Morningstar Sustainability Atlas

Europe leads the way in ESG practices, along with Hong Kong. The U.S. has healthy Carbon Metrics, but some companies' controversies lower its total score.

Morningstar Inc.
April 2023

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Executive Summary

This report examines the sustainability profiles of Morningstar's 48 country-specific equity indexes. The country indexes, which span developed and emerging markets and represent 97% of global market capitalization, vary significantly across environmental, social, and governance risk criteria. Through a series of maps, we demonstrate the Morningstar® Portfolio Sustainability Score™ across a range of country indexes. Key company-level drivers are highlighted. We also examine country indexes through the lens of the Morningstar® Portfolio Carbon Metrics, including the Morningstar® Portfolio Carbon-Risk Score,™ a forward-looking assessment of companies' vulnerability to the transition away from a fossil fuel-intensive economy.

Key Takeaways

- Continental Europe leads the way when it comes to corporate-level sustainability. For the fourth-consecutive year, the Netherlands earns the title of world's most sustainable stock market, followed by Finland.
- Hong Kong overtakes France for third place and confirms itself as the highest-scoring non-European market for sustainability, thanks to companies like AIA Group. However, the Hong Kong market also has a high Carbon Intensity score.
- The United States, for its part, ranks in the second quintile of global sustainability leaders thanks to big names such as Apple, Microsoft, and Berkshire Hathaway. At the same time, the level of ESG risks faced by the big names of Amazon.com, Meta Platforms, and Exxon Mobil is classified as High.
- Big Asian markets score poorly on sustainability. China lands at the bottom of the fourth quintile, as well as India and South Korea; Japan and South Korea are in the third quartile. Singapore scores better, landing in the second quintile. China Construction Bank, Toyota, Hyundai Motor, and Wilmar International are classified as "highly risky" from an ESG point of view.
- The U.S. lands in one of the world's least carbon-intensive equity markets, ranking in the second quintile. The main reason lies in its tilt toward the technology, consumer cyclical, communication services, financial services, and healthcare sectors and minimal exposure to energy and utilities.
- Hong Kong, one of the most carbon-intensive stock markets, has a Portfolio Carbon Risk Score that places in the Low category. By contrast, Peru and Kuwait post low Carbon Intensity scores but look riskier on a forward-looking basis.
- In light of the Russian invasion of Ukraine and the resulting sanctions issued by the U.S., European Union, and United Kingdom, Morningstar moved the Russia equity market from emerging-markets status to unclassified. This took effect at the rebalance after the market close on March 18, 2022. Since then, all Russia equity securities, including ADRs and GDRs, have been removed from the Morningstar Global Markets and Morningstar Target Market Exposure index families at a price of zero. This reflects that many investors outside of Russia can no longer trade these securities. Consequently, the Russian equity market was not taken into consideration for this analysis.

Introduction

The Morningstar Sustainability Atlas takes a bottom-up approach and discusses the overall sustainability profiles of national equity markets, which are scored based on the companies constituting their indexes. The same methodology that powers the Morningstar® Sustainability Rating™ for funds is applied to assess the sustainability profile of indexes.

The Sustainability Rating is a measure of the financially material ESG risks in a portfolio relative to a portfolio's peer group. The rating is a historical holdings-based calculation using the company-level Sustainalytics ESG Risk Rating. Sustainalytics, a Morningstar company and a leading provider of sustainability research, assigns ESG Risk Ratings to more than 10,000 companies across the globe.

This rating is the result of a three-step process. First, we calculate the Morningstar Portfolio Sustainability Score for every portfolio reported within the trailing 12 months. Second, we use these scores to calculate a portfolio's Morningstar Historical Portfolio Sustainability Score. Third, we assign a Sustainability Rating for a portfolio based on its Historical Portfolio Sustainability Score relative to its global Morningstar Category. Additionally, we apply buffers to increase the rating's stability, and we make ratings adjustments for portfolios with extreme Historical Portfolio Sustainability Scores.

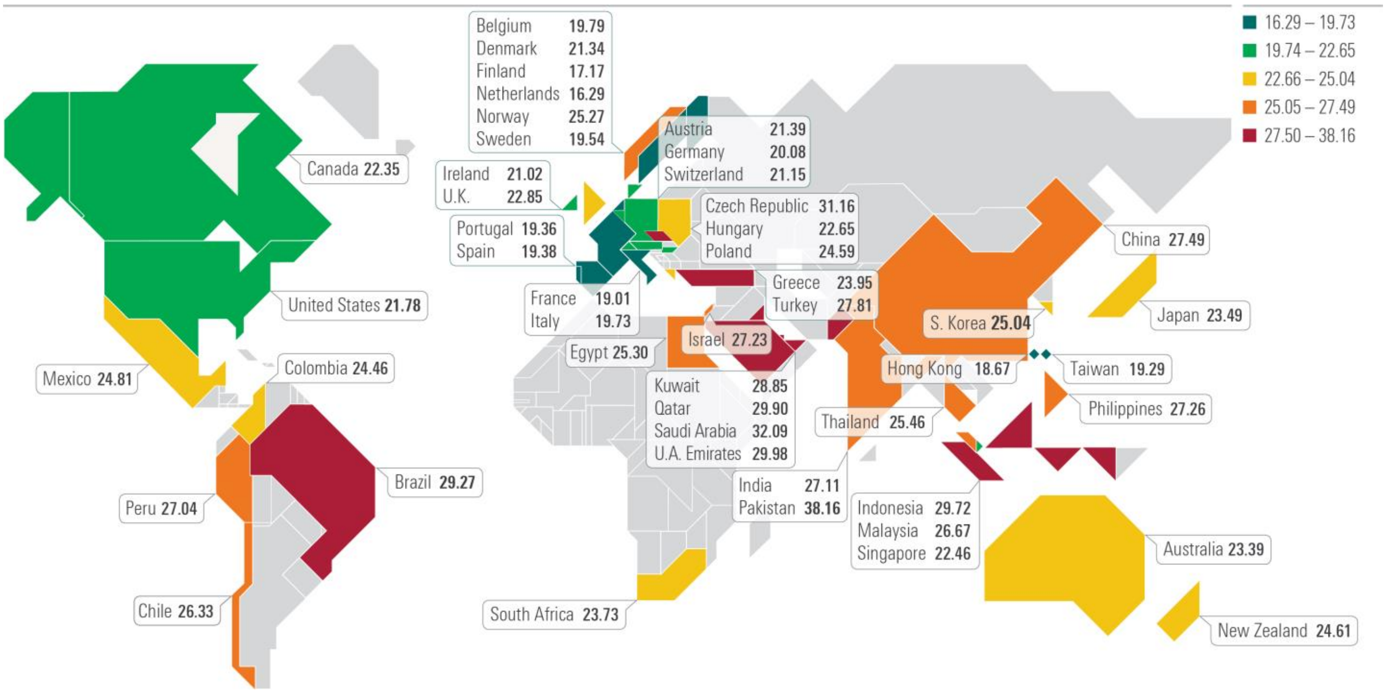
In November 2021, we made some changes to the Sustainability Rating that increased the number of funds receiving ratings. In addition to equity funds, we now provide Sustainability Ratings for most fixed-income funds and allocation funds. To learn more about the methodology of the Morningstar Sustainability Rating visit this link.

As with funds, Portfolio Sustainability Scores for indexes are weighted aggregates of company-level scores. Unlike funds, indexes do not receive a Morningstar Sustainability Rating, which compares portfolio holdings' ESG profiles with those of category peers using a 1- to 5-globe system. Indexes do, however, receive raw scores, which comprise both Morningstar Portfolio ESG Risk Exposure Scores and Morningstar ESG Managed Risk Scores.

This report will review the sustainability profiles of Morningstar's entire suite of global equity indexes. The 48 indexes are all members of the Morningstar Global Markets Index, including both developed and emerging markets. Portfolio Sustainability Scores can be calculated only if more than 67% of market capitalization is covered with ESG Risk Scores. Coverage exceeds this threshold in the case of all Morningstar country indexes. United Arab Emirates has the lowest coverage, with 85.3% of its index weight carrying ESG Risk Scores.

The Sustainability Atlas also includes the Morningstar Portfolio Carbon Metrics, which allows investors to analyze the degree to which portfolio holdings are aligned with the transition to a low-carbon economy and subject to risks from climate change. The highest-scoring funds earn the Morningstar® Low Carbon Designation,™ based on 12 months of portfolio history. This edition of the Sustainability Atlas examines country indexes on two metrics: Carbon Intensity and Carbon Risk. Carbon Intensity measures a portfolio's carbon footprint by gauging greenhouse gas emissions per millions of dollars of revenue. Carbon Risk relies on Sustainalytics' assessment of the degree to which corporate value is at risk from climate change and the shift away from fossil fuels. So, Carbon Intensity provides the current picture, while Carbon Risk is forward-looking.

Exhibit 1 Map of Morningstar Country Indexes' Portfolio Sustainability Scores



Source: Morningstar Direct. Data as of March 31, 2023.

Map of Morningstar Country Indexes' Portfolio Sustainability Scores

The Morningstar Portfolio Sustainability Score is an asset-weighted average of the Sustainalytics ESG Risk Rating, measuring the degree to which a company's economic value may be at risk driven by ESG issues.

As usual, continental European countries are the global sustainability leaders. For the fourth consecutive year, the Netherlands is the world's most sustainable stock market, thanks to holdings like payment-processing company Adyen and the consumer-internet group Prosus, and above all, ASML Holding, the biggest constituent of the benchmark. ASML is an ESG leader (especially in the corporate governance and human capital fields) among semiconductor equipment producers.

Finland follows, thanks to big companies like Nokia, a leader within the global technology hardware industry, and Sampo, another important name in the insurance services' sector. Sampo holds a Low ESG Risk Rating.

Hong Kong moved up a spot from last year, overtaking France for third place in the rankings. This is primarily due to big names holding low exposure to ESG risks. This is the case, for example, of insurance company AIA Group—by far the biggest name within the benchmark—which combines low risk exposure with strong management. The company has established an ESG committee, which includes several senior executives, and it has a strong human capital development initiative, such as an employee-share purchase plan and annual employee engagement surveys.

France—which has lost two positions in the last two years—ranks fourth. Important French constituents like global producer and distributor of luxury goods LVMH, electrical equipment supplier Schneider Electric, and personal care company L'Oréal are classified as ESG leaders in their industries. LVMH, in particular, is noted for showing particular strength in its audit and financial performance systems and its stakeholder governance. LVMH’s board of directors is supported by the sustainable development committee, which provides leadership on matters of ethics as well as environmental, workforce-related, and social responsibility. Through its LIFE 360 program, the company aims to further strengthen its action plans in regard to circularity, traceability, biodiversity, and climate. However, according to Sustainalytics research, gaps remain where the company could further improve its ESG reporting by following best practices, such as the GRI guidelines and SASB standards.

Taiwan rebounds from 11th place in 2022 to fifth place in 2023, thanks to the big role played by Taiwan Semiconductor Manufacturing Company, a global ESG leader. As part of its greenhouse gas emission-reduction program, TSMC has a companywide target to reach net-zero emissions by 2050. Additionally, it plans to use 40% renewable energy for all TSMC fab operation sites by 2030. In 2021, it used 100% renewable energy for its global offices. In terms of water resource use management, TSMC incorporates water scarcity and flooding into its enterprise risk management.

Portugal and Italy also make a leap forward compared with last year, from 10th to sixth place for the former and from 12th to ninth place for the latter. Portuguese utility company EDP—which accounts for about 40% of the benchmark—has been a strong performer on most ESG issues, and disclosure on relevant metrics meets best practice in most area.

The U.S. ranks 16th out of 48, as it was the case in 2022. On one hand, companies like Apple, Nvidia, UnitedHealth Group, and Visa are considered leaders from a sustainability point of view; on the other hand, the ESG Risk Ratings for big names such as Amazon, Meta, and Exxon Mobil are classified as High. This is attributable in most cases to the companies' involvement in controversies.

For example, Amazon’s disruptive expansion has led to rapid growth (reaching USD 386 million in 2020 net sales), but has drawn intense scrutiny from regulators, governments, and competitors for potential breaches of antitrust laws and anticompetitive behaviour. Over the past few years, it has faced employee strikes and allegations of poor working conditions in various jurisdictions, including in Germany and France. Amazon has been involved in a variety of controversies, most notably the formal antitrust investigation launched by the European Commission, or EC, in July 2019, over the company’s dual role as a retailer and marketplace. In 2020, the company faced a lot of scrutiny on how it addressed the early stages of the coronavirus pandemic, particularly toward its warehouse employees.

Another important name of the U.S. benchmark, Tesla, shows a Medium ESG risk and a "significant" level of controversy. Even though Tesla’s business model significantly lowers its exposure to issues such as carbon, compared with its industry peers, its reliance on its factory workforce to meet its ambitious production targets exposes the company to risks concerning labour relations and its ability to recruit and retain employees, particularly as it plans to build two new Gigafactories in Texas and Germany.

Tesla's management of human capital and product governance risks reveals significant shortcomings, according to Sustainalytics. Tesla has been involved in repeated incidents related to the timely delivery of its cars, the safety of its autopilot technology, and the management of its workforce. Despite its implication in controversies, commitments to labour rights and a program governing product quality are lacking. Moreover, tweets from CEO Elon Musk reportedly to impact the share price, remain a corporate governance concern.

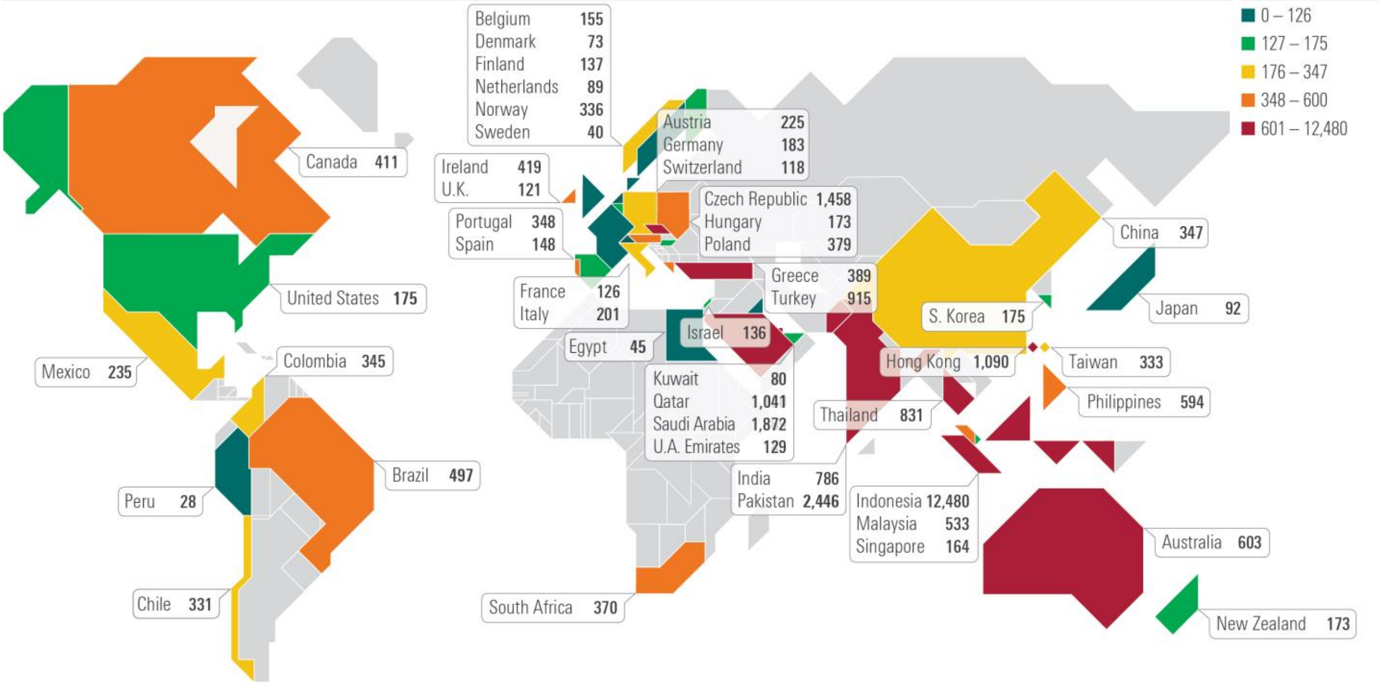
Meta Platforms collects a high volume of user data through Facebook, Instagram, Messenger, and WhatsApp, exposing the company to elevated data privacy and security risks. Changes to privacy laws and regulations could impose stricter restrictions on Meta's collection, and transfer and use of data, which could adversely impact its advertising services, including its ability to target ads. Meta's dual-class structure and voting agreement between certain stockholders limits the ability of minority shareholders to influence corporate matters. The company has appointed a privacy committee of the board of directors to oversee compliance of its privacy program and assist the board on data privacy issues. It continues to face multiple lawsuits and fines over privacy violations and its data usage practices, suggesting gaps in management's controls. The 2021 whistleblower and congressional hearings regarding the safety of Meta's products highlighted the negative impacts on users' mental health and indicated that a 2018 change to its algorithms to increase engagement may have increased the level of divisive and hurtful content.

Exxon Mobil, for its part, is highly exposed to a different material ESG issues, although it is being classified by Sustainalytics as "outperformer" in the corporate governance field. Considering its extensive deep-water operations (Guyana and Brazil), the company faces significant operational risks owing to the technical complexity and remoteness of these activities. Additionally, Exxon's involvement with Canadian oil sands and U.S. shale assets (Athabasca oil sands and Permian Basin, respectively) drives additional environmental risks. These unconventional production activities are typically more carbon-intensive and generate larger volumes of hazardous effluents and waste than conventional production methods. Over the past several years, Exxon Mobil has been involved in recurrent controversies associated with environmental pollution. Most recently, in June 2021, a Nigerian court ordered the company to pay around USD 199.5 million in compensation for oil spills that occurred between 2000 and 2010 to recompense the affected community.

China falls at the bottom of the fourth quintile, ranking 39th out of the 48 markets, and losing nine positions compared with 2021. Internet giant Tencent is the biggest name within the index, followed by Alibaba. Both companies hold a Medium ESG Risk Rating and have a concerning involvement in controversies. Two important names within the Chinese index, Industrial and Commercial Bank of China and Bank of China, hold an ESG Risk Rating classified as High. Indeed, profit growth in China's banking industry is under pressure, owing to the country's interest-rate liberalization reform, increasing competition from digital platforms and slowing economic growth. Financial challenges could make it more difficult for banks to manage product governance issues. Additionally, China's ongoing anticorruption campaign exposes the company to business ethics risks, particularly as the financial system is a key focus of government scrutiny.

Finally, Middle Eastern, Latin American, and Eastern European emerging markets, including Turkey and Brazil, occupy the globe's bottom quintile.

Exhibit 2 Map of Morningstar Country Indexes' Carbon Intensity Scores



Source: Morningstar Direct. Data as of March 31, 2023.

Map of Morningstar Country Indexes' Carbon Intensity Scores

Morningstar Portfolio Carbon Metrics allow investors to examine the environmental impact and the risks posed to their portfolios by climate change. Portfolio-level Carbon Metrics for indexes are weighted averages of their holdings.

Carbon Intensity measures a portfolio's carbon footprint by aggregating the Carbon Intensity scores of each holding on a weighted basis. To compute it, Sustainalytics looks at companies' total greenhouse gas emissions per millions of dollars of revenue.

The world's least-carbon-intensive equity markets include Peru (which climbs up from last year's second place to the top ranking), Sweden, Egypt, Denmark, and Kuwait. This owes to the small carbon footprints of the banks, telecoms, and property companies that dominate those indexes.

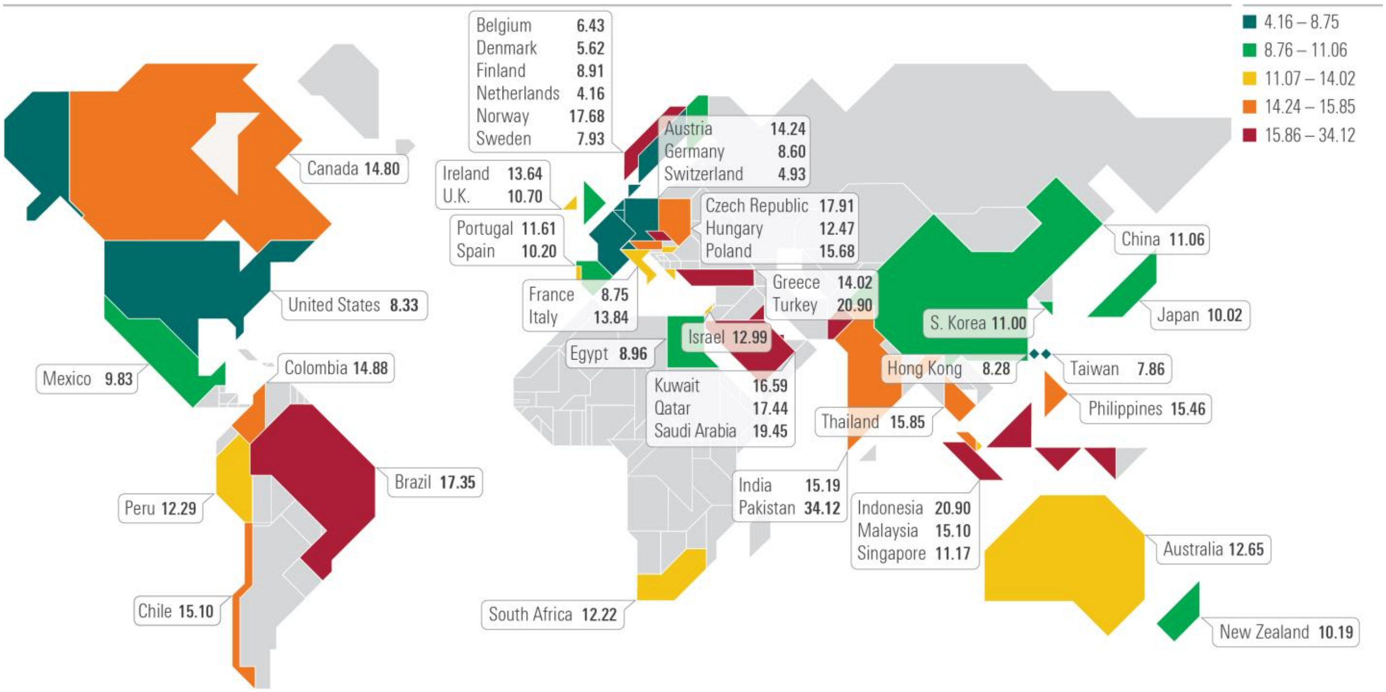
Most Western European markets have low carbon footprints relative to the sizes of their businesses. Beyond Sweden and Denmark, the Netherlands, Switzerland, the U.K., and France score the best. Israel scores well, as do developed Asian markets Japan and Singapore.

China lands at the bottom of the third quintile. Important components like automobile manufacturer BYD, Yum China (the largest restaurant chain in the country), China Petroleum & Chemical, and PetroChina show meaningful levels of carbon emissions, dragging down the performance of the Chinese market.

The U.S ranks 19th out of 48, slipping down four places compared with last year. It might be surprising for the country that emits the second-most carbon dioxide in the world — right after China — to score so decently. The main reason lies in the composition of the American stock market, where the technology, healthcare, financials, and consumer cyclical sectors are highly predominant, despite the fact that the energy sector has almost doubled its weight within the index in the last two years (at the end of March 2023, energy stocks account for 4.6% of the benchmark portfolio).

The most carbon-intensive country is by far Indonesia, with coal producer PT Bayan Resources responsible for a huge amount of emissions. Hong Kong and Turkey score poorly as well, mainly because of the carbon emitters in their indexes, such as utilities companies CLP Holdings, Power Assets Holdings, and CK Infrastructure Holdings, within the Hong Kong benchmark, or important names in the Turkish index, including the airline operator Turk Hava Yollari or the conglomerate Haci Omer Sabanci Holding.

Exhibit 3 Map of Morningstar Country Indexes' Carbon Risk Scores



Source: Morningstar Direct. Data as of March 31, 2023.

Map of Morningstar Country Indexes' Carbon Risk Scores

Carbon risk assesses the degree to which corporate value is at risk from the transition to a low-carbon economy. Companies with Low Carbon Risk Ratings, as assessed by Sustainalytics, are best poised to survive and thrive as the world moves away from fossil fuels, as they can face a range of carbon-related risks.

Climate change might threaten companies' physical assets or business models. They may be affected by policy or regulation aimed at lowering greenhouse gas emissions, their fossil fuel assets may be stranded, or changing popular perception may damage their brand. Certain economic sectors are inherently risky. Energy tops the list in terms of carbon risk and fossil fuel involvement, followed by utilities, basic materials, and industrials. Utilities and basic materials are actually more carbon intensive than energy at the sector level. Of course, carbon risk stems from different areas depending on the sector. For energy, which has the highest carbon exposure, the risk is in fossil fuel-related products and services, while utilities carry more carbon risk in their operations.

As with sustainability, 67% of an index's weight must be covered by Sustainalytics for portfolio-level Carbon Metrics to be calculated.

Northern European like the Netherlands, Switzerland, Denmark, Belgium, Sweden, and Germany carry the lowest levels of carbon risk. The U.S. scores very well, ranking eighth out of 48. A low level of the American stock market value is at risk from the transition to a low-carbon economy because of its technology and healthcare tilt and minimal exposure to energy and utilities. A notable exception is Berkshire Hathaway, which shows a Carbon Risk classified as High.

Environmental issues have been a key focus among consumers and investors alike for the past several years. According to Sustainalytics, considering the breakdown of its investees and its size, Berkshire has significantly higher exposure to risks around ESG-integration processes and responsible investing practices compared with its other holding peers. In addition, through its shareholdings, Berkshire is also indirectly exposed to ESG risks in various businesses, particularly in the financial, consumer goods, energy, and industrials sectors. Besides, Berkshire Hathaway is not currently aligned to a net-zero pathway, and Sustainalytics' analysts judge the company's management of low-carbon-transition issues as "weak" and expect that the company will increase its emissions by 23.5 % compared with its baseline projection.

On the flip side is Pakistan, with nearly 60% of its market cap in energy, utilities, and basic-materials stocks. It consequently has the world's highest Portfolio Carbon Risk Score. Also carrying significant Portfolio Carbon Risk Scores are energy-heavy markets Saudi Arabia, Czech Republic, and Qatar.

Hong Kong, one of the most carbon-intensive stock markets, shows a Portfolio Carbon Risk Score of Low, landing in the first quintile. Big companies and significant carbon emitters like industrial conglomerate CK Hutchison Holdings, utilities CLP Holdings, and Power Assets Holdings, as well as Galaxy Entertainment Group, are classified by Sustainalytics as carrying Carbon Risk Ratings of Medium, which means that, even though they are naturally exposed to high carbon risk, they are managing such risk through suitable policies.

Power Assets Holdings, for instance, currently focus on reducing the emissions of its power generation business, which makes up 12% of its assets. It reduced its coal capacity from 53% in 2016 to 32% in 2021 and aims to phase out all coal generation from its portfolio by 2035. Its coal-powered 800 MW Sheerness plant in Canada was converted to run on gas in 2021; a new gas plant is scheduled to be commissioned in Hong Kong to replace an existing coal plant. Some of its businesses have launched pilot programs, which involve mixing hydrogen in their gas supply as part of its long-term plan to completely transition from natural gas to hydrogen.

At the same time, CLP Holdings updated its targets for emission intensity to 0.3 kg CO_2e/kWh in 2030, 0.1 in 2040, and net zero in 2050. Its previous targets were 0.5 in 2030, 0.34 in 2040, and 0.15 in 2050. The company's emission intensity has declined by 17% over the last five years, reaching 0.57 in 2021. CLP also plans to phase out coal by 2040, a decade earlier than previously pledged.

By contrast, Kuwait and Peru post low Carbon Intensity scores but look riskier on a forward-looking basis.

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To learn more about sustainable investing and the Morningstar Low Carbon Designation, visit:
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