or lower risk factor exposure? Thus, it ignores magnitude. Typically, return differentials are small, which is by design. As mentioned, the indexes' weights are deliberately constrained in order to provide marketlike exposures and serve as credible alternatives to mainstream benchmarks. But in some cases—the Morningstar Sustainability Leaders Index family in particular—return differences can be significant.

Another limitation is that index members are counted equally, when in fact, their scope varies considerably. The Morningstar Global Markets Indexes are typically all-encompassing; other family members (Europe, Asia, and the United States, for example) are carve-outs thereof. But it is worth examining all the family members separately, as each reflects a core equities exposure for investors based in different geographies. The performance of the Global Markets indexes is the most affected by regional weights, so they may not provide the best answer to the question: Do ESG-screened companies outperform or underperform?

Yet another study limitation is the brief treatment of attribution. The study sacrifices depth for breadth. Interested readers can perform further research using Morningstar Direct.

Summary Findings

A total of 56 unique Morningstar ESG indexes were studied. Of those, 41 outperformed their non-ESG screened equivalent, a 73% success rate. Morningstar's ESG indexes tend to select companies that are less volatile and possess stronger competitive advantages and healthier balance sheets than their non-ESG equivalents. On the economic moat factor, 43 of 56 ESG indexes exhibited superior exposure (77%). This means the ESG index constituents tend to be better positioned, with their profits more insulated from competition. On the financial health factor, 48 of 56 ESG indexes exhibited superior exposure (86%). This means they are less likely to experience financial distress. On the volatility factor, 47 of 56 ESG indexes exhibited superior exposure (84%), implying a lower range of possible long-term returns than their non-ESG equivalents.

Morningstar Sustainability Index Family

The Morningstar Sustainability Indexes are broadly aligned with the Morningstar Sustainability Rating™ for funds (the "globe rating"). After excluding companies involved with tobacco, controversial weapons, and civilian firearms, as well as companies experiencing the two most serious levels of ESG-related controversy according to Sustainalytics, the indexes select companies in order of their Sustainalytics-assigned Sustainability Scores until 50% coverage of the parent index is reached by market cap. Sector and regional weights are kept within 2 percentage points of their equivalent market weight. Index constituents are weighted by market cap.

Exhibit 1 Morningstar Sustainability Index Family

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

Source: Morningstar, Inc.

The Morningstar Sustainability Index family launched in 2016, but most of the indexes have returns modeled to December 2009 based on Sustainalytics' company-level ratings. The emerging-markets-focused indexes go back to December 2011, as do some of the indexes with significant emerging-markets weights, such as Asia. The Sustainability indexes are derived from the large- and mid-cap segment of the equivalent Morningstar region/country index. This study examines returns through the end of 2018. The indexes overlap; for example, the constituents of the Morningstar US Sustainability Index consume roughly 50% of the Morningstar Global Markets Sustainability Index's weight.

As displayed in the exhibit below, 15 of 20 ESG indexes have outperformed their non-ESG equivalents. ESG screens generally added value in Asia and Europe and subtracted in North America. In Asia, constituents including Tencent, Taiwan Semiconductor, Samsung Electronics, SoftBank, and Toyota lifted the Sustainability indexes against the market. In Europe, Vodafone, Novartis, Diageo, and Allianz boosted the Sustainability indexes. The Global Markets Sustainability Index's underperformance can be blamed on its underweight exposure to the U.S. market, which posted strong returns since the index's 2009 inception, as well as the relative underperformance of ESG-screened investments within the U.S. market. Top-performing U.S. stocks, such as Apple and Amazon.com, are not included in the Sustainability indexes.

Exhibit 2 Sustainability Index Family Performance vs. Equivalent Large-Mid Cap Index

Source: Morningstar Direct. Data as of Dec. 31, 2018.

The members of the Morningstar Sustainability Index family tend to select companies that are less volatile and possess stronger competitive advantages and healthier balance sheets than their non-ESG equivalents. As displayed in Exhibit 3 below, 15 of 20 Sustainability indexes have higher exposure to the economic moat factor than their non-ESG equivalents. This means their constituents tend to be better positioned, with their profits more insulated from competition. Fifteen of 20 Sustainability indexes have higher exposure to the financial health factor than their non-ESG equivalents. This means, they are less likely to experience financial distress. And 15 of 20 Sustainability Indexes have superior volatility scores, implying a lower range of possible long-term returns, than their non-ESG equivalents.

Exhibit 3 Sustainability Index Family Risk Factor Exposures vs. Equivalent Large-Mid Cap Index

Source: Morningstar Direct. Data as of Dec. 31, 2018.

Morningstar Sustainability Leaders Index Family

The Morningstar Sustainability Leaders Indexes are similar to the broad Sustainability indexes but are more rigorously screened from an ESG perspective and far more concentrated. Not only do the Sustainability Leaders indexes exclude companies involved with tobacco, controversial weapons, and civilian firearms, they also avoid nuclear products and companies with significant exposure to gambling, alcohol, or adult entertainment. Companies experiencing the two most serious levels of ESG-related controversy according to Sustainalytics are excluded, as are companies that have a poor Carbon Risk Rating or that are not compliant with the United Nations Global Compact. The Sustainability Leaders indexes select companies in order of their Sustainalytics-assigned Sustainability Scores and are fixed-count in nature. Sector and regional weights are kept within 2 percentage points of their equivalent market weight, and index constituents are weighted by market cap.

Exhibit 4 Morningstar Sustainability Leaders Index Family — Membership and Constituent Counts

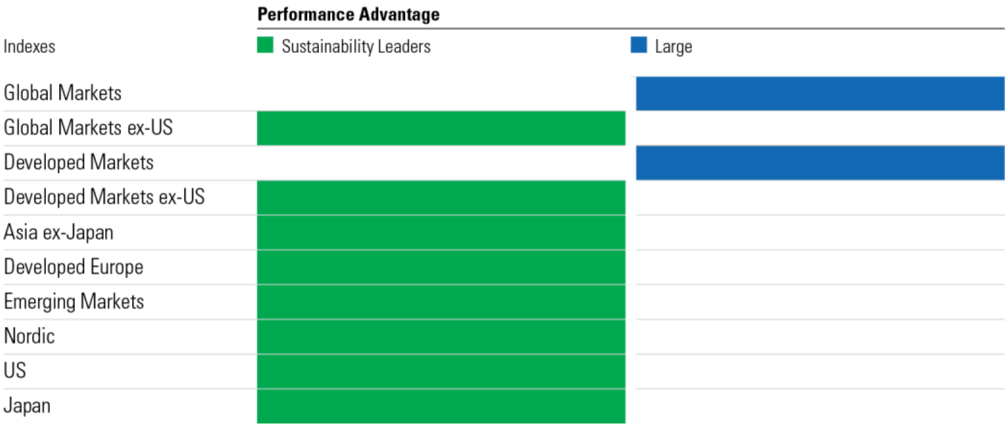
Broad Regional Markets		Developed Markets		Emerging Markets		Single Country	
Global Markets	100	Developed Markets	75	Emerging Markets	50	United States	50
Global Markets ex-US	75	Developed Markets ex-US	50			Japan	25
Asia ex-Japan	50	Developed Europe	50				
		Nordic	50				

Source: Morningstar, Inc.

The Morningstar Sustainability Leaders Indexes launched in 2018 but have returns back-tested to December 2012 based on Sustainalytics' company-level ratings. The indexes are derived from the large-cap segment of the equivalent Morningstar region/country index. This study examines returns through the end of 2018. The indexes overlap; for example, the constituents of the Morningstar US Sustainability Leaders Index consume 50% of the Morningstar Global Markets Sustainability Leaders Index's weight.

As displayed in Exhibit 5, eight of 10 Sustainability Leaders indexes best their non-ESG equivalents. It should be noted that the performance differentials in the case of the Sustainability Leaders indexes are larger than most. Some of the indexes outperformed by impressive margins. Interestingly, ESG screens added value to the US Sustainability Leaders index, in contrast to the underperformance of the broad US Sustainability index. Strong-performing Sustainability Leaders constituents like Intel, Cisco, Medtronic, and Starbucks compensated for not owning Apple, Amazon.com, and Facebook. The Sustainability Leaders indexes that are focused on Europe, Asia, and emerging markets also outperformed their mainstream equivalents. Underweight exposure to the U.S. market negatively impacted the Global Markets Sustainability Leaders and Developed Markets Sustainability Leaders indexes' relative to their parents.

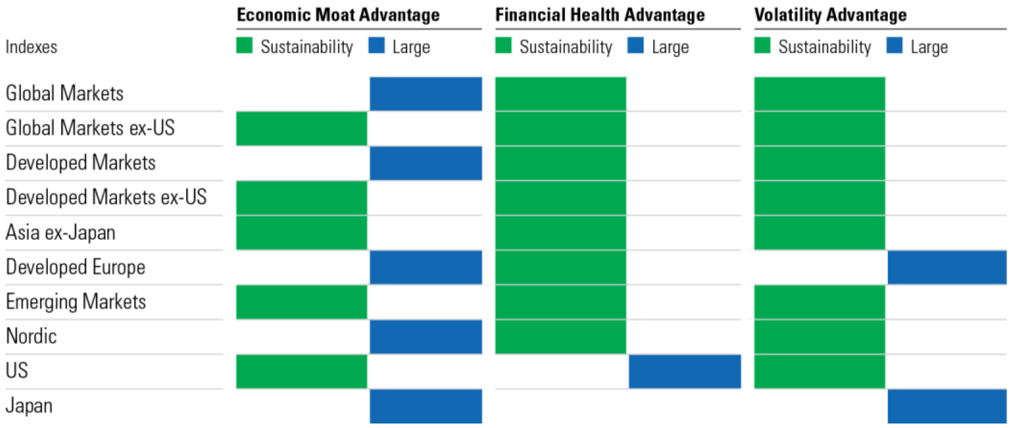
Exhibit 5 Sustainability Leaders Index Family Performance vs. Equivalent Large-Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

The members of the Morningstar Sustainability Leaders Index family tend to select companies that are less volatile and possess healthier balance sheets than their non-ESG equivalents. Comparison on the basis of competitive-advantage analysis yielded less conclusive results. As displayed in Exhibit 6, five of 10 Sustainability Leaders indexes have higher exposure to the economic moat factor than their non-ESG equivalents, meaning their constituents tend to be better positioned, with their profits more insulated from competition. The Global Markets and Developed Markets indexes' inferior exposure to economic moat is likely due to their underweight exposure to the U.S. market, which is moat rich. As shown in the same exhibit, eight of 10 Sustainability Leaders indexes have higher exposure to the financial health factor than their non-ESG equivalents. This means they are less likely to experience financial distress. The Morningstar Japan Sustainability Leaders Index displayed identical exposure to the financial health factor as its non-ESG equivalent. Eight of 10 Sustainability Leaders indexes have superior volatility scores, implying a lower range of possible long-term returns, than their non-ESG equivalents.

Exhibit 6 Sustainability Leaders Index Family Risk Factor Exposures vs. Equivalent Large-Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

Morningstar Sustainable Environment Index Family

The Morningstar Sustainable Environment Indexes are focused on companies that act as responsible stewards of the natural world, setting the standard within their industries on criteria such as waste management, water intensity, and pollution mitigation. The indexes highlight companies that seek to minimize their environmental impact and carbon risk, relying on Sustainalytics' assessment of 50 environmental indicators. The indexes exclude companies involved with controversial weapons and thermal coal, as well as companies experiencing a serious environmental controversy according to Sustainalytics and carrying a Carbon Risk Rating of Severe. The indexes select companies in order of their Sustainalytics-assigned Environmental Scores until 50% coverage of the parent index is reached by market cap. Sector and regional weights are kept within 2 percentage points of their equivalent market weight, and index constituents are weighted by market cap.

Exhibit 7 Morningstar Sustainable Environment Index Family

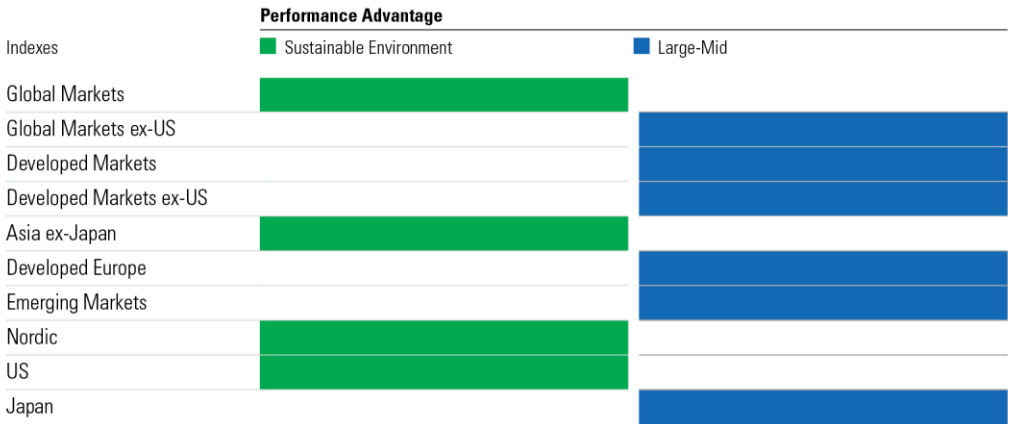
Broad Regional Markets	Developed Markets	Emerging Markets	Single Country
Global Markets	Developed Markets.	Emerging Markets	United States
Global Markets ex-US	Developed Markets ex-US		Japan
Asia ex-Japan	Developed Europe		
	Nordic		

Source: Morningstar, Inc.

The Morningstar Sustainable Environment Indexes launched in 2018, but most have returns back-tested to June 2012 based on Sustainalytics' company-level ratings. This study examines returns through the end of 2018. The indexes overlap; for example, the constituents of the Morningstar US Sustainable Environment Index consume roughly 50% of the Morningstar Global Markets Sustainable Environment Index's weight. The constituents of the Sustainable Environment Index family are derived from the large- and mid-cap segment of the equivalent Morningstar region/country index.

As in Exhibit 8, only four of the 10 Sustainable Environment indexes outperformed their non-ESG equivalent. The outperforming indexes included the Morningstar Global Markets Sustainable Environment Index, the Morningstar US Sustainable Environment Index, the Morningstar Asia ex-Japan Sustainable Environment Index, and the Morningstar Nordic Sustainable Environment Index. This makes the family unusual. It is the only one of the four major families in which the majority of indexes underperformed. Also, the US and Global Markets Sustainable Environment indexes outperformed, in contrast to their counterparts in the broad Morningstar Sustainability Index family. The Morningstar US Sustainable Environment Index benefited largely from its underweight exposure to the poor-performing energy sector. It should be noted that the underperforming indexes did so by narrow margins.

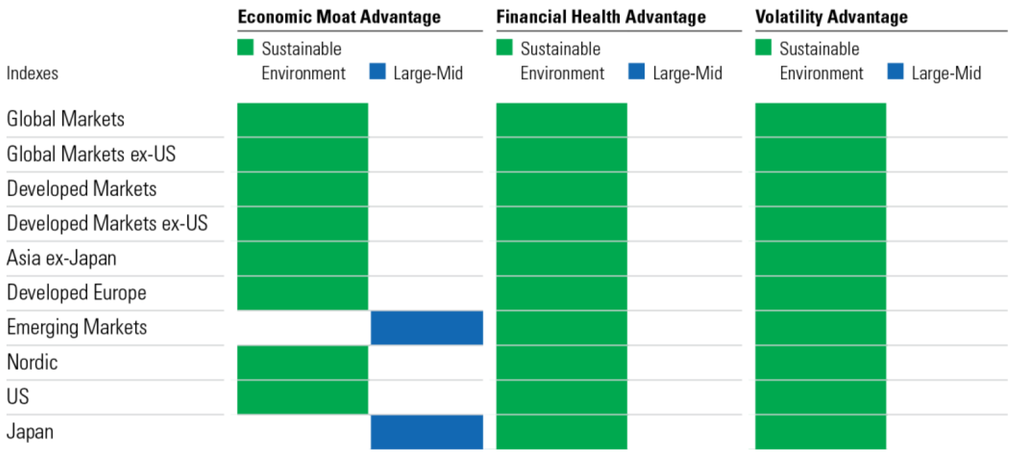
Exhibit 8 Sustainable Environment Index Family Performance vs. Equivalent Large-Mid Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

The members of the Morningstar Sustainable Environment Index family tend to select companies that are less volatile and possess stronger competitive advantages and healthier balance sheets than their non-ESG equivalents. As displayed in Exhibit 9, eight of 10 Sustainable Environment indexes have higher exposure to the economic moat factor than their non-ESG equivalents. This means their constituents tend to be better positioned with their profits more insulated from competition. All 10 Sustainable Environment indexes have higher exposure to the financial health factor than their non-ESG equivalents. This means, they are less likely to experience financial distress. And all 10 Sustainable Environment indexes have superior volatility scores, implying a lower range of possible long-term returns, than their non-ESG equivalents.

Exhibit 9 Sustainable Environment Index Family Risk Factor Exposures vs. Equivalent Large-Mid Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

Morningstar Low Carbon Risk Index Family

The Morningstar Low Carbon Risk Indexes are methodologically aligned with the Morningstar Low Carbon Designation. They allow investors to mitigate risks associated with climate change. Leveraging Sustainalytics' unique Carbon Risk Rating, the indexes highlight companies across regions that are aligned with a low-carbon economy. Some industries are inherently better positioned for a world less dependent upon fossil fuels, but individual companies are able to take actions to mitigate their climate-related risk. The indexes are created through an optimization process that targets low portfolio-level carbon risk and fossil fuel exposure, while minimizing deviation from the broad market. The number of constituents in each index is variable. Regional and sector weights are kept to within 4 percentage points of market weight.

Exhibit 10 Morningstar Low Carbon Risk Index Family

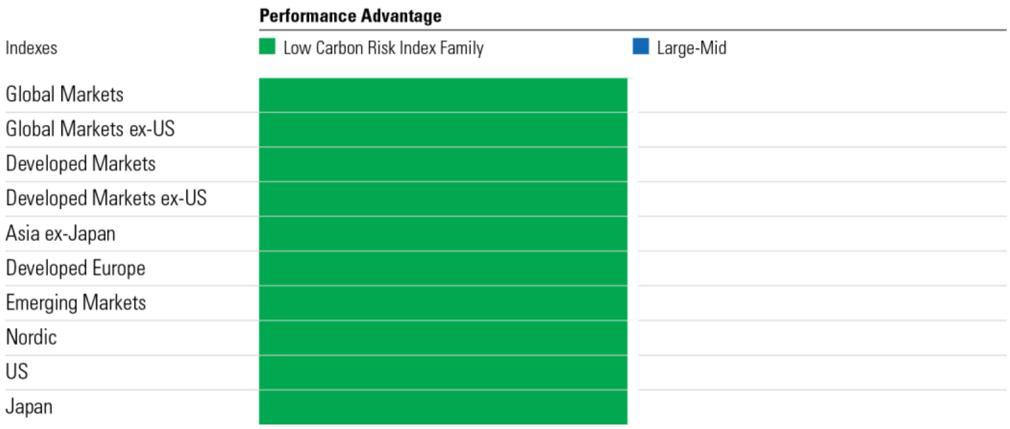
Broad Regional Markets	Developed Markets	Emerging Markets	Single Country
Global Markets	Developed Markets.	Emerging Markets	United States
Global Markets ex-US	Developed Markets ex-US		Japan
Asia ex-Japan	Developed Europe		
	Nordic		

Source: Morningstar Inc.

The Morningstar Low Carbon Risk Index family launched in 2018, but the indexes have returns back-tested to December 2012. This study examines returns through the end of 2018. The indexes overlap; for example, the constituents of the Morningstar US Low Carbon Risk Index consume roughly 50% of the Morningstar Global Markets Low Carbon Risk Index's weight. The Low Carbon Risk indexes are derived from the large- and mid-cap segment of the equivalent Morningstar region/country index.

As displayed in Exhibit 11, all 10 Low Carbon Risk indexes outperformed their non-ESG equivalent. Sector weights proved advantageous. Over the course of the indexes' six-year histories, underweight exposure to energy stocks boosted returns relative to the benchmark. This was true in the U.S., Europe, and Asia. In Asia, however, stock selection contributed more than sector allocation.

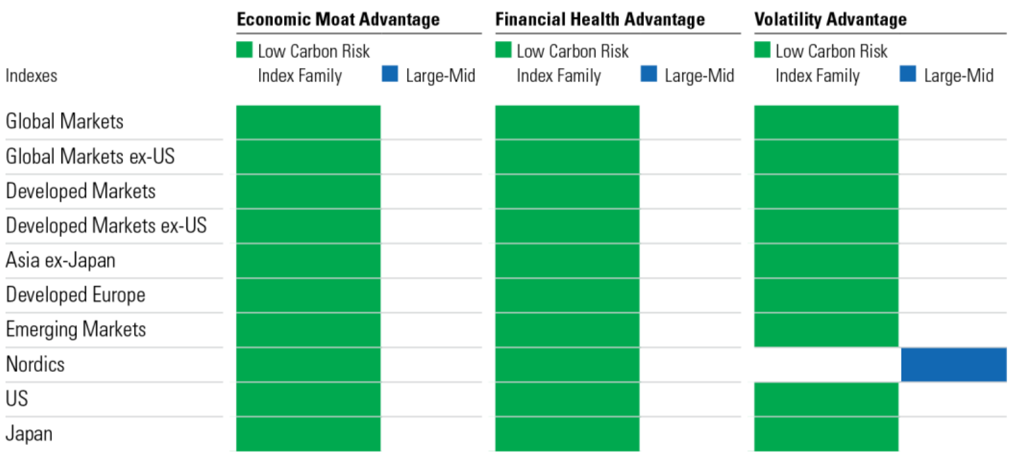
Exhibit 11 Low Carbon Risk Index Family Performance vs. Equivalent Large-Mid Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

The members of the Morningstar Low Carbon Risk Index family tend to select companies that are less volatile and possessed of stronger competitive advantages and healthier balance sheets than their non-ESG equivalents. As displayed in Exhibit 12, all 10 Low Carbon Risk indexes have higher exposure to the economic moat factor than their non-ESG equivalents. This means their constituents tend to be better positioned, their profits more insulated from competition. All 10 Low Carbon Risk indexes have higher exposure to the financial health factor than their non-ESG equivalents. This means, they are less likely to experience financial distress. And nine of 10 Low Carbon Risk indexes have higher exposure to the volatility factor, implying a lower range of possible long-term returns, than their non-ESG equivalents.

Exhibit 12 Low Carbon Risk Index Family Risk Factor Exposures vs. Equivalent Large-Mid Cap Index



Source: Morningstar Direct. Data as of 31 December 2018.

Morningstar Impact Indexes

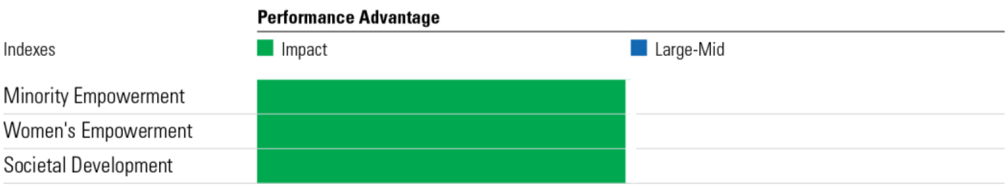
Morningstar's three impact indexes are focused on effecting positive societal change through the deployment of capital. The Morningstar Minority Empowerment Index targets the shares of 200 U.S. companies selected for their commitment to diversity and inclusion. Its scoring leverages a number of indicators researched by Sustainalytics, including board diversity, discrimination policies, and support for community development programs. The Morningstar Women's Empowerment Index is similar in that it also targets 200 companies listed in the U.S., 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. Finally, the Morningstar Societal Development Index targets the shares of 200 companies from developed and emerging markets that are contributing to the United Nations' 17 Sustainable Development Goals, 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.

The indexes are sourced from their equivalent large- and mid-cap market segment. Their sector and regional weights are kept to within 4 percentage points of their market weight.

- Morningstar Minority Empowerment Index
- Morningstar Women's Empowerment
- Morningstar Societal Development Index

Morningstar's impact indexes have limited track records. The indexes launched in August 2018 with no back-testing. So, this study, which examines returns through the end of 2018, covers less than six months—an extremely brief period from which to draw conclusions. As displayed in Exhibit 13, all three impact indexes outperformed their non-ESG equivalents.

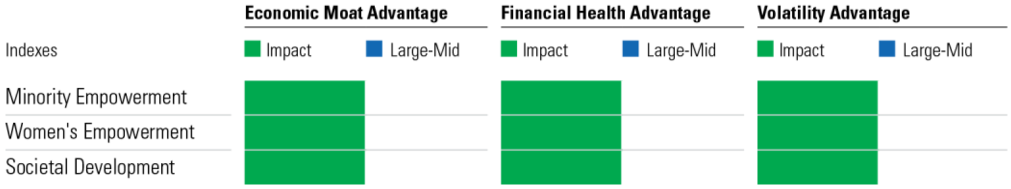
Exhibit 13 Impact Indexes Performance vs. Equivalent Large-Mid Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

The impact indexes tend to select companies that are less volatile and possess stronger competitive advantages and healthier balance sheets than their non-ESG equivalents. As displayed in Exhibit 14, all three impact indexes have superior volatility scores, implying a lower range of possible long-term returns, than their non-ESG equivalents. All three impact indexes have higher exposure to the economic moat factor than their non-ESG equivalents. This means their constituents tend to be more favorably positioned, with their profits more insulated from competition. And all three impact indexes have higher exposure to financial health than their non-ESG equivalents. This means, they are less likely to experience financial distress.

Exhibit 14 Impact Indexes Risk Factor Exposures vs. Equivalent Large-Mid-Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

Morningstar Focused Sustainability Indexes

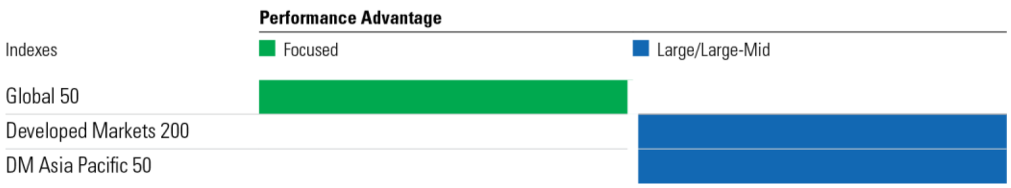
Morningstar's three focused sustainability indexes are methodologically similar to the broad Morningstar Sustainability Indexes. They select compact cohorts of companies based on their Sustainability Scores across different regional groupings. They exclude tobacco, controversial weapons, and companies experiencing serious ESG-related controversies. Sector and regional weights are kept to within 2 percentage points of their parent index, and index constituents are weighted by market cap.

- Morningstar Global Markets Sustainability 50 Index
- Morningstar Developed Markets Sustainability 200 Index
- Morningstar Developed Markets Asia Pacific Sustainability 60 Index

Morningstar's focused sustainability indexes launched in 2018, but most of the indexes have returns back-tested to December 2009 based on Sustainalytics' company-level ratings. The Morningstar Global Markets Sustainability 50 Index is derived from the large- and mid-cap segment of the global-equity market. The Morningstar Developed Markets Sustainability 200 Index is derived from the large-cap segment, as is the Morningstar Developed Markets Asia Pacific Sustainability 60 Index. This study examines returns through the end of 2018. The indexes overlap; for example, the developed markets index constitutes the majority of the global index's weight.

The Morningstar Global Markets Sustainability 50 Index was the only one of the three focused sustainability indexes to outperform its non-ESG equivalent.

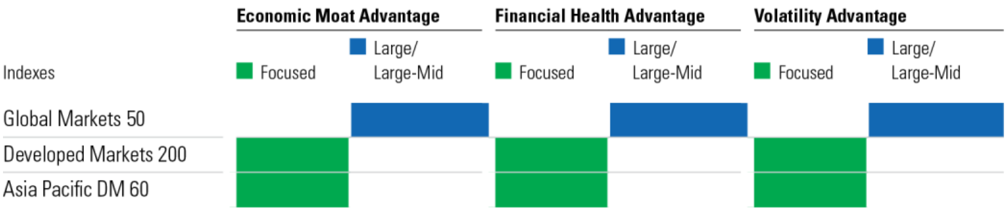
Exhibit 15 Focused Sustainability Indexes Performance vs. Equivalent Large-Cap/Large-Mid Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

The focused sustainability indexes tend to select companies that are less volatile and possess stronger competitive advantages and healthier balance sheets than their non-ESG equivalents. As displayed in Exhibit 16, two of three focused indexes have higher exposure to the economic moat factor than their non-ESG equivalents. This means their constituents tend to be more favorably positioned, with their profits more insulated from competition. The global index's inferior exposure to economic moat is likely due to its underweight exposure to the U.S. market, which is moat-rich. Two of three focused indexes have higher exposure to financial health than their non-ESG equivalents. This means, they are less likely to experience financial distress. And two of three focused indexes have superior volatility scores, implying a lower range of possible long-term returns than their non-ESG equivalents.

Exhibit 16 Focused Sustainability Index Family Risk Factor Exposures vs. Equivalent Large-Cap/Large-Mid Cap Index



Source: Morningstar Direct. Data as of Dec. 31, 2018.

Conclusion

While the strong performance of Morningstar's ESG indexes is encouraging, investors should remember that relative returns are highly changeable. If commodity prices rally, that could be a disadvantage for ESG indexes that are relatively light on energy and basic-materials stocks. The good news for long-term investors is that the indexes' strong scores for economic moat, financial health, and volatility are predictive of a positive long-term investor experience. These attributes are likely to endure, because Morningstar Research consistently observes a relationship between them and high ESG scores.

About Morningstar, Inc.

Morningstar, Inc. is a leading provider of independent investment research in North America, Europe, Australia, and Asia. The company offers an extensive line of products and services for individual investors, financial advisors, asset managers, retirement plan providers and sponsors, and institutional investors in the private capital markets. Morningstar provides data and research on a wide range of investment offerings, including managed investment products, publicly listed companies, private capital markets, and real-time global market data. Morningstar also offers investment management services through its investment advisory subsidiaries, with more than $207 billion in assets under advisement and management as of September 30, 2018. The company has operations in 27 countries.

To learn more about Morningstar Indexes, visit:
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