The MSCI Net-Zero Tracker

A quarterly gauge of progress by the world’s listed companies toward curbing climate risk
The world’s listed companies must act now to drive their greenhouse gas emissions to net-zero.

With delegates preparing to gather in Glasgow for the COP26 climate summit, we estimate that emissions of listed companies would cause temperatures to rise by 3 degrees Celsius (3°C) above preindustrial levels. That will not prevent a climate disaster. Nor will it work for investors who aim to cut emissions associated with their investments in half, just nine years from now, and to net-zero in the coming decades.

Investors are monitoring whether companies have credible plans to reduce their carbon footprint and are tracking the alignment of their portfolios with the Paris Agreement, which aims to limit global temperature rise to well below 2 degrees Celsius (2°C), and preferably to no more than 1.5°C.

The MSCI Net-Zero Tracker indicates the collective progress of listed companies toward global climate goals.1 It offers an objective gauge of companies’ contribution to total carbon emissions and their progress toward a net-zero economy.

This edition of the Net-Zero Tracker looks at the temperature rise of listed companies based on their projected emissions and counts down the time remaining to reach net-zero. It shows the companies with the largest carbon footprints, shines a light on corporate leaders and laggards in disclosure, and highlights companies whose decarbonization targets are notable for their alignment with global goals.

The Net-Zero Tracker underscores the need for climate-related financial disclosures with quantitative measurement based on internationally agreed standards. It also emphasizes the need for action – at the COP26 climate talks and beyond – so that investors can assess companies’ resilience to a changing world.

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1 Represented by the MSCI All Country World Investable Market Index (ACWI IMI), which includes large-, mid- and small-cap traded listed companies across 23 developed-market and 27 emerging-market countries. With 9,226 constituents, the index covers approximately 99% of the global equity investment opportunity set. As of September 30, 2021.
Key findings

Sounding the alarm

The lion’s share of listed companies are sharply misaligned with the goal of preventing the worst effects of a warming planet.

» Listed companies are on track to cause average temperatures to rise by nearly 3°C above preindustrial levels.

» Less than half (43%) of listed companies align with a 2°C temperature rise, which falls short of the Paris Agreement goal of keeping warming well below 2°C, preferably to no more than 1.5°C, above pre-industrial levels.

» Less than 10% of listed companies align with a 1.5°C temperature rise, which science tells us offers the best chance of averting a climate disaster.

» A majority of listed companies (57%) do not align with any globally agreed temperature target.

» Listed companies across all regions are misaligned with global climate goals.

Every sector has a climate problem

While the energy, materials and utilities sectors account for the bulk of global corporate emissions, there are high emitters in every sector. Even in typically low-emissions industries like health care, some companies’ emissions are aligned with temperatures that are much too high.

A shrinking window

We estimate listed companies will burn through their share of the global carbon budget for keeping temperature rise below 1.5°C by November 2026, based on their emissions as of the end of August. That is five months less than remained in May and reflects the surge in emissions as economies rebound from the pandemic.

Listed companies’ annual estimated emissions were 11.1 billion tons ( gigatons) of direct (Scope 1) greenhouse gases at the end of August, up from 10.9 gigatons at the end of May. The only way to buy more time is to cut net emissions faster.

Future editions of the MSCI Net-Zero Tracker will highlight both the aggregate share of MSCI All Country World Investable Market Index (MSCI ACWI IMI) constituents that have set net-zero targets and the targets’ thoroughness.*

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2 The calculation reflects listed companies’ share of the global budget, which is the total amount of greenhouse gas that humans can put into the atmosphere without undermining the Paris Agreement goal of keeping warming well below 2°C. See the MSCI Net-Zero Tracker (July 2021), available at [https://www.msci.com/documents/1296102/26195050/MSCI-Net-Zero-Tracker.pdf](https://www.msci.com/documents/1296102/26195050/MSCI-Net-Zero-Tracker.pdf)

3 As of September 8, 2021

* The MSCI Net-Zero Tracker is a summary report. Please contact us for details about any of the information covered.
Taking the temperature of listed companies

Listed companies’ emissions trajectories versus their carbon budget can be translated into an implied temperature rise metric showing the warming scenario they align with across all emissions scopes. Depending on their commitments, listed companies with similar emissions today could be on very different paths for the future.

Take the oil giants Royal Dutch Shell and Exxon Mobil, for example. Both emit hundreds of millions of tons of carbon every year. But their future pathways look very different. Shell has set a target that addresses its carbon footprint across all emissions scopes with the goal of reaching net-zero in less than 30 years, which aligns with a temperature rise of 2.1°C. Exxon, on the other hand, has yet to set a net-zero target and is on a path for warming of over 4°C.

MSCI measures the remaining emissions budget for each company within the MSCI ACWI IMI and calculates an implied temperature rise that considers the company’s Scope 1, 2 and 3 emissions together with any emissions-reduction targets.
Listed companies are putting carbon into the atmosphere at a rate that would make the planet nearly 3°C warmer. Less than half are on track to keep warming below 2°C, and only 10% are aligned with 1.5°C.

**Listed companies are on track to make the world 3°C warmer**

As of August 31, 2021

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MSCI Implied Temperature Rise in °C

- ≤1.5°C (10%)
- >1.5°C ≤2°C (33%)
- >2°C ≤3°C (33%)
- >3°C (24%)
- Implied Temperature Rise of listed companies = 3 °C
- Paris agreement

Aggregate temperature of the world’s listed companies = 3 °C

As of August 31, 2021

5 msci.com
No sector is immune

Some sectors are running hotter than others — the energy, materials and utilities sectors emit more and may be harder to decarbonize than sectors such as health care, financials and communication services. But there are high-emitting companies in every sector.

The outliers, even in low-emitting sectors, consume a disproportionate share of their industry’s remaining budget. In short, such listed companies are heavily spending other companies’ emissions. For the economy to reach net-zero emissions in less than 30 years, every company on track to exceed globally agreed thresholds will have to decarbonize.

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**Implied temperature rise by GICS® sector**

As of August 31, 2021
Taking corporate temperatures by region

Listed companies in every region are emitting too much. Though companies in developed economies are projected to become more carbon efficient than those in emerging economies, no region yet aligns with the Paris Agreement target. And because every company’s emissions warm the same atmosphere, carbon intensity is a global problem.

Implied temperature rise of listed companies by region

As of August 31, 2021

For the definition of developed- and emerging-market regions, see https://www.msci.com/our-solutions/indexes/market-classification
We’re running out of time to reach net-zero emissions

The window for reducing corporate emissions is shrinking. The world’s listed companies will deplete their share of the global emissions budget for keeping temperature rise to 1.5°C by November 2026, based on their current greenhouse gas output.\(^5\)

There is still room for a course correction, but it will demand a pivot without precedent. Listed companies need to cut their carbon intensity by 10% each year on average between now and 2050 to align with a 1.5°C rise in temperature. But from 2016 to 2020, less than a quarter of the world’s listed companies managed that feat.\(^6\)

\(^5\) The hourglass shows annual total Scope 1 emissions of MSCI ACWI IMI constituents (not index-weighted) based on listed companies’ reported emissions data and MSCI estimates, up to 2020. Emissions for 2020 that companies haven’t yet reported and 2021 figures are based solely on MSCI estimates, given a lag in company reporting. The remaining future emissions budget to achieve a 1.5°C and 2°C warming scenario are calculated based on bottom-up estimates (sum of remaining emissions budget of all MSCI ACWI IMI constituents) as of August 31, 2021.


Current annual emissions of MSCI ACWI IMI companies: 11.1 gigatons of CO2e

Remain 1.5°C budget of MSCI ACWI IMI companies: 58 gigatons of CO2e

Remain 2°C budget of MSCI ACWI IMI companies: 230 gigatons of CO2e

60.3 gigatons of CO2e of MSCI ACWI IMI companies since the Paris Agreement (Dec. 2015)
Corporate greenhouse gas emissions are heading in the wrong direction. We estimate that direct (Scope 1) emissions of the world’s listed companies will rise 6.7% this year as global economic activity continues to return to pre-pandemic levels.

Listed company emissions are forecast to account for about a fifth (19%) of this year’s total global carbon budget of 58 gigatons, which measures the total amount of greenhouse gas that can be put into the atmosphere and still limit warming to 1.5°C.

The table below shows the total MSCI ACWI IMI Scope 1 greenhouse gas emissions (sum for all constituents without index weighting) and total global emissions, as of August 31, 2021.

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Global*</td>
<td>51.2</td>
<td>51.7</td>
<td>51.8</td>
<td>51.9</td>
<td>53.5</td>
<td>55.3</td>
<td>59.1</td>
<td>55.3</td>
<td>58.0</td>
</tr>
<tr>
<td>MSCI ACWI IMI**</td>
<td>10.9</td>
<td>10.4</td>
<td>10.2</td>
<td>9.6</td>
<td>10.2</td>
<td>11.4</td>
<td>11.3</td>
<td>10.4</td>
<td>11.1</td>
</tr>
</tbody>
</table>

* Global emissions through the end of 2019 are based on annual UN Environment Programme reports. Global emissions forecasts for 2020 and 2021 are estimates based on changes in emissions as reported by Carbon Monitor (carbonmonitor.org).

** ACWI IMI emissions for 2019 as reported by companies or estimated by MSCI where not reported. Emissions for 2020 are based on company emissions data where available. Where unavailable, MSCI ESG Research estimates emissions based on the company’s sales figures. MSCI estimates changes in emissions for 2021 based on changes in emissions as reported by Carbon Monitor.
Scope 1 greenhouse gas emissions of listed companies

Emissions reflect the addition of China to the MSCI ACWI IMI starting in 2018

GHG emissions in Gigatons

ACWI IMI

ACWI IMI (Estimate)

Emission since the Paris agreement = 60.3Gt
The top 10 listed companies with the largest carbon footprints

The table below shows the 10 largest emitters in the MSCI ACWI IMI based on total greenhouse gas emissions in the 12 months that ended August 31, 2021. It also shows the contribution of each of those companies’ emissions to the total emissions of listed companies, as well as differences in transparency. Among companies with the largest carbon footprints, two – Gazprom and Royal Dutch Shell – report their emissions fully. Two others on the list – Saudi Arabian Oil Company and Coal India – report less than all of their direct (Scope 1) emissions.

The table shows:
- **Issuer** and **Country**
- **Scope 1 emissions** [tons of CO2e]
- **Scope 2 emissions** [tons of CO2e]
- **Scope 3 emissions** [tons of CO2e]
- **Total carbon emissions** [tons of CO2e]*
- **Sum of reported emissions vs MSCI estimated total emissions [%]**
- **Ratio of total company emissions (reported/estimated) vs ACWI IMI total emissions****

### Table

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Country</th>
<th>Scope 1 emissions [tons of CO2e]</th>
<th>Scope 2 emissions [tons of CO2e]</th>
<th>Scope 3 emissions [tons of CO2e]</th>
<th>Total carbon emissions [tons of CO2e]*</th>
<th>Sum of reported emissions vs MSCI estimated total emissions [%]</th>
<th>Ratio of total company emissions (reported/estimated) vs ACWI IMI total emissions****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabian Oil Company</td>
<td>Saudi Arabia</td>
<td>141,353,354</td>
<td>12,882,544</td>
<td>2,066,786,386</td>
<td>2,221,022,284</td>
<td>Estimated only***</td>
<td>3.5%</td>
</tr>
<tr>
<td>GAZPROM PAO</td>
<td>Russia</td>
<td>210,300,000</td>
<td>11,730,000</td>
<td>1,425,140,400</td>
<td>1,300,530,000</td>
<td>94%</td>
<td>2.0%</td>
</tr>
<tr>
<td>COAL INDIA LTD</td>
<td>India</td>
<td>14,548,847</td>
<td>1,528,528</td>
<td>997,562,628</td>
<td>1,013,640,003</td>
<td>Estimated only***</td>
<td>1.6%</td>
</tr>
<tr>
<td>NK ROSNEFT PAO</td>
<td>Russia</td>
<td>59,400,000</td>
<td>21,800,000</td>
<td>868,025,787</td>
<td>949,225,787</td>
<td>34%</td>
<td>1.5%</td>
</tr>
<tr>
<td>PetroChina Company Limited</td>
<td>China</td>
<td>132,170,000</td>
<td>41,910,000</td>
<td>660,197,527</td>
<td>834,277,527</td>
<td>21%</td>
<td>1.3%</td>
</tr>
<tr>
<td>EXXON MOBIL CORPORATION</td>
<td>U.S.</td>
<td>105,000,000</td>
<td>7,000,000</td>
<td>627,200,392</td>
<td>739,200,392</td>
<td>88%</td>
<td>1.2%</td>
</tr>
<tr>
<td>China Shenhua Energy Company Limited</td>
<td>China</td>
<td>126,680,000</td>
<td>8,220,000</td>
<td>529,127,420</td>
<td>664,027,420</td>
<td>20%</td>
<td>1.0%</td>
</tr>
<tr>
<td>ROYAL DUTCH SHELL PLC</td>
<td>Netherlands</td>
<td>63,000,000</td>
<td>9,000,000</td>
<td>585,031,708</td>
<td>657,031,708</td>
<td>98%</td>
<td>1.0%</td>
</tr>
<tr>
<td>BP P.L.C.</td>
<td>U.K.</td>
<td>41,300,000</td>
<td>4,200,000</td>
<td>592,909,079</td>
<td>638,409,079</td>
<td>58%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Daimler AG</td>
<td>Germany</td>
<td>1,027,000</td>
<td>1,035,000</td>
<td>559,009,237</td>
<td>561,071,237</td>
<td>19%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

* Sum of reported or estimated Scope 1 and 2 emissions plus Scope 3 emissions estimates.

** If a company does not report its Scope 1 and 2 carbon emissions data, MSCI estimates each scope separately based on either the company’s previously reported emissions data or, if none, the carbon emissions intensity of the company’s production or industry segments. We estimate Scope 3 emissions for all companies in our coverage based on company-specific information that considers both the revenue intensity of emissions and production data, in line with the Greenhouse Gas Protocol framework. For more information, please see: “MSCI Climate Change Metrics Methodology and Definition” and “Scope 3 Carbon Emissions Estimation Methodology.” MSCI ESG Research LLC

*** Comparison between reported and estimated emissions does not apply because the company reports only some of its Scope 1 emissions. Hence, MSCI uses estimates alone to calculate the company’s total emissions.

**** Because companies’ share their value chain with multiple other companies, double counting is unavoidable when estimating Scope 2 and 3 emissions. The comparison here, on average, cancels this double counting by comparing each listed company’s share of total emissions to ACWI IMI total emissions.
What gets measured gets managed. Investors need emissions disclosures to assess the resilience of every company to climate change. Disclosure helps investors assess the carbon intensity of companies, to model climate-related financial risk and its possible impact on the performance of portfolios and to allocate capital accordingly.

Public companies with improved emissions reporting

The table below shows the 15 largest listed companies by market capitalization in the MSCI ACWI IMI that reported additional scopes or categories of greenhouse gas emissions in the 12 months that ended August 31, 2021. As it happens, the companies below also are now reporting substantially all their emissions across all emissions scopes.

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Country</th>
<th>Total reported emissions [tons CO2e]</th>
<th>Total estimated emissions [tons CO2e]</th>
<th>Sum of reported emissions vs MSCI estimated total emissions [%]*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deutsche Telekom AG</td>
<td>Germany</td>
<td>18,931,684</td>
<td>16,696,169</td>
<td>113%</td>
</tr>
<tr>
<td>HESS CORPORATION</td>
<td>U.S.</td>
<td>56,800,000</td>
<td>52,462,488</td>
<td>108%</td>
</tr>
<tr>
<td>DAIWA HOUSE INDUSTRY CO., LTD.</td>
<td>Japan</td>
<td>11,395,844</td>
<td>11,204,577</td>
<td>102%</td>
</tr>
<tr>
<td>A.P. MOELLER - MAERSK A/S</td>
<td>Denmark</td>
<td>53,224,000</td>
<td>52,442,814</td>
<td>101%</td>
</tr>
<tr>
<td>TOYOTA INDUSTRIES CORPORATION</td>
<td>Japan</td>
<td>48,455,818</td>
<td>48,341,263</td>
<td>100%</td>
</tr>
<tr>
<td>NANYA TECHNOLOGY CORPORATION</td>
<td>Taiwan</td>
<td>1,381,014</td>
<td>1,391,165</td>
<td>99%</td>
</tr>
<tr>
<td>Mitsui Chemicals, Inc.</td>
<td>Japan</td>
<td>16,752,064</td>
<td>16,954,596</td>
<td>99%</td>
</tr>
<tr>
<td>EIZO Corporation</td>
<td>Japan</td>
<td>381,275</td>
<td>388,531</td>
<td>98%</td>
</tr>
<tr>
<td>CNX RESOURCES CORPORATION</td>
<td>U.S.</td>
<td>29,960,000</td>
<td>30,631,427</td>
<td>98%</td>
</tr>
<tr>
<td>GREIF, INC.</td>
<td>U.S.</td>
<td>5,693,100</td>
<td>5,821,259</td>
<td>98%</td>
</tr>
<tr>
<td>Yadea Group Holdings Ltd</td>
<td>China</td>
<td>23,809</td>
<td>24,351</td>
<td>98%</td>
</tr>
<tr>
<td>Clariant AG</td>
<td>China</td>
<td>4,990,000</td>
<td>5,137,893</td>
<td>97%</td>
</tr>
<tr>
<td>SERCO GROUP PLC</td>
<td>U.K.</td>
<td>1,170,133</td>
<td>1,206,768</td>
<td>97%</td>
</tr>
<tr>
<td>COVANTA HOLDING CORPORATION</td>
<td>U.S.</td>
<td>4,857,554</td>
<td>5,020,894</td>
<td>97%</td>
</tr>
<tr>
<td>GAZPROM PAO</td>
<td>Russia</td>
<td>1,300,530,000</td>
<td>1,384,973,494</td>
<td>94%</td>
</tr>
</tbody>
</table>

* If a company does not report its Scope 1 and 2 carbon emissions data, MSCI estimates each scope separately based on either the company’s previously reported emissions data or, if none, the carbon emissions intensity of the company’s production or industry segments. We estimate Scope 3 emissions for all companies in our coverage based on company-specific information that considers both the revenue intensity of emissions and production data, in line with the Greenhouse Gas Protocol framework. For more information, please see: “MSCI Climate Change Metrics Methodology and Definition” and “Scope 3 Carbon Emissions Estimation Methodology.” MSCI ESG Research LLC
The largest emitters that have not disclosed their greenhouse gas emissions

The table below shows the 10 largest emitters based on MSCI’s estimates of emissions across all emissions scopes that have not reported any of their greenhouse gas emissions as of August 31, 2021.7

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Country</th>
<th>Emissions reference year (note capitalization)</th>
<th>GICS® sector</th>
<th>Total estimated emissions [tons CO2e]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaanxi Coal Industry Company Limited</td>
<td>China</td>
<td>2019</td>
<td>Energy</td>
<td>200,839,903</td>
</tr>
<tr>
<td>BERKSHIRE HATHAWAY INC.*</td>
<td>U.S.</td>
<td>2020</td>
<td>Financials</td>
<td>146,814,617</td>
</tr>
<tr>
<td>China State Construction Engineering Corporation Limited</td>
<td>China</td>
<td>2020</td>
<td>Industrials</td>
<td>93,669,496</td>
</tr>
<tr>
<td>Shanxi Coking Coal Energy Group Co., Ltd.</td>
<td>China</td>
<td>2019</td>
<td>Energy</td>
<td>82,534,966</td>
</tr>
<tr>
<td>PBF ENERGY INC.</td>
<td>U.S.</td>
<td>2020</td>
<td>Energy</td>
<td>75,332,910</td>
</tr>
<tr>
<td>Shanxi Lu’an Environmental Energy Dev. Co., Ltd</td>
<td>China</td>
<td>2020</td>
<td>Energy</td>
<td>73,857,910</td>
</tr>
<tr>
<td>CHINA AVIATION OIL (SINGAPORE) CORPORATION LTD</td>
<td>China</td>
<td>2020</td>
<td>Energy</td>
<td>64,153,719</td>
</tr>
<tr>
<td>Dongfang Electric Corporation Limited</td>
<td>China</td>
<td>2020</td>
<td>Industrials</td>
<td>57,586,774</td>
</tr>
<tr>
<td>MASTEC, INC.</td>
<td>U.S.</td>
<td>2020</td>
<td>Industrials</td>
<td>41,013,329</td>
</tr>
</tbody>
</table>

* Berkshire Hathaway Inc., a holding company, has not reported carbon emissions as of August 31, 2021. At least three of its subsidiaries — Berkshire Hathaway Energy, MidAmerican Energy Company, and Burlington Northern Santa Fe (BNSF) — have reported emissions separately. The holding company, however, has not reported its emissions in the aggregate.

7 MSCI reported incorrectly in July that Coal India and Surgutneftegas PAO had not reported any of their emissions as of May 31, 2021. Coal India reported its Scope 1 and 2 emissions, which totaled 5 megatons of CO2, in April 2021. Surgutneftegaz PAO reported its Scope 1 and 2 emissions for its oil and gas production business, which totaled 2 megatons of CO2 in June 2020 and 1 megaton of CO2 in June 2021, respectively.
Public companies with the most thorough emissions-reduction targets

Not all decarbonization targets are worthy of the task. While corporate climate leaders aim to achieve net-zero emissions across their entire carbon footprint, some companies start with targets that address only a fraction.

The table below shows the 10 companies in the MSCI ACWI IMI that have published the most thorough corporate decarbonization targets in the 12 months that ended August 31, 2021.

We assessed thoroughness according to three criteria: comprehensiveness (the table below comprises targets that address a company’s total emissions), the change in emissions (% of tons of CO2e) targeted each year and the implied temperature rise that would result. 8

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Country</th>
<th>Latest target announcement date</th>
<th>Annual total emissions (tons of CO2e)</th>
<th>Projected normalized change in emissions per year [%]</th>
<th>Comprehensiveness of target [%]</th>
<th>Implied temperature rise (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>J Sainsbury PLC</td>
<td>U.K.</td>
<td>2020</td>
<td>31,718,705</td>
<td>-3.23</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>H &amp; M Hennes &amp; Mauritz AB</td>
<td>Sweden</td>
<td>2018</td>
<td>17,387,525</td>
<td>-3.23</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>GlaxoSmithKline PLC</td>
<td>U.K.</td>
<td>2019</td>
<td>17,425,188</td>
<td>-3.23</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>Electricité de France SA</td>
<td>France</td>
<td>2020</td>
<td>135,300,000</td>
<td>-3.23</td>
<td>100</td>
<td>1.6</td>
</tr>
<tr>
<td>BT GROUP PLC</td>
<td>U.K.</td>
<td>2020</td>
<td>3,428,510</td>
<td>-3.84</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>Shionogi &amp; Co., Ltd.</td>
<td>Japan</td>
<td>2020</td>
<td>141,675</td>
<td>-3.23</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>Astrazeneca PLC</td>
<td>U.K.</td>
<td>2020</td>
<td>7,803,145</td>
<td>-8.69</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>MORGAN SINDALL GROUP PLC</td>
<td>U.K.</td>
<td>2020</td>
<td>3,969</td>
<td>-3.2</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>Koninklijke BAM Groep N.V.</td>
<td>Netherlands</td>
<td>2020</td>
<td>3,642,859</td>
<td>-3.07</td>
<td>100</td>
<td>1.3</td>
</tr>
<tr>
<td>ROYAL DUTCH SHELL PLC</td>
<td>Netherlands</td>
<td>2020</td>
<td>657,031,708</td>
<td>-3.23</td>
<td>100</td>
<td>2.1</td>
</tr>
</tbody>
</table>

8 MSCI measures comprehensiveness as the percentage of Scope 1, 2 and 3 emissions covered by the company’s targets. MSCI standardizes companies’ projected emissions to show them as the amount to be reduced annually.
The world’s companies are running out of time to slow the worst of climate change. We estimate that emissions of listed companies would make the world roughly 3°C warmer.

Fifty-seven percent of listed companies have yet to align with the goal of keeping global warming well below 2°C, preferably to no more than 1.5°C, above preindustrial levels, as called for by the Paris Agreement. Even low-emissions sectors include companies with high emissions. Such companies are putting carbon into the atmosphere in amounts that far exceed their fair share of the emissions budget that remains for keeping temperature rise within the globally agreed threshold.

Corporate carbon emissions, meanwhile, are ticking back up as the global economy starts to recover from the pandemic. The window for keeping average temperature rise to 1.5°C narrowed by five months between May and August.

Gaps also remain in companies’ disclosure of their carbon emissions. Some companies are broadening their emissions reporting and setting decarbonization targets that align with global goals. Others have yet to disclose their emissions at all.

Investors need climate disclosures with measurable data to assess the resilience of companies to both the physical risks of climate change and the risks of transitioning to a net-zero economy. Companies must do more to drive down and disclose emissions. The time to act is slipping away.
Glossary

Comprehensiveness (of emission reporting or target setting): Percentage of listed companies’ Scope 1, 2 and 3 emissions covered by emissions reporting or target setting.

Carbon dioxide equivalent (CO2e): Greenhouse gas emissions with the same global warming potential as one metric ton of carbon.

Emissions intensity: Greenhouse gas emissions in CO2-equivalent tons per million USD of company sales.

Implied Temperature Rise: A measure that converts a company’s current and projected greenhouse gas emissions across all emissions scopes (based on the company’s track record and stated reduction targets) to an estimated rise in global temperatures by comparing those emissions with the global carbon for keeping warming well below 2°C.

Megaton [Mt]: One million tons (of emissions).

GICS®: The global industry classification standard jointly developed by MSCI Inc. and S&P Global Market Intelligence.

Gigaton [Gt]: One billion tons (of emissions).

MSCI ACWI Investable Market Index (IMI): Captures listed large-, mid- and small-cap companies across developed- and emerging-market countries. With 9,226 constituents (as of Sept. 20, 2021), this index covers approximately 99% of the global equity investment opportunity set.

Remaining emissions budget: A company’s remaining future emissions budget in tons of CO2e to stay within a 1.5°C or 2°C warming scenario. (Please contact esgclientservice@msci.com for full methodology.)

Scope 1 emissions: Listed companies’ direct greenhouse gas emissions in tons of CO2 equivalent (CO2e).

Scope 2 emissions: Listed companies’ greenhouse gas emissions from electricity use in tons of CO2 equivalent (CO2e).

Scope 3 emissions: Listed companies’ indirect greenhouse gas emissions in tons of CO2 equivalent (CO2e) from upstream supply chain and emissions inherent in products and services (downstream). Scope 3 covers 15 categories of upstream and downstream emissions as defined by the Greenhouse Gas Protocol.
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