

# The Sustainability Yearbook 2022

Long-term sustainability risks  
require near-term action

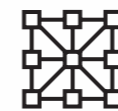
# The Sustainability Yearbook 2022

# 2022 Annual Corporate Sustainability Assessment

February 2022

[spglobal.com/esg/csa/yearbook/](https://spglobal.com/esg/csa/yearbook/)

**S&P Global**



**61**

Industries



**7,554**

Companies assessed\*

\*As of January 21, 2022



**140,136**

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The Sustainability Yearbook 2022 is based on results captured in the 2021 Corporate Sustainability Assessment from April 2021 to January 2022.

## The Sustainability Yearbook

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# Foreword

This is not just an accounting of corporate sustainability practices. What you are about to read is a close examination of some of the major business and finance trends of the past year—topics that will continue to be front and center well into the future.

Consequently, the themes presented in this report should be of great interest not just to ESG practitioners but to business leaders everywhere. The talented authors have used S&P Global’s best-in-class ESG data and analytics to explain how companies are adapting to rapid changes. They cover everything from the transition to a low carbon economy to the state of corporate diversity and the dramatic shifts in the labor market we saw in 2021 to the growing recognition that businesses have an important role to play in protecting biodiversity.

Last year, more companies than ever participated in S&P Global’s Corporate Sustainability Assessment (CSA). The CSA forms the backbone of the research on which this report is based. We thank the companies that participated in this process, demonstrating their ongoing commitment to transparency about their ESG performance.

In 2021, public-private sector cooperation helped power the move to a more transparent and trustworthy ESG investing ecosystem. At the COP26 climate change conference in Glasgow, the IFRS Foundation announced the formation of the International Sustainability Standards Board to “develop a comprehensive global baseline of high-quality sustainability disclosure standards.” At S&P Global, we welcomed this news.

In addition, the Impact Taskforce (ITF), a private-sector-led, independent body supported by the UK’s government under its presidency of the G7, released recommendations focused on driving private financing to promote impact-driven economies and societies. It was a privilege to represent S&P Global as chair of the ITF workstream dealing with the steps that are needed to produce greater transparency, harmonized disclosure standards, and better data that will facilitate the flow of capital toward projects with positive impact on people and the planet.

These initiatives, as well as others, make me hopeful that we can achieve more transparency and better comparability

and standardization of sustainability-related data. Doing so would be a huge benefit for companies and the financial system.

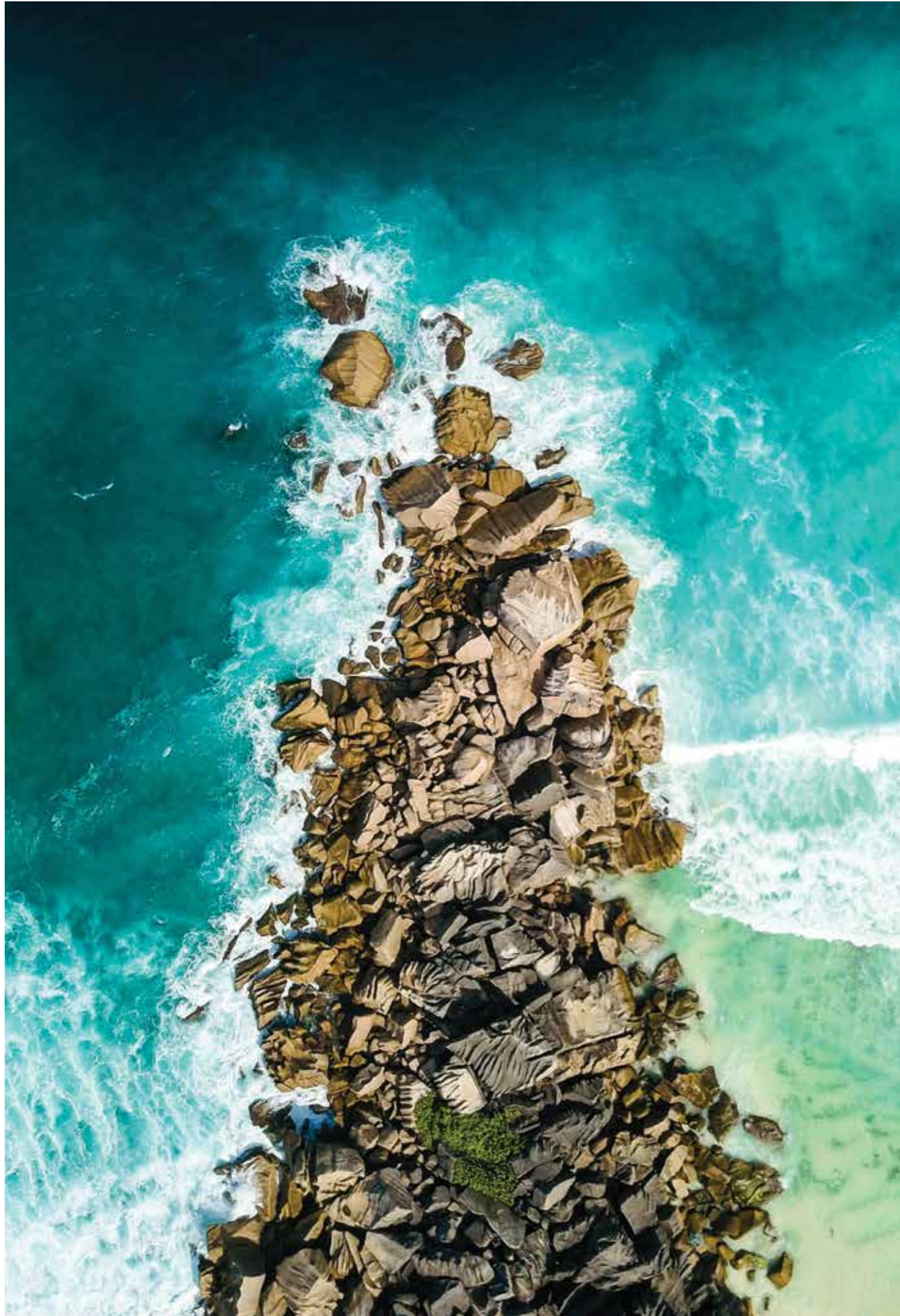
In closing, I want to thank Manjit Jus, S&P Global’s Global Head of ESG Research and Data, and his team who are responsible for this report. They have done a fabulous job advancing our understanding of corporate behavior, and they continue to contribute to the global dialogue about corporate disclosure. I am grateful for their work.

Douglas L. Peterson  
President and CEO  
S&P Global



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## Introduction

Dear Reader,

I am proud to introduce you to the latest S&P Global Sustainability Yearbook, a collection of insights based on S&P Global's research into some of the most pressing challenges the world faces. The Yearbook also acknowledges and distinguishes those companies that are leading their industries on sustainable business practices – across a broad spectrum of the economy.

For many years, the Yearbook has served as one of the more comprehensive annual publications on the state of corporate sustainability, reflecting on developments of the past year and providing an outlook on upcoming environmental, social and governance issues. This year, for the first time, we are publishing the Yearbook under the S&P Global Sustainable1 brand. Formed in early 2021, Sustainable1 brings together foundational elements of S&P Global's ESG research and analytical capabilities. Building on strong legacy brands such as Trucost and SAM, Sustainable1 serves as a source for sustainability intelligence within S&P Global, helping to drive thought leadership and innovative product solutions for the market.

The Sustainability Yearbook represents an annual snapshot of the work being done within Sustainable1. Our research on corporate sustainability is underpinned by the S&P Global Corporate Sustainability Assessment, or CSA, a research process that has been evolving since 1999 to capture ESG metrics and data on increasingly complex sustainability topics. Our data and analytics are supported by expertise from across S&P Global's divisions.

Our key focus areas this year include five topics spanning the E, the S and the G that will continue to drive corporate sustainability strategies in 2022 and beyond:

**– More companies calling climate change a 'material issue' as stress testing gains traction:** In the face of increasing climate-related regulation worldwide, more companies are building strategies to prepare for climate change. This includes everything from measuring and disclosing their risks to using scenario analysis to test how their approaches hold up under different climate change scenarios. Nearly one-quarter of companies surveyed in the 2021 CSA now consider climate change a material issue.



**– Most companies aren't setting basic climate targets, putting net zero out of reach:**

As climate came even more into the spotlight in 2021, so did corporate discussions about net zero targets. Nonetheless, the 2021 CSA indicates that most companies globally have not set initial emission reduction targets, much less net zero ones. We found that companies that do have net zero targets scored better in the assessment of emissions and disclosure criteria if they also have interim goals before 2040.

**– Nature is climbing the agenda, but corporate biodiversity commitments remain rare:**

Nature continues to gain prominence in ESG discussions, but we found that pledges to protect biodiversity and natural capital remain sparse. Fewer than 20% of S&P 500 companies have made commitments, according to the 2021 CSA. And among companies with a commitment, 40% have not set a target year. That lack of accountability could undermine the pledge, no matter how significant it is.

**– COVID-19 upended employee expectations**

**– now companies must adapt:** The global employment landscape changed dramatically as a result of the COVID-19

pandemic. Learning to navigate changing employee expectations is becoming a necessity for companies as workers, regulators and investors demand a greater focus on human capital management. Our research shows how 2020 set the stage for the current tumultuous labor market, and we highlight the industries best prepared to offer the kinds of benefits that workers are seeking in an era still defined by the pandemic.

**– Progress toward corporate diversity requires more than ticked boxes and token hires:**

Social issues gained prominence in the corporate world during the coronavirus pandemic, and as a result, companies are increasingly turning to diversity, equity and inclusion as part of the effort to grapple with the S in ESG. Mindful of this shift, we added several new questions to the 2021 CSA asking companies about the breakdown of their workforces based on race, ethnicity and nationality, as well as age, LGBTQI+ status and disability.

In 2021, we saw a record number of companies from around the world engage with us through our research process. More than 2,100 companies representing more than 45% of global market cap engaged with S&P Global

in reviewing collected data or supplementing publicly reported data with additional disclosure and context. We firmly believe that a robust ESG research process must include the companies being researched to ensure accuracy, and also to create buy-in so that the results of this research process are used to drive measurable change.

Companies engage in our research process because they derive value from the outcomes of our analysis, and also from the process itself. Companies tell us that engaging internal subject matter experts across the organization in the disclosure process helps to strengthen internal networks and fosters sustainability champions who in turn drive change within their domains.

The record number of engaged companies from all geographies reflects the growing importance of sound sustainability practices to navigate stricter regulations and increasing stakeholder expectations.

To make progress against the most urgent challenges of our time, it is becoming increasingly necessary to demonstrate real, measurable sustainability impacts. There are many lenses through which to view sustainability issues, and a single ESG score may never be able to fully capture all of these. That is why being part of the ongoing stakeholder dialogue is critical – to

better understand the different perspectives on sustainability and to be able to zoom in on those that are most critical for companies, investors, and the world at large. The Sustainability Yearbook is a small contribution toward creating more transparency and insight into areas that matter to a broad group of stakeholders.

I feel privileged that our research organization sits at the intersection of many of these conversations, driving forward sustainability thinking at companies on one hand and providing the data and analytics investors need to steer capital toward sustainable development. I hope you enjoy reading the articles and learning about the trends and companies that are driving change within their industries.

Manjit Jus  
Managing Director, Global Head of ESG Research  
S&P Global Sustainable1



**More companies calling climate change a 'material issue' as stress testing gains traction**





Key takeaways:

- Nearly one-quarter of companies surveyed in the 2021 S&P Global Corporate Sustainability Assessment call climate change a material risk.
- Incoming mandatory disclosure rules in some jurisdictions are driving companies to integrate recommendations from the Task Force on Climate-Related Financial Disclosures into risk management.
- Scenario analysis could help carbon-intensive sectors prepare for the future as climate hazards increase and the energy transition progresses.

The destructive effects of climate change have upended lives and economies for decades, and 2021 was no exception: from flooding in Europe and Canada and wildfires in the U.S. to growing water scarcity and agricultural disruption, the human and financial costs were great. The number of weather-related disasters has risen 5x from the 1970s to the 2010s, with economic losses related to those events reaching \$1.38 trillion in the 2010-2019 decade, the World Meteorological Organization said in August 2021.<sup>1</sup>

More than ever before, companies are taking the risk seriously.



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<sup>1</sup> "WMO Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes (1970-2019) (WMO-No. 1267)," World Meteorological Organization, 2021, [https://library.wmo.int/doc\\_num.php?explnum\\_id=10902](https://library.wmo.int/doc_num.php?explnum_id=10902).



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<sup>2</sup> "Why we need Biden's executive order on climate-related financial risk," S&P Global Sustainable1, May 24, 2021, <https://www.spglobal.com/esg/insights/why-we-need-biden-s-executive-order-on-climate-related-financial-risk>.



Stuart Bowles  
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Results from the 2021 S&P Global Corporate Sustainability Assessment, or CSA, show that more companies are building strategies to prepare for climate change, from measuring and disclosing their risks to using scenario analysis to test how their approaches hold up under different climate change scenarios. Nearly one-quarter of companies surveyed now give climate change the weighty label of "material issue."

Companies face pressure to prepare from three directions: internally, from investors and from regulators. Almost 60% of the companies in the S&P 500 have at least one asset at high risk of physical impact from climate change, according to S&P Global Sustainable1 data.<sup>2</sup> Shareholders and portfolio managers are increasingly assessing their holdings for climate change risk. And a growing number of regulators across jurisdictions are outright requiring climate risk disclosure at financial institutions or stress testing their economies' climate resiliency.

In this context, CSA data shows that the most carbon-intensive sectors such as utilities and energy are recognizing the threat and integrating climate into business strategy. But there is some disparity among companies in the use of scenario analysis to test the resiliency of climate strategies — a tool that could help companies avoid credit downgrades as climate hazards increase and the energy transition progresses.

<sup>3</sup> "New EU ESG disclosure rules to recast sustainable investment landscape," S&P Global Sustainable1, Aug. 3, 2021, <https://www.spglobal.com/esg/insights/new-eu-esg-disclosure-rules-to-recast-sustainable-investment-landscape>

<sup>4</sup> "ASEAN Sectoral Bodies Release ASEAN Taxonomy for Sustainable Finance – Version 1," Association of Southeast Asian Nations, Nov. 10, 2021, <https://asean.org/asean-sectoral-bodies-release-asean-taxonomy-for-sustainable-finance-version-1/>.

<sup>5</sup> "Common Ground Taxonomy – Climate Change Mitigation," International Platform on Sustainable Finance, Nov. 4, 2021, [https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/211104-ipsf-common-ground-taxonomy-instruction-report\\_en.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/211104-ipsf-common-ground-taxonomy-instruction-report_en.pdf).

<sup>6</sup> "Top US financial regulator faces big questions in move to mandate ESG disclosures," S&P Global Sustainable1, Sept. 8, 2021, <https://www.spglobal.com/esg/insights/top-us-financial-regulator-faces-big-questions-in-move-to-mandate-esg-disclosures>.

Regulation is driving increased disclosure

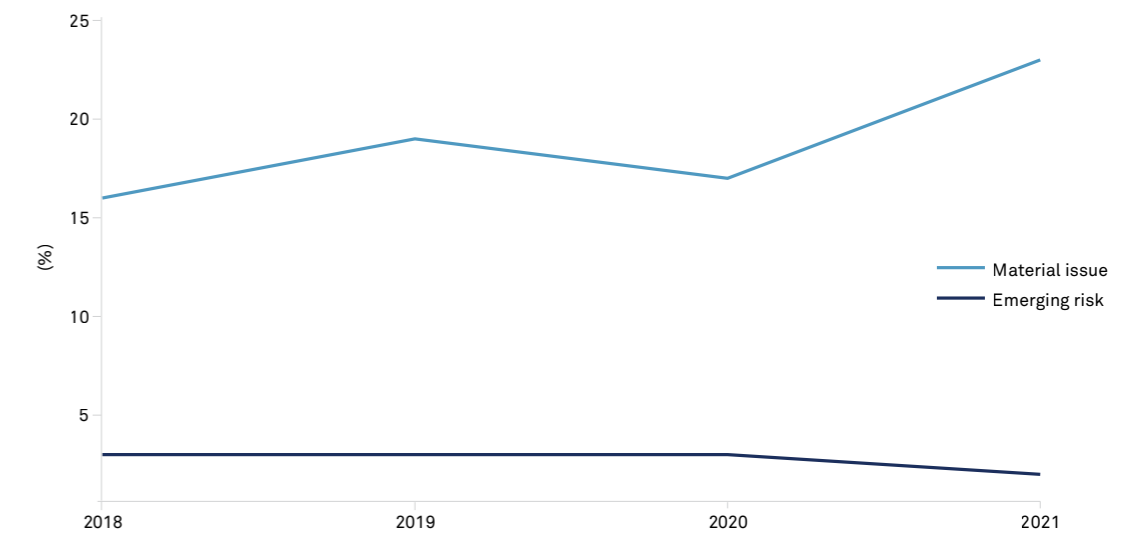
An uptick in climate-related regulation worldwide is signaling to companies that the wind is changing on risk disclosure and strategy integration. The European Union took the lead in 2018 with the launch of its Sustainable Finance Action Plan, a broad package of rules that are reshaping the sustainability landscape. There is the EU green taxonomy – a dictionary of sustainable activities designed to steer companies as they adapt their business strategies to climate change – and a raft of ESG disclosure-related rules, including the Sustainable Finance Disclosure Regulation, which requires asset managers, pension funds and insurers to disclose how they consider ESG risks in their investment decisions.<sup>3</sup>

Taxonomies and disclosure rules are springing up worldwide. The Association of Southeast Asian Nations, an economic forum of 10 southeast Asian nations including Thailand, the Philippines and Malaysia, published its taxonomy in November 2021.<sup>4</sup> China already has its own taxonomy and is working on a common taxonomy with the EU.<sup>5</sup> The U.S. Securities and Exchange Commission is developing climate risk disclosure regulations on climate risk.<sup>6</sup>

There is also growing momentum for making voluntary disclosure frameworks such as the influential Task Force on Climate-Related Financial Disclosures, or TCFD, mandatory. Calls for a consistent, global ESG disclosure framework prompted the creation of an International Sustainability Standards Board.

Rising number of companies see climate change as material risk

Percentage of surveyed companies identifying climate change as one their "top 3 material issues" or as an "emerging risk" by year



Data as of November 2021. Based on 2,130 to 3,967 companies surveyed each year from 2018 to 2021. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

The percentage of surveyed companies calling climate change a material issue rose to 23% in the 2021 CSA from 17% the prior year.



The goal of the 2015 Paris Agreement is to limit global warming to “well below” 2 degrees C and “preferably” to 1.5 degrees C compared to preindustrial temperatures.

Against this backdrop, more corporates are calling climate change a material issue for their business. According to the 2021 CSA, companies are increasingly considering climate one of the top three concerns that could have a material impact on their business. The percentage of surveyed companies calling climate change a material issue rose to 23% in the 2021 CSA from 17% the prior year.

Sustainability reporting and disclosure are improving in tandem. Almost all sectors improved their scores on Climate Strategy, the CSA criterion that considers the strategies implemented by the business to consider the risks and opportunities of climate change, alongside approaches for mitigation and adaptation. The criterion is aligned with the CDP, a nonprofit formerly known as the Carbon Disclosure Project, a global environmental disclosure framework for investors and companies.

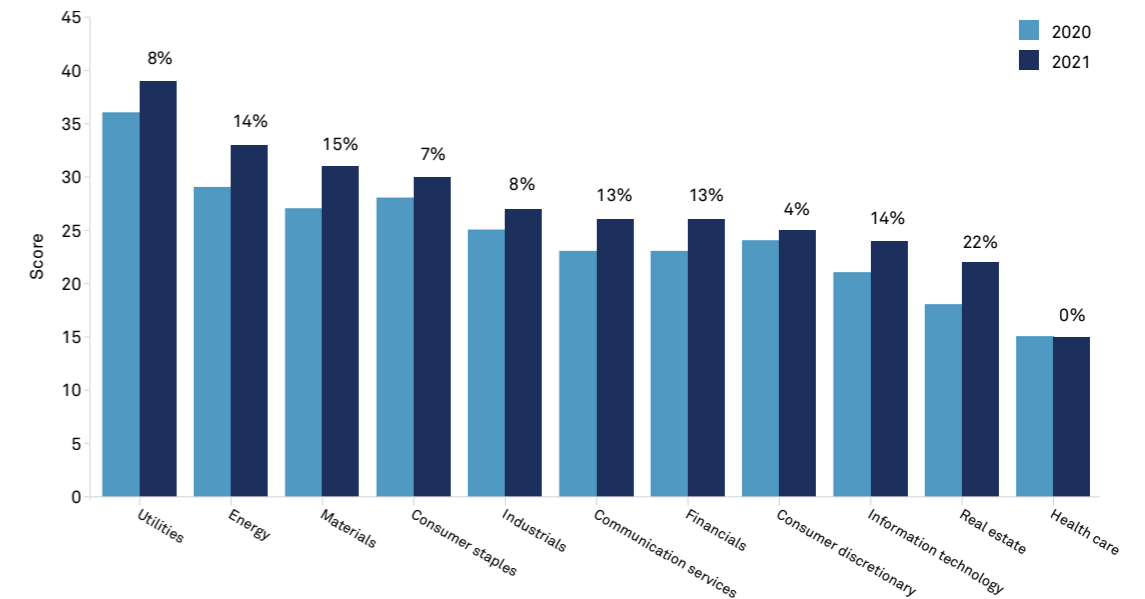
Some of the most carbon-intensive sectors account for the highest score increases, showing that the companies facing a business reboot from climate change are increasingly integrating this risk into their business strategies. The real estate sector, which includes property developers and managers<sup>7</sup>, saw a 22% increase in its climate strategy scores. The materials sector improved 15%, while energy and information technology improved 14%.

### Integration of the TCFD in risk management

Frameworks such as the Financial Stability Board’s TCFD are encouraging companies to report on how climate risks could impact their businesses. The TCFD has provided companies with a voluntary framework since June 2017 and uses standardized guidelines to steer companies in disclosing material climate risks. It focuses on governance, strategy and risk management as well as metrics and targets.

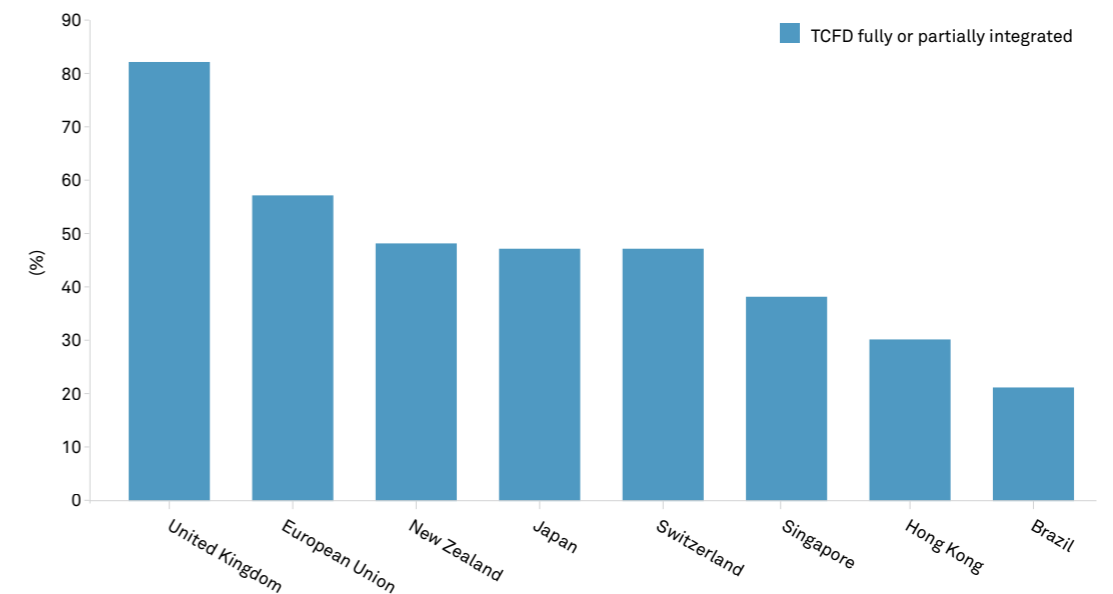
<sup>7</sup> Existing buildings and new construction are the source of nearly 40% of global energy-related carbon emissions, according to the nonprofit World Green Building Council. “UN climate conference seeks concrete steps to tackle dirty, energy-hungry buildings,” S&P Global Sustainable1, Nov. 3, 2021, <https://www.spglobal.com/esg/insights/un-climate-conference-seeks-concrete-steps-to-tackle-dirty-energy-hungry-buildings>.

### Energy, materials and real estate sectors show highest improvement in climate strategy scores



Data as of November 2021. The CSA’s Climate Strategy criterion focuses on the risks and opportunities of climate change as well as mitigation and adaptation strategies and measures. The criterion is aligned with the CDP. Based on a survey of 5,301 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

### Mandatory TCFD disclosure rules in the UK are pushing companies to integrate the framework



Data as of November 2021. Based on a survey of 5,301 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.



In 2021, the CSA asked for the first time whether companies integrate TCFD in their risk management. The survey results show that high-carbon emitting sectors with greater exposure to transition and physical risks have a higher percentage of companies that have started to integrate TCFD.

For example, more than 60% of energy companies surveyed are reporting fully or partially in line with the TCFD's 11 disclosure recommendations. These recommendations include detailing management's role in calculating and overseeing climate-related risks, as well as conducting scenario analysis to test a company's resilience to "different climate-related scenarios, including 2 degree or lower scenario."<sup>8</sup> The goal of the 2015 Paris Agreement is to limit global warming to "well below" 2 degrees C and "preferably" to 1.5 degrees C compared to preindustrial temperatures. More than 56% of utilities firms surveyed integrate TCFD, compared to 46% of materials and 41% of financials.

Health care is at the bottom of the pack, with 16.5% of companies surveyed integrating TCFD into risk management. The health care sector contributes just 4.4% of global emissions, but the COVID-19 pandemic

made it one of the fastest-growing sectors in the world, and its carbon footprint could triple by 2050 if no action is taken.<sup>9</sup>

### Companies prepare for mandatory disclosure rules

The momentum for increased disclosure comes as many jurisdictions are making it mandatory for companies to report on climate risk, with many of them endorsing the TCFD. A strong signal for widespread compulsory TCFD disclosure came in June 2021, when the G7 group of countries said they backed the idea.

While the EU has not officially adopted the TCFD for its 27 member states, it is reforming its Non-Financial Reporting Directive as the Corporate Sustainability Reporting Directive. The policy hinges on the idea of "double materiality," in which firms need to report not just in financial terms but also about how sustainability issues affect them and how their business affects the environment, employees and customers.<sup>10</sup> The expanded regulation will also require companies to disclose what percentage of their revenues are in line with the EU's green taxonomy.

<sup>8</sup> "Task Force on Climate-related Financial Disclosures 2021 Status Report," Financial Stability Board, Sept. 15, 2021, <https://www.fsb.org/wp-content/uploads/P141021-1.pdf>.

<sup>9</sup> "US pharma giants combat emissions crisis with long-term net-zero pledges," S&P Capital IQ Pro, Sept. 27, 2021, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-pharma-giants-combat-emissions-crisis-with-long-term-net-zero-pledges-66729132>.

<sup>10</sup> "Questions and Answers: Corporate Sustainability Reporting Directive proposal," European Commission, April 21, 2021, [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_21\\_1806](https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_1806).

CSA data shows that companies are taking heed of regulatory requirements and preparing for mandatory disclosure. More than 80% of U.K.-based CSA participants are partially or fully integrating TCFD, while in the EU and New Zealand that figure stands at 57% and 48%, respectively. In Japan, 47% of assessed companies are applying the TCFD to risk management. In June 2021, Japan revised its Corporate Governance Code to require some listed companies to disclose climate-related financial information according to TCFD recommendations.<sup>11</sup> Corporations are taking note of mandatory disclosure in other regions as well. In Brazil, more than 20% of CSA-assessed companies are integrating TCFD. The country's central bank announced in September 2021 that Brazilian financial institutions will be required to disclose climate risks within the TCFD framework in December 2022.<sup>12</sup>

### Minority of companies are using scenario analysis to gauge future transition risks

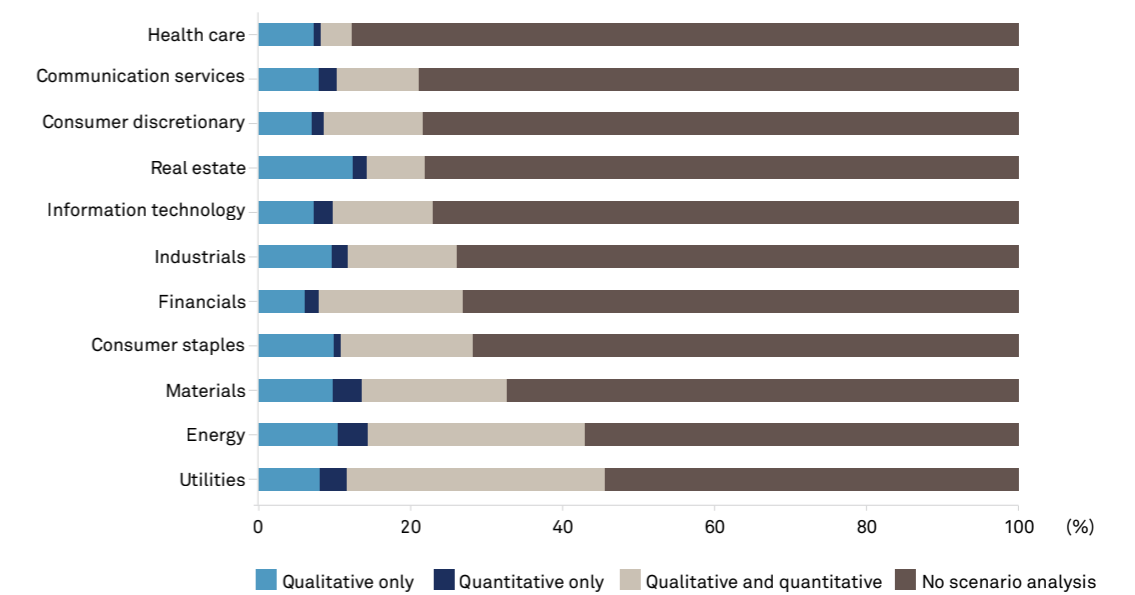
As corporations increase disclosure and integrate climate change into risk management, CSA data shows that only a quarter of surveyed companies are currently using scenario analysis to test for transition

risks. Transition risk scenario analysis takes a forward-looking approach to how future policy, regulatory and technological changes as well as legal, market and reputational risks would impact a business. Companies can also test for physical risks, such as rising sea levels or an increase in extreme weather events like hurricanes, flooding and wildfires.

Among the CSA respondents, the utilities and energy sectors have the highest number of companies conducting scenario analysis at 46% and 43%, respectively, followed by materials at 33%. These three sectors use quantitative analysis more than others, indicating the impact of current regulation such as the EU Emissions Trading Scheme or the expectation of future carbon pricing initiatives. Quantitative scenario analysis uses analytical models to determine a wide range of climate-risk outcomes, while qualitative scenario analysis is based on descriptive narratives and is often the first step for organizations to explore potential future climate outcomes.

In sectors with less obvious climate transition risks, such as health care, the percentage of companies conducting only qualitative scenario analysis is higher relative to quantitative analysis, suggesting that climate risks have

### Only a quarter of companies are using scenarios to test their transition risks



Data as of November 2021. Based on a survey of 5,301 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable 1.

<sup>11</sup> "Task Force on Climate-related Financial Disclosures 2021 Status Report," Financial Stability Board, Sept. 15, 2021, <https://www.fsb.org/wp-content/uploads/P141021-1.pdf>.

<sup>12</sup> "New regulation on social, environmental, and climate-related risk disclosures," Banco Central do Brasil, Sept. 15, 2021, [https://www.bcb.gov.br/content/about/legislation\\_norms\\_docs/BCB\\_Disclosure-GRSAC-Report.pdf](https://www.bcb.gov.br/content/about/legislation_norms_docs/BCB_Disclosure-GRSAC-Report.pdf).

In the results of its economy-wide stress test, the ECB said its analysis shows that the mining, electricity, and gas sectors would be most affected by climate change by 2050 if no mitigation action was taken, raising their probability of default.

been considered less material and the practice of using scenarios is less developed.

Scenario analysis for transition or physical risks may be a tool companies need to focus on as regulators seek more information about climate risks to national economies.

Concerns over the significant risks posed by climate change are prompting financial regulators and supervisors to conduct climate stress tests on their national financial systems and economies. They are largely using scenario analysis created by the Network for Greening the Financial System, or NGFS, a group of central banks collaborating on how to tackle climate change, which has asked companies and financial institutions to report on climate risks using TCFD disclosures. In the NGFS framework, a disorderly scenario implies a delayed or sudden implementation of transition policies, combined with high costs, while an orderly transition means transition policies are enacted in a timely manner with limited costs.

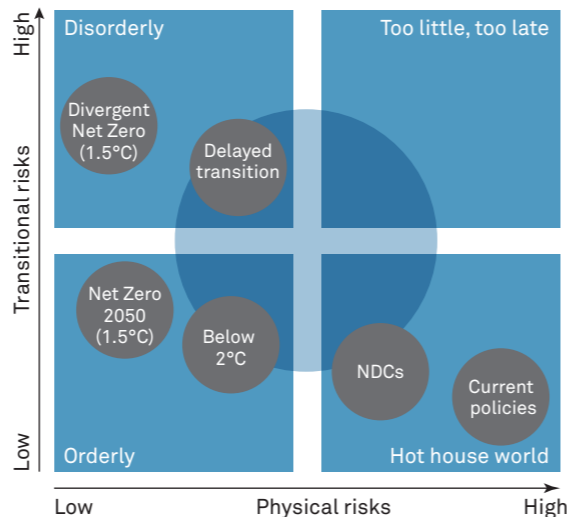
Since the 2008 financial crisis, regulators have used stress tests to assess how well banks can withstand hypothetical adverse scenarios, such as a sharp market downturn or an economic shock. Regulators can then determine, for example, whether banks need to shore up capital to weather losses. Regulators are now tailoring these tests to climate change to amass key data on banks' exposure to potentially stranded assets and examine their resilience to climate risk. What makes them different from existing stress tests is that they force banks and insurers to think beyond their usual three-to-five-year business cycle and look at a 30-year horizon, considering various transition and physical risk scenarios.

### Climate stress testing carbon-intensive sectors

A recent French central bank climate stress test demonstrated that the credit risk in seven high-risk sectors, including mining and fossil fuel production, triples in a worst-case climate scenario.<sup>13</sup> In the results of its economy-wide stress test, the European Central Bank said its analysis shows that the mining, electricity, and gas sectors would be most affected by climate change by 2050 if no mitigation action was taken, raising their probability of default.<sup>14</sup>

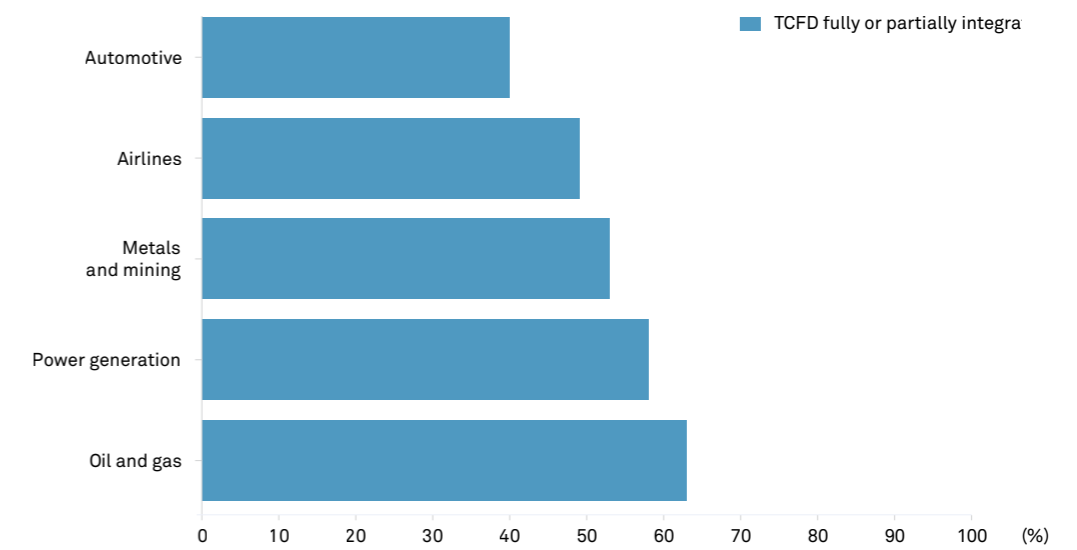
According to CSA data, carbon-intensive sectors are reacting to the risks presented by climate change. They are ahead of other sectors in applying the TCFD recommendations to their climate risk management. The oil and gas sector has the highest TCFD integration

### NGFS Scenarios Framework



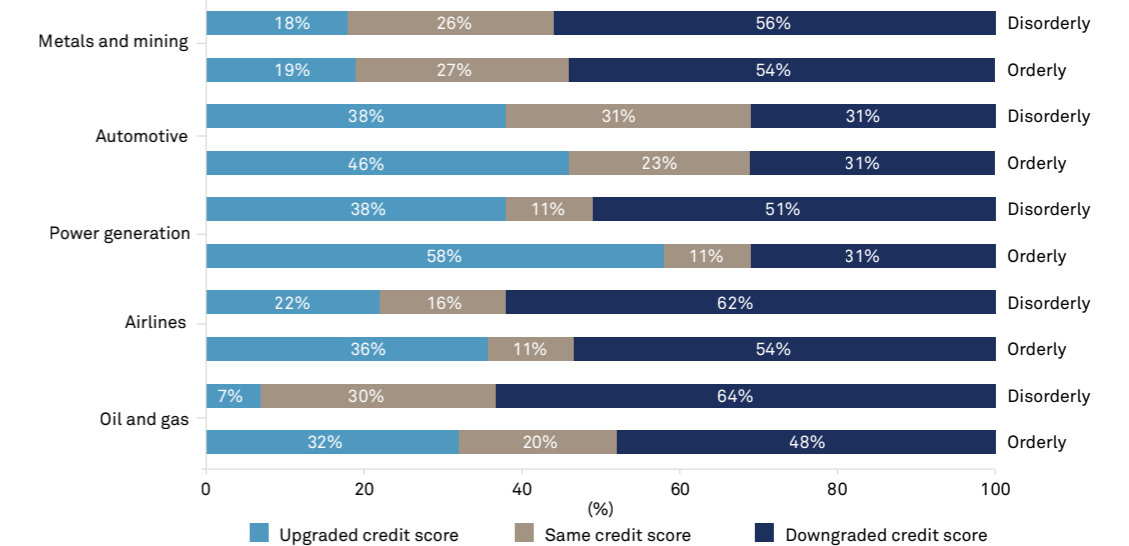
Positioning of scenarios is approximate, based on an assessment of physical and transition risks out to 2100. Source: Network for Greening the Financial System.

### The oil and gas sector has the highest TCFD integration among carbon-intensive sectors



Data as of November 2021. Results based on responses from 629 companies in carbon-intensive sectors. CSA industries are aligned with the industries used in S&P Global Market Intelligence credit score analysis of carbon intensive sectors. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

### Chance of a credit score change by 2050 for the largest companies by revenue operating in carbon-intensive sectors



Data as of November 2021. Based on Network for Greening the Financial System scenarios. An orderly scenario assumes the early introduction of climate policies. A disorderly scenario implies a delayed or sudden introduction of transition policies. Analysis assesses the credit risk of transition risks based on 5,608 companies: 3,800 in oil & gas sectors, 1,290 in power generation sectors, 410 in metals & mining sectors, 95 in the airline industry and 13 in automobile manufacturing. Source: S&P Global Market Intelligence, S&P Global Sustainable1. Results produced using Climate Credit Analytics.

<sup>13</sup> "A first assessment of financial risks stemming from climate change: The main results of the 2020 climate pilot exercise," Banque de France Prudential Supervision and Resolution Authority, 2021, [https://acpr.banque-france.fr/sites/default/files/medias/documents/20210602\\_as\\_exercice\\_pilote\\_english.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20210602_as_exercice_pilote_english.pdf).

<sup>14</sup> "ECB economy-wide climate stress test," European Central Bank, September 2021, <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op281-05a7735b1c.en.pdf>.



among carbon-intensive sectors. That's a positive signal, given that an S&P Global Market Intelligence analysis of high-carbon sectors found that oil and gas companies face the highest credit impact related to transition risks by 2050 under an NGFS disorderly scenario.

However, while most companies in carbon-intensive industries have started using TCFD recommendations to manage climate risk, less than half are testing the resiliency of their strategy by conducting transition risk scenario analysis. Metals and mining stands out as the sector with the lowest percentage of companies using transition risk scenario analysis even though the risk of an impact on the sector's credit score is more than 50%.

### The costs of not transitioning in time

The financial costs of not adapting to climate change could be high, so companies – especially those in high-carbon sectors – need to act to ensure they do not face massive disruptions to their businesses over the longer term.

Understanding climate risks to business and the wider economy is a joint effort by all stakeholders, from corporations to policymakers to investors. CSA data

indicates that companies recognize the material impact climate change can have on their business and aligning with TCFD is a concrete step in managing climate risk and preparing for future climate stress tests by regulators, particularly in carbon-intensive industries. Companies ahead of the curve may find themselves better prepared for the economic impacts of climate change. ■

*This piece was published by S&P Global Sustainable<sup>1</sup> and not by S&P Global Ratings, which is a separately managed division of S&P Global.*

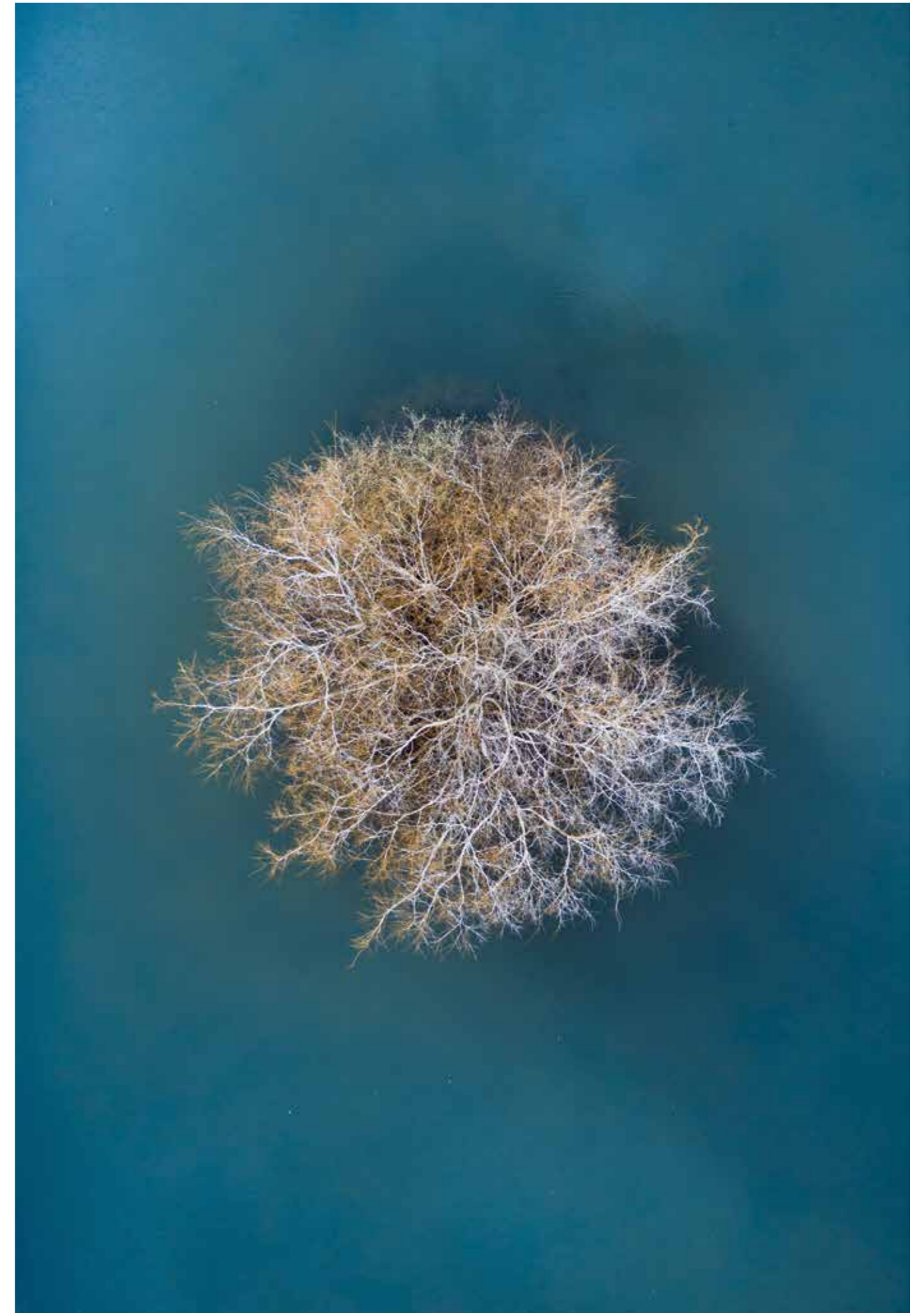
#### Contributors



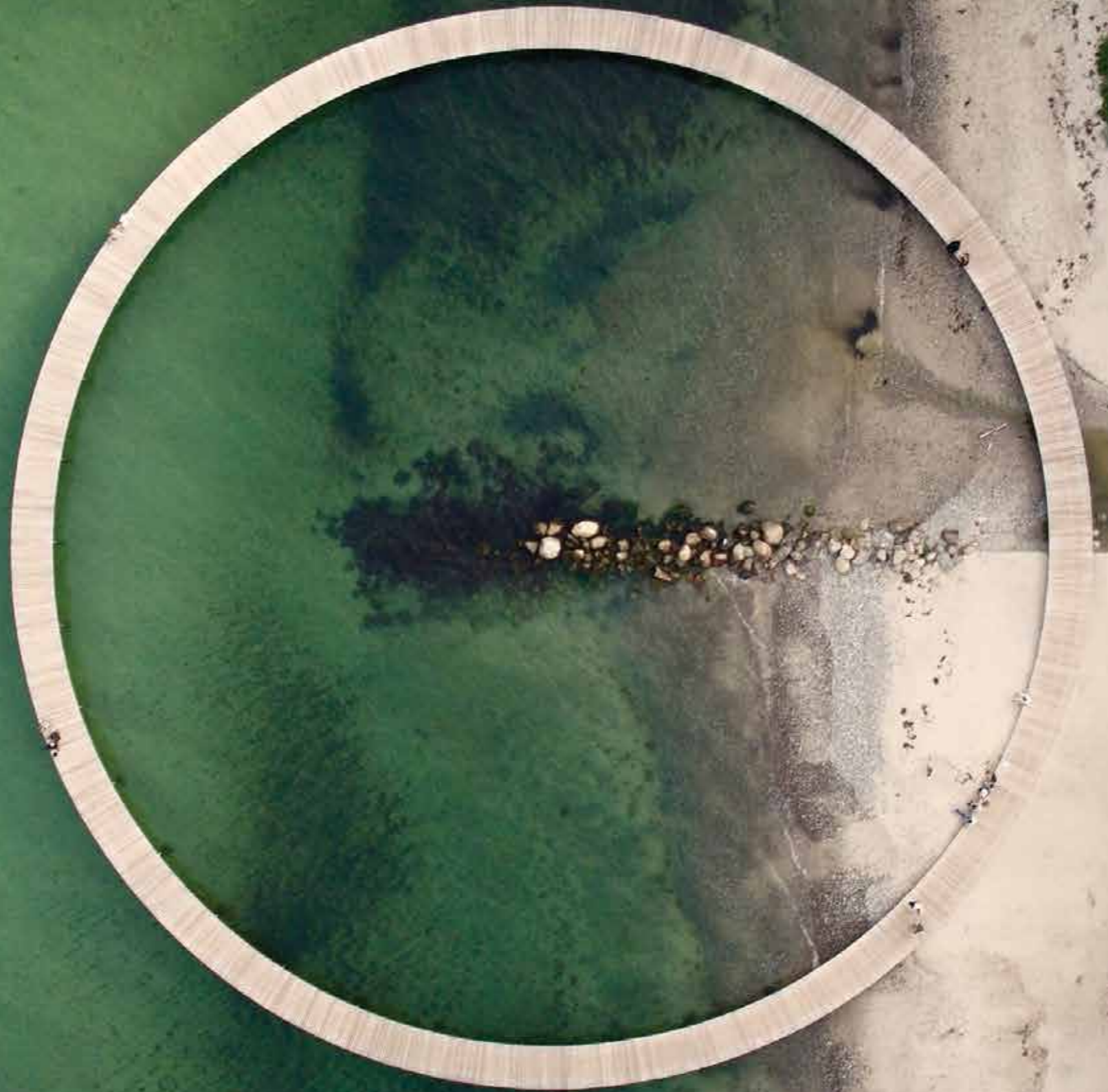
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**Most companies aren't setting basic climate targets, putting net zero out of reach**



Key takeaways:

- The 2021 S&P Global Corporate Sustainability Assessment indicates that most companies globally have not set initial emission reduction targets, much less net zero ones.
- Companies that do have net zero targets scored better on emissions and disclosure criteria if they also have interim goals before 2040.
- Pressure is rising on companies to set near-term targets to ensure they can achieve their longer-term goal.

The rising wave of major companies announcing ambitious, long-term emissions targets made “net zero” one of the top sustainability buzzwords of 2021. Large corporates around the world have pledged to cut their greenhouse gas emissions as close to zero as possible and offset the remainder, usually by the distant deadline of 2050.

These announcements have grabbed headlines and give the impression that the corporate world is moving to tackle climate change. But the reality is more complicated.

Data collected in the 2021 S&P Global Corporate Sustainability Assessment, or CSA, indicates that most companies globally have yet to set even initial emission reduction targets, much less net zero ones.

Only 36.8% of about 5,300 companies reviewed in the latest CSA have announced plans to curb direct emissions and/or emissions associated with their purchased energy, also known as Scope 1 emissions and Scope 2 emissions, respectively. These areas

of emissions are the first two that companies target, making them a key indicator of how far along companies are on their climate journey.

While only a third of companies globally have announced Scope 1 and Scope 2 climate targets, adoption rates vary greatly on a regional scale and among sectors.

Unsurprisingly, given how much longer Europe has paid attention to environmental, social and governance issues compared to the rest of the world, 59% of European companies have announced plans to reduce direct emissions and/or emissions associated with their purchased energy. However, only 35.6% of companies in North America, 31.1% in Latin America, and 29.4% of companies in the Asia-Pacific region have announced Scope 1 and/or Scope 2 reduction targets.

Setting net zero targets appears to be even less common. S&P Global ESG analysts reviewed data collected by the sustainability disclosure platform CDP. They found that only 23.7% of all companies that responded

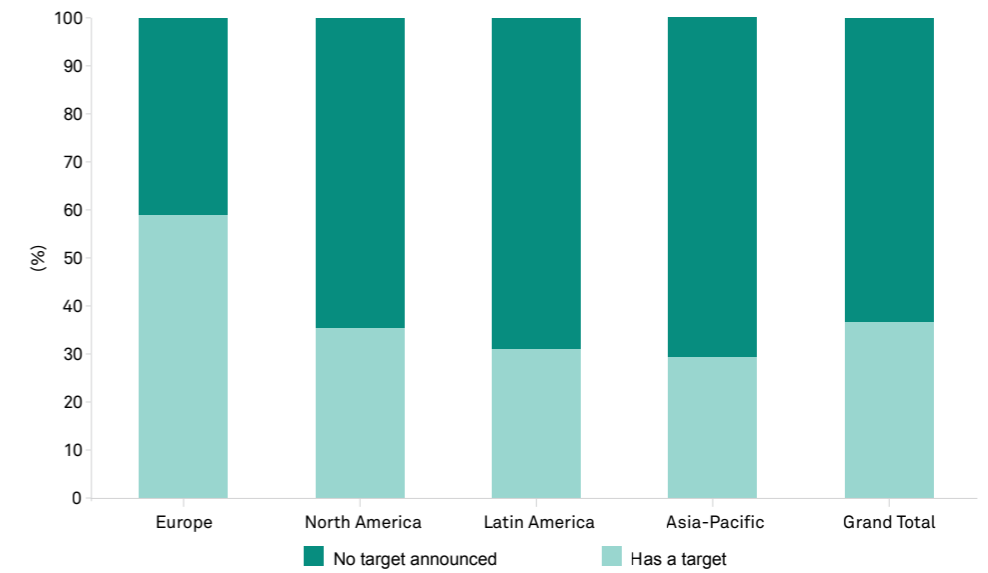


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A majority of European companies have announced a climate target



Data as of November 2021. “Climate target” refers to a reduction target for Scope 1, Scope 2 or both Scope 1 and Scope 2 emissions. Results based on responses from 5,241 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

to CDP’s climate survey and are also part of the CSA analysis for this article have set a net zero emissions target. The lack of progress in these larger universes of companies contrasts starkly with the widespread net zero commitments made by top firms. The majority of the 30 largest companies by sector have made net zero pledges as of December 2021, according to a recent analysis by S&P Global Market Intelligence journalists.<sup>1</sup> That includes 21 of the 30 largest U.S. and European oil and gas firms, 26 of the largest U.S. utilities and all 30 of the largest American, Canadian and European banks.<sup>2</sup>

Outside of those corporate giants, the figures signal that the corporate world collectively still has far to go to even begin to address climate change.

Scientists say the world needs to achieve net zero emissions by 2050 to limit global warming to 1.5 degrees C, relative to preindustrial levels. But immediate progress is also needed: Scientists have projected that the path to net zero requires cutting global emissions by about 45% by the end of this decade,<sup>3</sup> which means just about all companies across all sectors need to make measurable progress on curbing emissions within the next few years. No sector can be left behind.

<sup>1</sup> Net zero announcements made in 2021 will be reflected in the 2022 CSA results.

<sup>2</sup> “Path to net-zero: Stakeholders demand action on ambitions as pledges swell,” S&P Capital IQ Pro, Dec. 13, 2021, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/path-to-net-zero-stakeholders-demand-action-on-ambitions-as-pledges-swell-67951124>.

<sup>3</sup> “Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments,” Intergovernmental Panel on Climate Change, Oct. 8, 2018, <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>.

Emission scopes

<b>Scope 1</b>	Emissions directly from owned or controlled sources
<b>Scope 2</b>	Indirect emissions from the generation of purchased energy
<b>Scope 3</b>	Emissions from the upstream and downstream operations across the supply chain of a company, including any caused by customers’ use of those products

Scientists have projected that the path to net zero requires cutting global emissions by about 45% by the end of this decade.

Moreover, companies are sure to come under added pressure from investors, governments and the public both to set credible targets and to establish interim goals and show progress toward them. And this sense of urgency will grow over time as the global emissions continue to accumulate, the costs of climate-related disasters escalate and the likelihood grows that governments will pass more stringent climate-related regulations in the face of corporate inaction.

### Energy and utilities leading on climate targets

For both climate targets and net zero targets, the energy and utilities sectors have higher rates of adoption than other sectors.

For example, 48.4% of energy sector and 48.0% of utilities sector companies have Scope 1 and/or Scope 2 climate targets, followed by the materials sector at 47.2%,

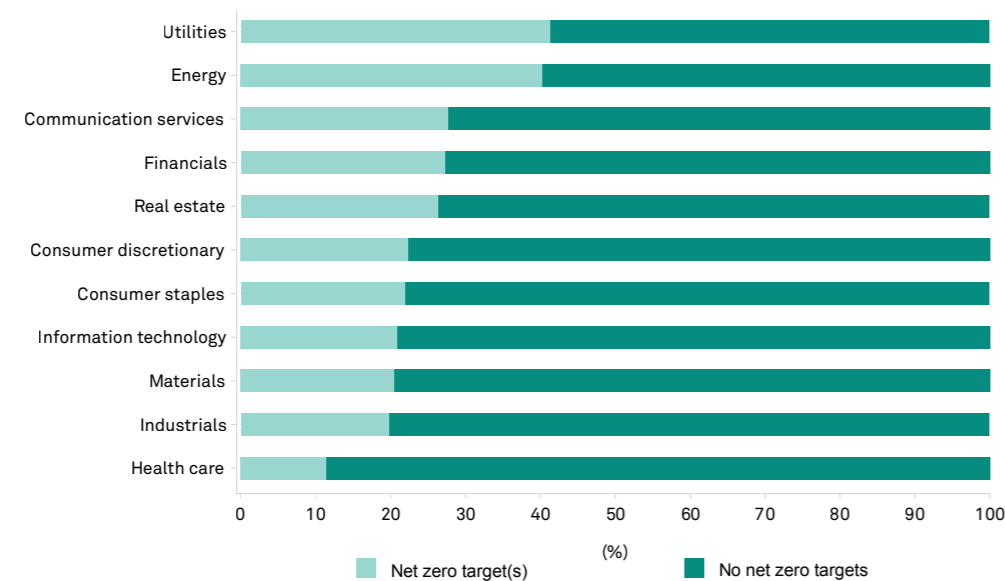
consumer staples at 42.7% and industrials at 41.4%. Around one-third of companies in other sectors have set these targets, with the exception of the health care sector, where only 21% of companies have targets.

CDP data shows that the sector rankings on net zero commitments are slightly different but generally follow the same pattern, with energy and utilities still leading and the health care sector having the lowest percentage of companies with net zero targets.

The prevalence of net zero targets among energy companies compared to others is likely due to several factors.

For starters, fossil fuels, which oil and gas companies pump out of the earth and sell in various forms, were responsible for 81% to 91% of human-caused emissions from 2010 to 2019, according to the U.N.'s Intergovernmental Panel on Climate Change, or IPCC.<sup>4</sup> And electric utilities use primarily natural gas and coal to produce the world's power supplies, although the portion of electricity produced from zero-carbon renewable resources is growing.

### Utilities and energy sectors have the highest percentage of net zero targets



Data as of November 2021. Results based on responses from 1,919 companies. Source: CDP, Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

<sup>4</sup> IPCC, "Climate Change 2021: The Physical Science Basis," Intergovernmental Panel on Climate Change, Aug. 7, 2021, [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_Full\\_Report.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf).



Given their outsized role in global emissions, energy companies and utilities have faced the most pressure from investors – although that pressure has expanded to other sectors in recent years – to report on their emissions and set comprehensive targets that align with limiting global warming to 1.5 degrees C.

Energy companies and utilities likely also find it easier than other sectors to calculate their emissions, particularly Scope 1 and Scope 2, given that many already report emissions to federal regulators such as the U.S. Environmental Protection Agency.

Furthermore, utilities have one of the clearest pathways to decarbonization through their role in the energy transition. Power providers can replace a large portion of their fossil fuel fleet with renewables today, though fossil fuels are also currently needed to ensure reliability. And, as other low-carbon technologies evolve, utilities will have additional options for decarbonization in the form of carbon capture and sequestration, battery storage and advanced nuclear.

Sectors with less clear exposure to fossil fuels are also setting net zero targets, albeit to a lesser extent. About 28% of communication services companies, 27% of financial companies and 26% of real estate companies have set net zero targets. But only 11% of health care companies globally are pursuing net zero goals.

Going forward, companies across all sectors can expect to feel more pressure from investors and regulators to set net zero targets and show their plan for meeting them.

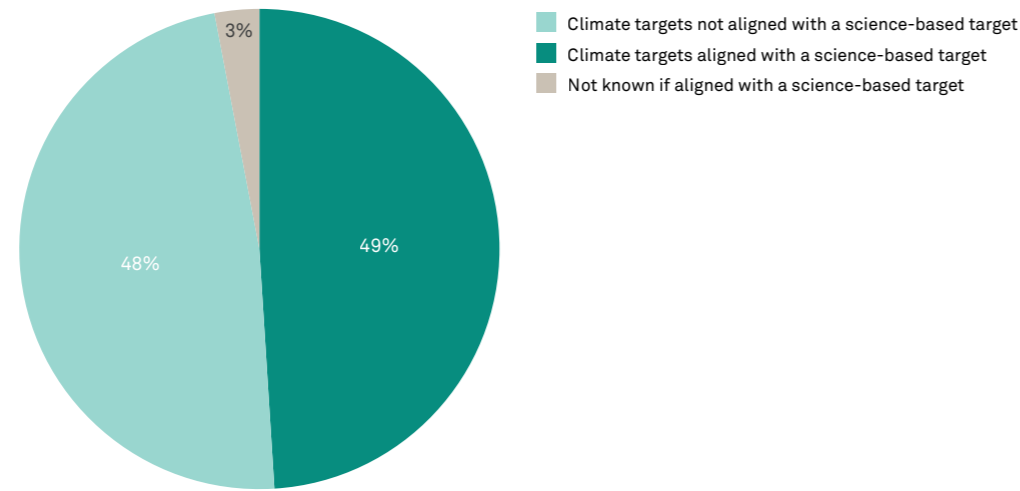
### Where do companies with climate targets stand?

Focusing on the small share of companies globally that have set climate targets, the 2021 CSA can provide more insight on the rigor and significance of companies' efforts.

The survey asked companies if their climate goals aligned with a 2-degree science-based target, which still requires companies to reduce their emissions but

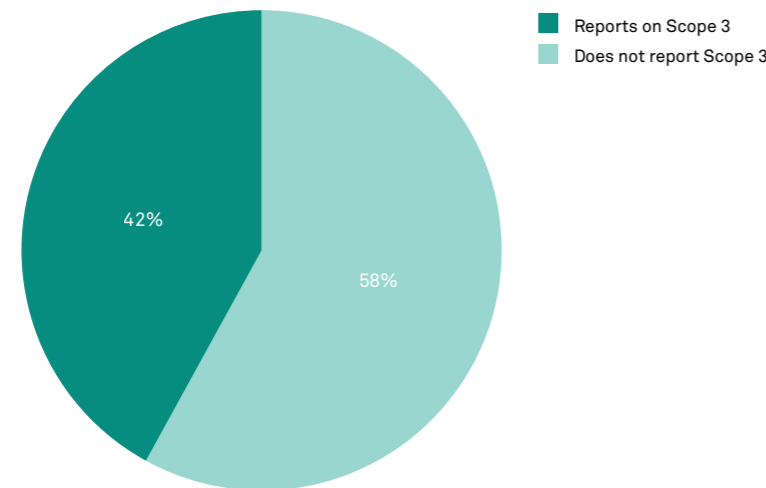


### Nearly half of companies with climate goals align with a 2-degree science-based target



Data as of November 2021. "Climate target" in this case refers to Scope 1 direct emissions and Scope 2 indirect emissions. A 2-degree science-based target is one that aligns with emissions reductions scientists have said will be needed to limit global warming to 2 degrees C relative to preindustrial levels. Results based on responses from 1,950 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

### Most companies do not report Scope 3 emissions



Data as of November 2021. Results based on responses from 5,301 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

to a lesser extent than under a more ambitious 1.5-degree net zero scenario.<sup>5</sup>

Companies that have announced plans to reduce Scope 1 and/or Scope 2 emissions are almost evenly split on whether they have aligned those goals with a 2-degree

warming scenario – one in which the world limits global warming this century to 2 degrees C relative to preindustrial levels.

This indicates that many companies may be setting targets that fall short of what's needed even under a 2-degree C scenario.

<sup>5</sup> The 2021 CSA questionnaire asked companies if their goals aligned with a 2-degree warming scenario, which at the time matched the Science Based Targets initiative's standard.

A fully developed net zero target should include both direct and indirect emissions. But these indirect Scope 3 emissions that occur up and down the company's value chain – including when customers use the products – are harder to measure for some industries and difficult to reduce for most because they are ultimately out of companies' direct control.

source of Scope 3 emissions, while 46.5% of financials and 47.4% of materials sector companies report those emissions.

Scope 3 emissions are especially significant for energy sector oil and gas companies as the majority of their emissions occur when customers use their products for transportation fuel and other consumer goods and services. Strategies to reduce Scope 3 emissions generally include reducing the carbon content of fuels by using alternative liquids such as biofuels, or by pivoting to more efficient but less well-developed fuels such as electricity or hydrogen. These latter options, however, still lack sufficient distribution infrastructure.

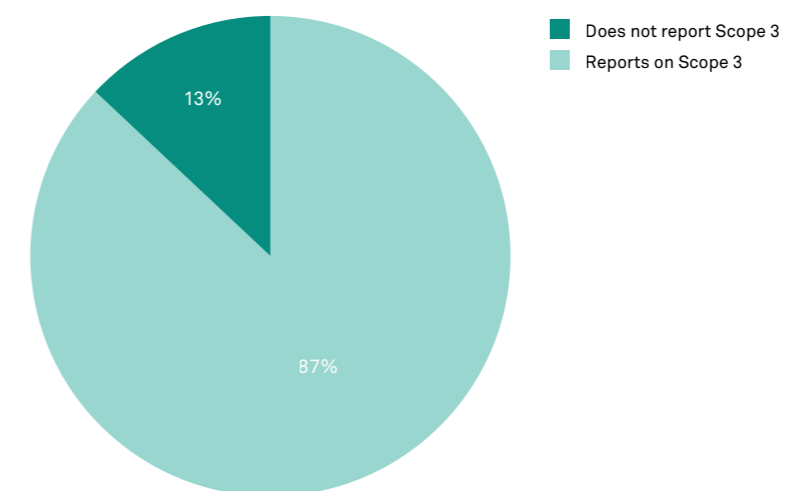
Going forward, companies across all sectors can expect to feel more pressure from investors and regulators to set net zero targets and show their plan for meeting them.

As a result, most companies are only beginning to measure and report on these emissions. Only 42% of companies in the 2021 CSA report on at least one source of Scope 3 emissions.

But those levels vary more on a sector basis. Utilities was the top sector with 58.3% of companies reporting at least one source of Scope 3 emissions. But the energy sector ranked fourth in this area with only 45.8% reporting at least one

While some oil and gas companies have begun to set net zero targets, many of those announcements cover only their operations. One prime recent example is the announcement in September 2021 by the Oil and Gas Climate Initiative, or OGCI, which represents 12 of the world's largest oil companies. The OGCI said its members aim to reach net zero emissions from operations under their control by 2050, which spans Scopes 1 and 2. The commitment did not include Scope 3

### Most companies with Scope 1 and/or Scope 2 targets also report on Scope 3



Data as of November 2021. Results based on responses from 1,950 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.







emissions. In 2019, upstream Scope 3 emissions alone made up just over half of those 12 companies' carbon footprints.<sup>6</sup>

But as the role of fossil fuels in driving climate change has become clearer and as the risk of more stringent climate-related regulations increases, the energy sector has started to look for ways to shift away from fossil fuels or partially decarbonize those fuels through the creation of blue

or green hydrogen, investing in carbon capture and sequestration or by moving more toward renewable electricity and other power generation business lines.

One positive sign is that the vast majority of companies setting overall climate-related targets are reporting Scope 3 emissions too. Specifically, 87% of companies in the 2021 CSA that have set climate targets are reporting on at least one source of Scope

### Energy transition strategies of upstream oil and gas companies

Type	Description	Examples
Emissions offsets	Producers seek to offset emissions from existing operations independently from the operations themselves	 Afforestation and carbon credits
Transformation of operations	Producers seek to reduce carbon intensity by transforming existing operations (drilling, flaring, leakage, refining)	 Electric drilling platforms, CCUS, reduced flaring, increased operational efficiency
Transformation of product offering	Producers seek to reduce carbon intensity by offering new, low-carbon products using either (A) the existing resource base or (B) existing delivery channels	 (A) Hydrogen (from natural gas) (B) Biofuels
Transformation of business model	Producers seek to reduce carbon intensity by fundamentally transforming their business model, seeking out new end users and new delivery channels	 EV charging stations, direct power sales

Source: S&P Global Platts.

<sup>6</sup> "Oil group's net-zero goal shuns emissions cuts that would threaten core assets," S&P Capital IQ Pro, Sept. 29, 2021, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/oil-group-s-net-zero-goal-shuns-emissions-cuts-that-would-threaten-core-assets-66773327>.

<sup>7</sup> "US hydrogen pilot projects build up as gas utilities seek low-carbon future," S&P Capital IQ Pro, Oct. 8, 2021, [https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-hydrogen-pilot-projects-build-up-as-gas-utilities-seek-low-carbon-future-65570349?mkt\\_tok=NTY1LUJjYy0xMDAAAAGAGPzRsoe0Ebw1ZTVmDwnJ\\_PoKCVc\\_BQlRqAoHNISGJuC5REaEiLAgNqhox0ebUte8rdQUT14J3ZzkC-73SJ5RQlnfyC1WAE8H6Z8srK-V9FoiQlg](https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-hydrogen-pilot-projects-build-up-as-gas-utilities-seek-low-carbon-future-65570349?mkt_tok=NTY1LUJjYy0xMDAAAAGAGPzRsoe0Ebw1ZTVmDwnJ_PoKCVc_BQlRqAoHNISGJuC5REaEiLAgNqhox0ebUte8rdQUT14J3ZzkC-73SJ5RQlnfyC1WAE8H6Z8srK-V9FoiQlg).

### Companies with net zero targets have better emissions and disclosure scores if they also have interim goals before 2040

Target years	Average Scope 1 score	Average Scope 2 score
Climate target between 2021 and 2029	75.8	79.7
Climate target between 2030 and 2039	77.6	76.1
Only has a target in 2040 or after	63.5	62.6

Data as of November 2021. A company will get points in the Direct Greenhouse Gas Emissions (Scope 1) and Indirect Greenhouse Gas Emissions (Scope 2) criteria by reducing their emissions, disclosing yearly targets, publicly reporting the data and having a third party verify the data. Results based on responses from 1,863 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

3 emissions. While there is no guarantee that those companies who report on Scope 3 emissions will set associated Scope 3 reduction targets, reporting those figures is a key first step forward.

### Interim targets make for better performance on related CSA scores

Setting a net zero target is an important overarching objective for companies to address the threat of climate change, but ambitious goals alone are not sufficient. Companies also need to make proactive changes on the path to net zero now. They need to create realistic plans to transition to a low-carbon world. And crucially, those transition pathways would need to include near-term emissions reduction milestones. The path to 2050 – the typical target date for corporate net zero targets – can't be traveled without credible signposts in the next few years, S&P Global Sustainable1 wrote in October 2021.<sup>8</sup>

Investors are paying special attention to this area, and investor-led groups like Climate Action 100+ have specifically called for companies to show their 2030 interim goals.<sup>9</sup>

Interim targets also indicate how serious a company is about its goal and can affect its CSA sustainability scoring in a positive way when it comes to emissions and disclosure. A review of climate-related

A fully developed net zero target should include both direct and indirect emissions.

emissions performance scores and target disclosure scores of companies that have set net zero targets shows that companies that have set targets before 2040 scored higher than those that are waiting to start curbing emissions until 2040 or after.

While just over one-third of companies reviewed in the 2021 CSA have set climate targets, the number needs to grow quickly to ensure the world is on track to limit global warming and forestall some of the worst consequences of climate change. Transparency and accountability will be key going forward to ensure companies are not only setting targets but also carrying them out and taking concrete action along the way to ensure they meet those goals. ■

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<sup>8</sup> "2025 Could Mark a Tipping Point for the Low-Carbon Energy Transition," S&P Global Sustainable1, Oct. 1, 2021, <https://www.spglobal.com/esg/insights/2025-could-mark-a-tipping-point-for-the-low-carbon-energy-transition>.

<sup>9</sup> Climate Action 100+ Successes, <https://www.climateaction100.org/progress/successes/>.

**Nature is climbing the agenda, but corporate biodiversity commitments remain rare**



## Key takeaways:

- Pledges to protect biodiversity and natural capital are increasing but remain rare: less than 20% of S&P 500 companies have made commitments, according to the 2021 S&P Global Corporate Sustainability Assessment.
- Corporate promises to address biodiversity and ecosystem loss need to extend through the full supply chain where materials and inputs are sourced.
- Most of the corporate world still lacks commitments to ending deforestation despite it being more easily measured than other natural capital risks.

Companies are making only modest progress in their commitments to protect biodiversity and nature, an issue that is capturing more attention in the corporate world as 2022 shapes up to be a pivotal year in the broader quest to halt ecosystem destruction across the globe.

Businesses have long harnessed nature's resources without having to pay a full price for the privilege. There is now a growing realization that the real-world cost of exploited natural capital – everything from bees and fish stocks to the carbon-storing capacity of trees – ought to be properly tallied on corporate balance sheets. Such an accounting could spur companies to make and sell goods and services in a way that causes no net loss of natural capital or, better yet, yields a gain – thus helping to restore a small part of the natural world.

The S&P Global 2021 Corporate Sustainability Assessment, or CSA, reveals several key biodiversity trends. While the number of corporate biodiversity commitments has grown, the level remains low, with a handful

of sectors heavily outperforming others. And among companies with a commitment, 40% have not set a target year. That lack of accountability could undermine the pledge, no matter how significant it is.

But there are some positive signs, too. For example, most companies with time-bound targets have promised to meet those goals by 2030, indicating that their corporate boards want to act urgently. Another welcome development is that businesses heavily reliant on agricultural resources – such as food and drink producers – have increasingly extended their biodiversity commitments to their supply chains, where most of the harm originates.

### Recognizing the problem

Terrestrial and marine ecosystems provide essential economic services, from supplying food and medicines to storing carbon and filtering the planet's air and water. More than half of global economic output, about \$44 trillion of economic value generation, is moderately or highly dependent on nature, according to the World Economic Forum.<sup>1</sup>

<sup>1</sup> "Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy," World Economic Forum, Jan. 19, 2020, <https://www.weforum.org/reports/nature-risk-rising-why-the-crisis-engulfing-nature-matters-for-business-and-the-economy>.



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Just four big value chains – food, energy, infrastructure and fashion – are responsible for more than 90% of man-made pressure on biodiversity, according to a March 2021 report by Boston Consulting Group.<sup>2</sup> That report also notes that the overall economic value provided by biodiversity is worth more than \$150 trillion annually – about twice the world's GDP. Destroying natural capital, therefore, is often the same as destroying business capital.

"Biodiversity has moved rapidly up the agenda for corporations and financial institutions," said Emily McKenzie, technical director of the Taskforce on Nature-related Financial Disclosures, or TNFD, in an interview with S&P Global Sustainable1. "Protecting and restoring nature is increasingly being understood as a commercial imperative based on risk – as opposed to an issue of corporate social responsibility."

The year 2021 gave that commercial imperative a big push forward, starting with the publication in February of the Dasgupta Review, a 600-page U.K. Treasury report that underscored the growing financial risks corporations face linked to natural degradation.<sup>3</sup> One of its main messages:

Most companies with time-bound targets have promised to meet those goals by 2030, indicating that their corporate boards want to act urgently.

"Just as diversity within a portfolio of financial assets reduces risk and uncertainty, so diversity within a portfolio of natural assets increases Nature's resilience to shocks, reducing the risks to Nature's services."

In March, the United Nations adopted the System of Environmental-Economic Accounting – Ecosystem Accounting. The new statistical framework is intended to help countries measure their natural capital. That was followed by the creation in June 2021 of the TNFD, a framework that will help companies assess and disclose biodiversity risk.<sup>4</sup> In October 2021, at the first phase of a U.N. biodiversity conference in Kunming, China, more than 100 countries also committed to putting biodiversity on a path to recovery by 2030.

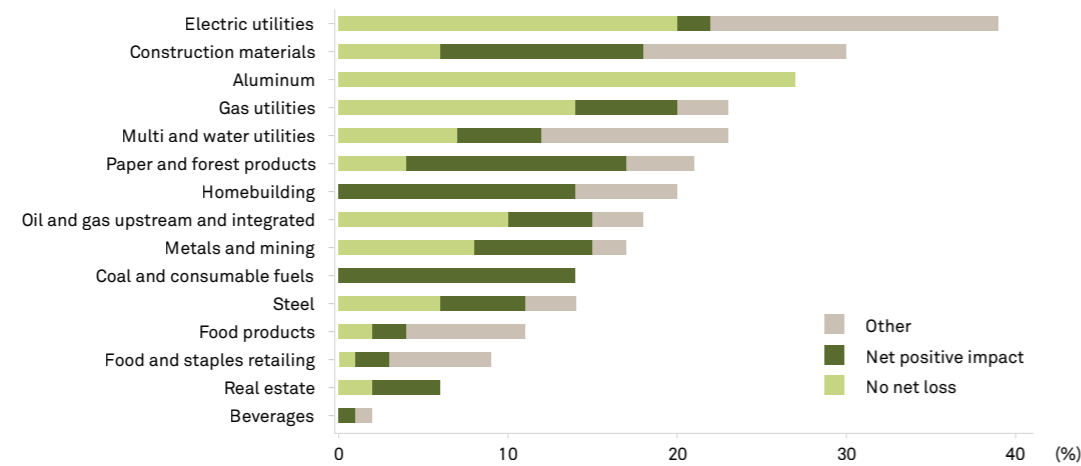
<sup>2</sup> "The Biodiversity Crisis Is a Business Crisis," Boston Consulting Group, March 2, 2021, <https://www.bcg.com/publications/2021/biodiversity-loss-business-implications-responses>.

<sup>3</sup> "The Economics of Biodiversity: The Dasgupta Review," HM Treasury, Feb. 2, 2021, <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>.

<sup>4</sup> "Plight of the bumblebee: Task force takes aim at nature-related financial risk," S&P Global Sustainable1, June 9, 2021, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/plight-of-the-bumblebee-task-force-takes-aim-at-nature-related-financial-risk-64893250>.

## Few companies have biodiversity commitments; utilities lead the pack

Percentage of companies per industry making nature-related commitments



Data as of November 2021. No net loss, or NNL, means that damages linked to business activity are offset by at least equivalent gains, avoiding a net loss of biodiversity and ecosystem services. Net positive impact, or NPI, means that corporate actions on biodiversity, such as habitat protection, are greater than the impact from its business activity. A commitment to NPI typically goes further than one to NNL. Examples of "other" commitments include: No deforestation; no peat; no exploitation; the use of certified raw materials, etc. Results based on responses from 1,300 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

The momentum grew further at the U.N.'s big COP26 climate conference in November 2021, where asset managers, governments and companies aligned on the use of nature-based tools to tackle climate change. Nearly \$20 billion in public and private funding was pledged to halt deforestation. And there was widening support for blue bonds, which allow ocean-dependent economies to use the proceeds for marine conservation.

emissions and help the world meet climate targets, such as the Paris Agreement goal of limiting global warming to 1.5 degrees Celsius above preindustrial levels. Nature, by contrast, has no easily distilled targets.

The other hurdle is the sheer scale of the problem. Between 1992 and 2014, capital produced per person doubled and human capital per person increased by about 13% globally, according to estimates published in the Dasgupta Review. But over the same period the stock of natural capital per person declined by nearly 40%. Funding is an issue, too. According to the U.K. government, only 3% of global climate finance is currently spent on nature-based solutions.<sup>5</sup>

### Progress is building slowly

An analysis of the 2021 CSA data shows that while companies are becoming more aware of the considerable nature-related risks they face, many have only taken baby steps so far to fix the problem.

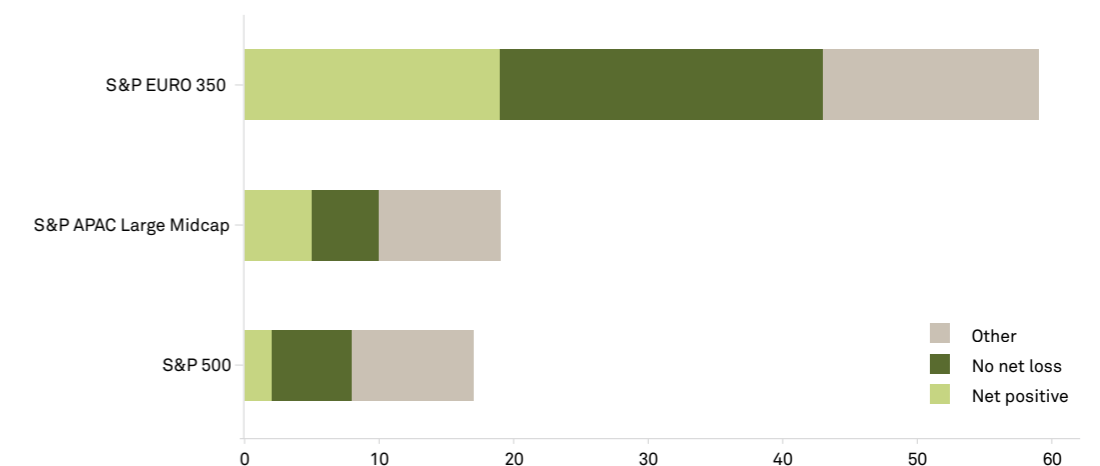
Nonetheless, restoring nature – everything from tropical jungles to mangrove forests and coral reefs – won't be easy. One reason is that the task is nebulous. Companies trying to assess or mitigate their climate change risk can measure CO2 and methane

Just four big value chains – food, energy, infrastructure and fashion – are responsible for more than 90% of man-made pressure on biodiversity.

<sup>5</sup> "Nature: Protecting and restoring nature for the benefit of people and climate," COP26, November 2021, <https://ukcop26.org/nature/>.

## Big European companies well ahead of US and Asia-Pacific peers on biodiversity

Percentage of companies in three regional S&P indices making nature-related commitments



Data as of November 2021. No net loss, or NNL, means that damages linked to business activity are offset by at least equivalent gains, avoiding a net loss of biodiversity and ecosystem services. Net positive impact, or NPI, means that corporate actions on biodiversity, such as habitat protection, are greater than the impact from its business activity. A commitment to NPI typically goes further than one to NNL. Examples of "other" commitments include: No deforestation; no peat; no exploitation; the use of certified raw materials, etc. Results based on responses from 305 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

The CSA asked companies to report on whether they had set any of three types of biodiversity commitments: No net loss, which means that damages linked to business activity are offset by at least equivalent gains; net positive impact, which means that actions on biodiversity, such as habitat protection, are greater than the impact from its business activity; and other pledges such as no deforestation or using certified raw materials.

Overall, the CSA data shows that only a small percentage of companies had adopted biodiversity commitments, although there is a slight uptick in 2021 compared to 2020 results. Electric utilities had the highest share of overall commitments with 40% of companies, as well as the largest share of no-net-loss commitments. The next-best performing industries were materials and energy. This likely reflects environmental impact assessments mandated by law.

"That shows there's a lot to do," said McKenzie of TNFD. "40% is far too low

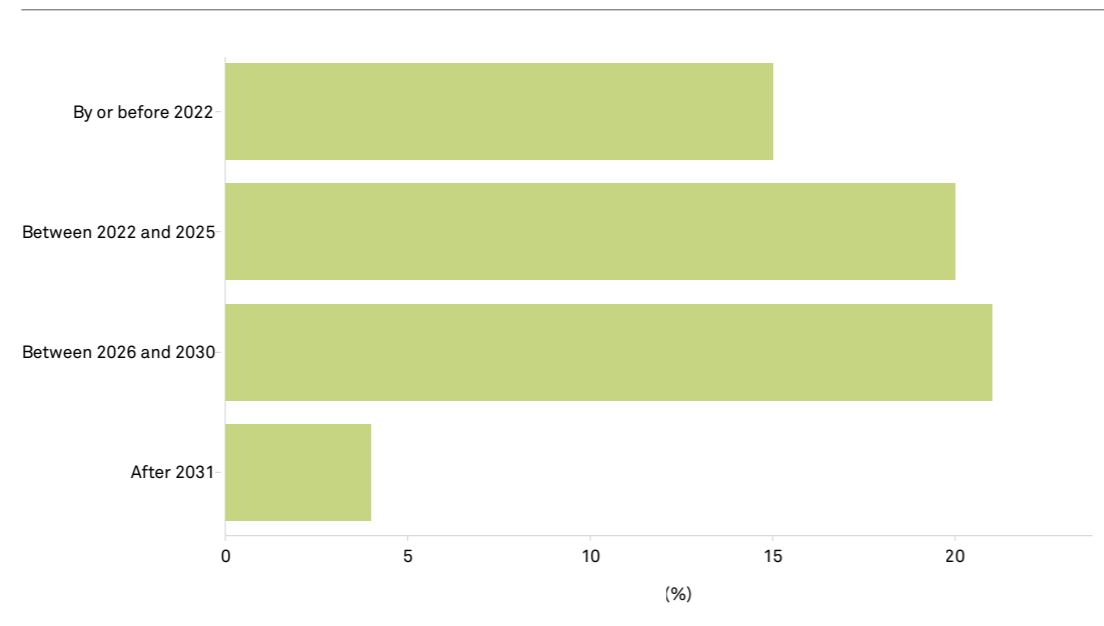
in my view, given the extent of the risk. The commitments need to catch up."

How do some of the biggest public companies fare on biodiversity commitments? Among companies in the three major regional S&P indices that report their biodiversity commitments, European businesses are well in the lead, with about 60% of companies committing to biodiversity protection, compared to only 15% to 20% of companies in the S&P 500 and S&P APAC Large Midcap indices.

But having a commitment isn't enough; a company should also specify when it intends to fulfil its goal. In this regard, progress is slow. Among companies with biodiversity commitments, 40% have not set a target year, the CSA data shows. This is significant because a commitment that lacks a time-bound plan could let a company avoid making progress toward its pledge with any urgency.

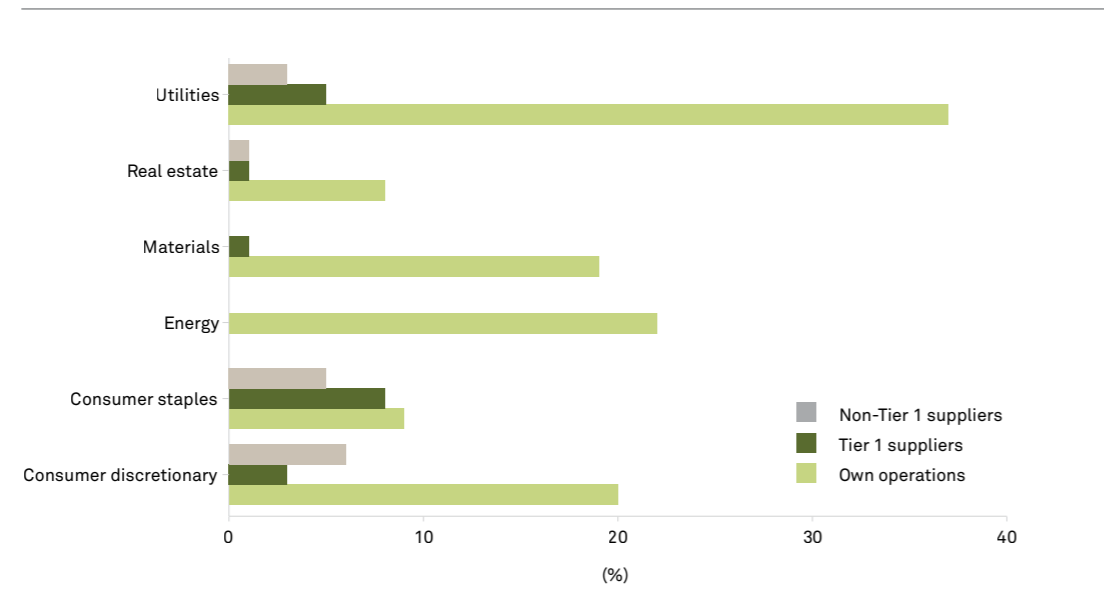
### Most companies promise biodiversity action by 2030

Percentage of companies with a nature-related commitment and a publicly reported target year



Data as of November 2021. Results based on responses from 126 companies that have indicated a target year. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

### Consumer sector extends biodiversity commitments to supply chain



Data as of November 2021. Tier 1 suppliers directly supply goods, materials or services (including intellectual property or patents) to the company. Non-Tier 1 suppliers provide products and services to the supplier at the next level in the chain (i.e. Tier 2 or lower). Results based on responses from 1,300 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.



One positive that emerged from the CSA findings is that of those companies that have set time-bound targets, most plan to meet those goals by 2030. In the context of tackling a complex issue like biodiversity, a decade can be considered near-term. A 2030 goal is also much sooner than the corporate commitments to hitting net zero by 2050 that are becoming more common.

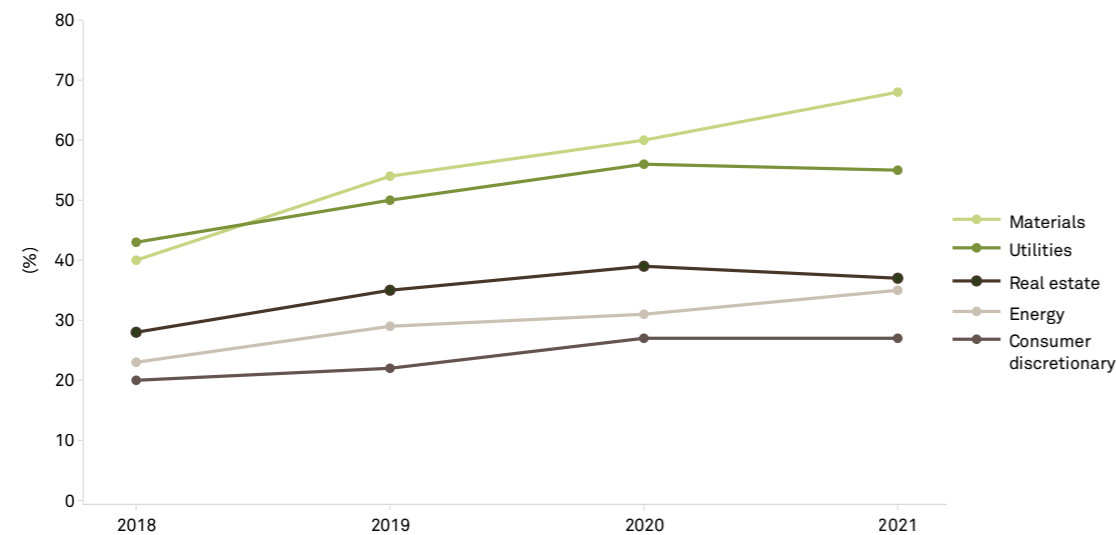
Another measure of the strength of any biodiversity commitment is how far into a supply chain it extends. A company that wants to reduce the biodiversity impact of its own operations is typically tackling low-hanging fruit. The much harder job – and this is especially true for consumer companies – is tackling biodiversity throughout the far reaches of upstream suppliers. For example, a U.S. burger franchise should address the impact on nature degradation not only in its own processing factories, but also in distant places like the Amazon where its beef suppliers could be burning down vast tracks of jungle to grow soy and raise cattle.

The CSA assesses the scope of biodiversity commitments and whether they also extend to Tier 1 suppliers, or those directly feeding into a company's operations, and to non-Tier 1 suppliers, who are farther up the chain. The data shows that most companies set commitments only for their own operations. Of those companies indicating the scope of their commitments in the consumer staples sector, for example, a larger share of them requires their Tier 1 and non-Tier 1 suppliers to adhere to their commitments. That's not surprising, since food and drink companies are exposed to a sizable natural-capital risk in the form of the raw agricultural commodities they rely on.

Energy companies, by contrast, generally only apply these commitments to their own operations. This likely reflects the fact that, unlike with consumer companies, the impact to energy companies is mainly at the level of their own operations and their supply chain is limited in size.

## Materials sector leads the way in assessing production sites exposed to biodiversity risk

Percentage of companies by sector that have assessed their biodiversity exposure in terms of number of sites and land area



Data as of November 2021. Results based on responses from 327 companies. Only includes companies that assessed their exposure in all four years.  
Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

In a global economy, large companies often buy or make goods in distant locales, where the exposure to biodiversity risk could be significant. How many companies analyze biodiversity exposure for their production sites?

The CSA examined a subset of 327 companies that had assessed their exposure to critical biodiversity by number of sites and land area, continuously over the 2018 to 2021 period. The picture that emerges is mixed. Materials and utilities, which often operate in remote areas and often conduct environmental impact studies as a prerequisite for getting licenses, lead the way in doing such analyses. The real estate, energy and consumer staples sectors are far behind.

Among companies with commitments, only a small proportion say they have reported on the metrics they use to establish and measure progress toward targets, which would suggest that the problem of declining natural capital has yet to be incorporated as a

major risk factor. One major obstacle to wider adoption is the lack of a simple, universal metric for biodiversity like the CO2-equivalent metric used for emissions reduction targets. The European Commission's Finance and Biodiversity Community has identified several metrics currently in use – such as mean species abundance, or MSA, which compares the number of native species in an area to the estimated number in an undisturbed state – though none have been widely adopted.<sup>6</sup>

But there are signs that some sectors are trying to get to grips with the issue: most companies with biodiversity commitments in the construction materials and paper and forests products industries, as well as a third of companies in the metals and mining sector, assess their sites not just on a wider spatial level, but also at the level of species and/or habitats. That suggests these companies understand the biodiversity state of their sites in considerable detail.

<sup>6</sup>“Guide on biodiversity measurement approaches,” European Commission Finance and Biodiversity Community, October 2021, [https://www.financeforbiodiversity.org/wp-content/uploads/Finance-for-Biodiversity\\_Guide-on-biodiversity-measurement-approaches.pdf](https://www.financeforbiodiversity.org/wp-content/uploads/Finance-for-Biodiversity_Guide-on-biodiversity-measurement-approaches.pdf).

At COP26, Canada, Brazil, Russia, Indonesia and other countries that together encompass 85% of the world's forests agreed to reverse forest loss and land degradation by 2030.

## Grappling with deforestation

One area of nature-related risk that is more measurable and therefore easier for corporations to address is deforestation – a new topic for the 2021 CSA. However, according to assessment results, none of the six major sectors assessed had more than 25% of companies with deforestation commitments. Among the group, consumer discretionary, consumer staples and utilities companies made the most headway in deforestation pledges, while the energy, materials and real estate sectors lagged significantly.

In terms of how far up the supply chain the 2021 deforestation commitments reached, about 15% of companies in the consumer staples sector said their pledges extended to their Tier 1 suppliers in addition to their own operations. By contrast, the consumer discretionary, utilities, energy, materials and real estate sectors were each at the 3% mark or lower.

There is growing support to ramp up anti-deforestation efforts. At COP26, Canada, Brazil, Russia, Indonesia and other countries that together encompass 85% of the world's forests agreed to reverse forest loss and land degradation by 2030. The pledge was supported by \$12 billion of public finance from a dozen countries, including the U.K.<sup>7</sup>

Private investors promised a further \$7.2 billion. More than 30 financial institutions with over \$8.7 trillion of global assets also said they would phase out deforestation from their commodity portfolios by 2025.

The commitments target products that are closely linked to deforestation, including beef, soy, palm oil, pulp and paper.

The year 2022 will also be pivotal in the effort to redress some of nature's broader imbalances resulting from human and business activity. One of the major events will be the second phase of the U.N.'s biodiversity conference in Kunming, China known as COP15. The plan is for delegates to come up with a set of renewed biodiversity targets for the next 10 years.

And many eyes will track the progress of asset managers, financial institutions, companies and governments that announced a host of ambitious nature-related pledges at COP26, and any more commitments made in the months leading up to the Kunming conference.

“You can set the rules of the game, but you need to make sure they are verified,” said McKenzie of TNFD. “And there should be consequences for companies and financial institutions if those risks are not managed.” ■

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<sup>7</sup>“At COP26, governments and businesses turned a new leaf on protecting nature to halt climate change,” S&P Global Sustainable1, Nov. 17, 2021, <https://www.spglobal.com/esg/insights/at-cop26-governments-and-businesses-turned-a-new-leaf-on-protecting-nature-to-halt-climate-change>.

**COVID -19 upended  
employee expectations  
– now companies  
must adapt**





## Key takeaways:

- Most sectors saw a decrease in employees leaving their jobs voluntarily in 2020 as more workers than usual opted to stay in their current position, the 2021 S&P Global Corporate Sustainability Assessment shows.
- Many of the sectors hit hard by the Great Resignation in 2021 are the least prepared to offer employees health and wellness programs that gained prominence during the pandemic, like flexible working hours and work from home arrangements.
- Understanding the factors that motivate staff to stay with their employers will remain a key challenge for companies seeking to improve retention and bolster their human capital management practices.

The start of the COVID-19 pandemic in 2020 dealt a blow to the world's economies and prompted many people to rethink their work-related priorities. That ultimately led many employees to leave their jobs or switch career tracks in 2021 in a global trend dubbed the Great Resignation.

But before this onslaught of resignations, the uncertainty of the pandemic caused many people to hold onto their jobs. An analysis of the 2021 S&P Global Corporate Sustainability Assessment, or CSA, shows that 2020 marked a dramatic decrease in employees leaving their jobs voluntarily.

Those deferred job changes as well as a variety of other factors contributed to the soaring number of employees globally who switched jobs and careers in 2021.<sup>1</sup> This trend has been particularly apparent in the U.S., where the Bureau of Labor Statistics has measured a sharp spike in the number of "quits" in 2021. Economic research from S&P Global Ratings has found that the U.S. labor participation rate is at a 45-year low.<sup>2</sup>

A host of factors led to the Great Resignation. With the arrival of COVID-19, companies suddenly had to rethink employee safety and benefits. The pandemic caused a similar reckoning for employees facing significant disruption to their lives. Many people worldwide began working from home and many also faced sudden new responsibilities on the home front, like caring for children doing remote schooling or caring for aging family members as care facilities closed.<sup>3</sup> Frontline workers and other employees who cannot do their jobs remotely suddenly faced the new health risks presented by COVID-19, as well as the added stress of working through a pandemic. These issues, along with worker burnout, opportunities to switch to companies with better pay or benefits, and the increasing tendency of the younger workforce to want to work at companies that align with their values, all contributed to the ongoing Great Resignation.<sup>4</sup>

Our goal in this article is to show how trends demonstrated in the new CSA data set the stage in 2020 for this tumultuous labor market

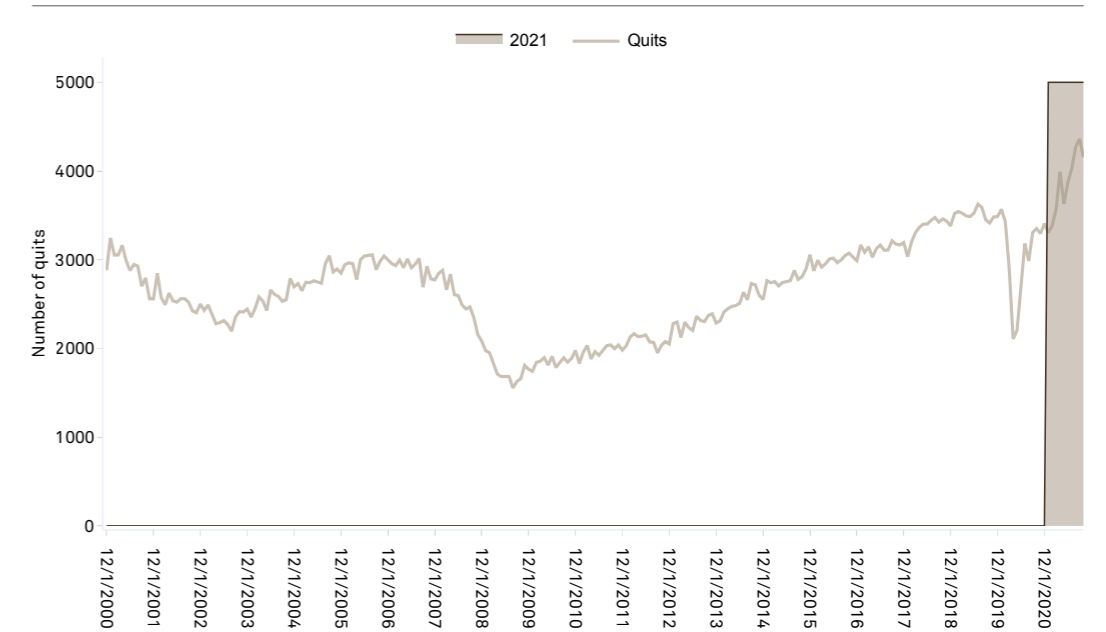


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## The number of US workers quitting spiked in 2021



Data as of October 2021. The U.S. Bureau of Labor Statistics metric "quits" is similar to voluntary turnover except that quits exclude retirements or transfers. Source: Economic Policy Institute analysis of Bureau of Labor Statistics Job Openings and Labor Turnover Survey, S&P Global Sustainable1.

in 2021, and to highlight the industries best prepared to offer the kinds of benefits that workers are seeking in an era still defined by the coronavirus pandemic. In some cases, the CSA showed that companies offering flexible hours, work from home arrangements and childcare assistance saw fewer employees leaving voluntarily compared to companies that did not offer those programs. This analysis of CSA data covers more than 500 companies that in 2020 had a combined total of about 12.2 million full-time employees.

Learning to navigate the new landscape of employee expectations is becoming a necessity for companies as workers, regulators and investors alike demand a greater focus on human capital management – a term that broadly refers to how a firm treats its employees. In the U.S., for example, the Securities and Exchange Commission

is developing a rule that requires publicly traded companies to disclose human capital management information.<sup>5</sup> Large shareholders are already pushing for this kind of transparency: State Street Global Advisors in January 2021 told companies in its portfolios it expects them to disclose their human capital management practices and long-term strategy.

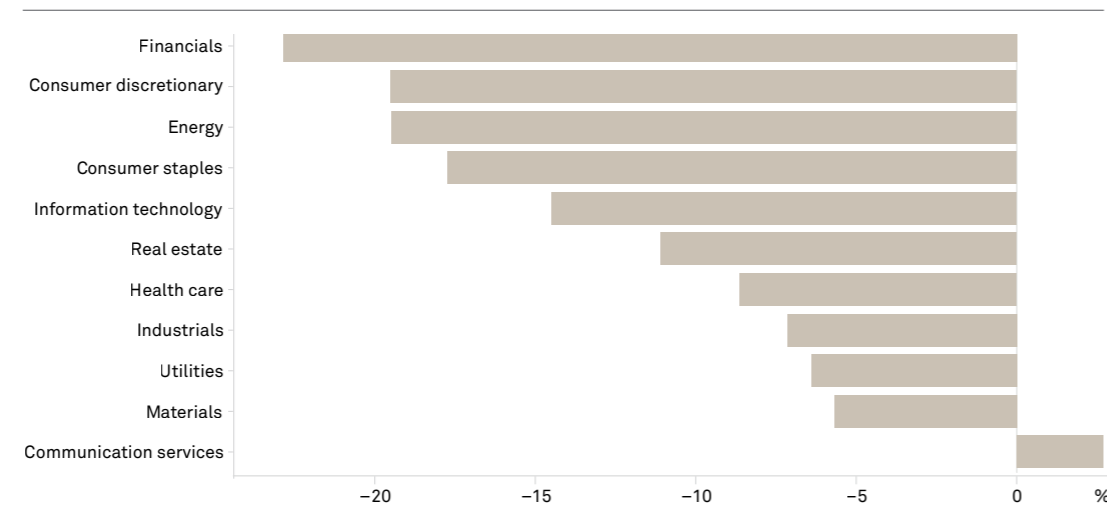
### Workers avoided big job changes in 2020

On a global scale, corporations in 2020 saw their voluntary turnover rate dip by 12.6% compared to the prior three-year annual average, foreshadowing a bump in job changes in 2021. Voluntary turnover refers to the proportion of employees who choose to leave an organization for reasons like resignation or retirement over a set

Learning to navigate the new landscape of employee expectations is becoming a necessity for companies as workers, regulators and investors alike demand a greater focus on human capital management.

<sup>5</sup> "Top US financial regulator faces big questions in move to mandate ESG disclosures," S&P Global Sustainable1, Sept. 8, 2021, <https://www.spglobal.com/esg/insights/top-us-financial-regulator-faces-big-questions-in-move-to-mandate-esg-disclosures>.

**Fewer people left their jobs voluntarily in 2020 compared to the past 3 years**  
Change in voluntary turnover in 2020 vs. prior three-year average



Data as of November 2021. Voluntary turnover refers to the proportion of employees who choose to leave an organization (e.g., resignation, retirement, early retirement) over a set period expressed as a percentage of the total employees. The figure is as reported by companies. Change in voluntary turnover is calculated as the change in voluntary turnover in 2020 versus the prior three-year average. Negative numbers represent a lower turnover rate, or more employees retained. Results based on responses from 516 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

On a global scale, corporations in 2020 saw their voluntary turnover rate dip by 12.6% compared to the prior three-year annual average, foreshadowing a bump in job changes in 2021.

period expressed as a percentage of total employees. A negative change in turnover rate means fewer people left their jobs voluntarily

In our analysis, almost all sectors experienced a strong decrease in the voluntary turnover in 2020, with financials, consumer discretionary, energy and consumer staples showing decreases steeper than 15% compared to the three previous years.

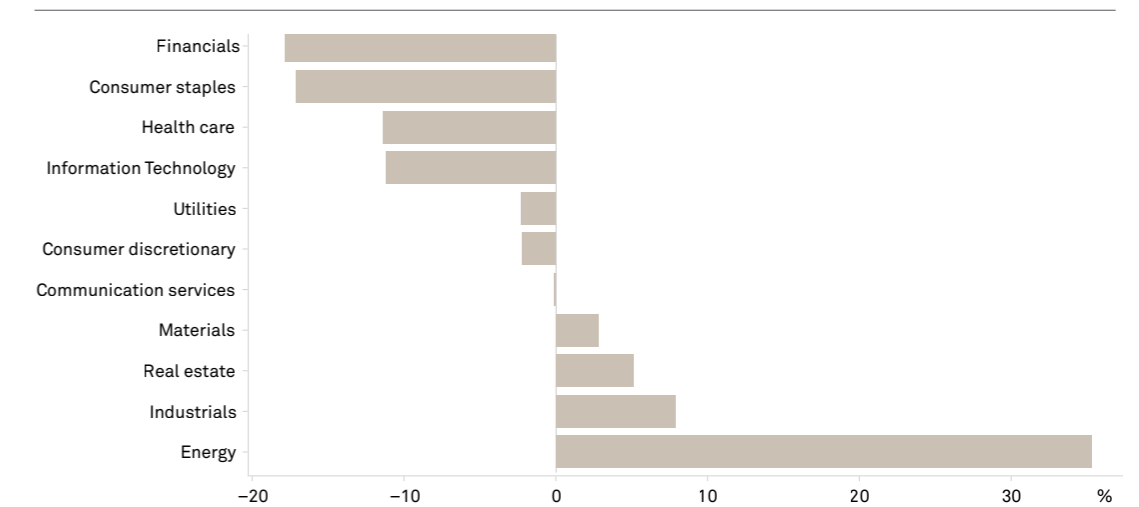
Only the communication services sector, which includes interactive media, home entertainment and telecommunication services companies, saw a slight increase in employees leaving voluntarily in 2020 compared to the prior three years.

**Total turnover rates were lower for several sectors in 2020**

While a higher share of employees chose to hold on to their current jobs in 2020, about half of the sectors reviewed saw an increase in total turnover compared to the prior few years. Total turnover refers to the proportion of employees who leave an organization for any reason over a set period, expressed as a percentage of the total employees. As such, a decrease in total turnover, expressed as a negative number in the charts, indicates that fewer employees left the company in 2020 compared to the past three years.

It wasn't just companies in the sectors hardest hit by the pandemic, such as consumer, entertainment and leisure and hospitality, that were furloughing and laying off employees in 2020.<sup>6</sup> CSA data also suggests that high layoffs occurred in other sectors. In industrials, real estate, materials and energy, there was a decrease in voluntary turnover alongside an increase in total turnover.

**Total workforce turnover varied widely in 2020 compared to the past 3 years**  
Change in total turnover in 2020 vs. prior three-year average



Data as of November 2021. Voluntary turnover refers to the proportion of employees who choose to leave an organization (e.g., resignation, retirement, reason over a set period, expressed as a percentage of the total employees. The figure is as reported by companies. Change in total turnover is calculated as the change in total turnover in 2020 versus the prior three-year average. Negative numbers represent a lower turnover rate, or more employees retained. Results based on responses from 516 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

The energy sector, which saw a 19% decrease in voluntary turnover rates, experienced a 35% increase in total turnover in 2020 compared to the prior three years – with the difference likely representing an uptick in layoffs in 2020.

The pandemic hit the energy sector especially hard as lockdowns caused demand for fossil fuels for ground and air transportation to plummet.<sup>7</sup> This prompted oil and gas producers to cut billions of dollars in capital spending.<sup>8</sup> As of August 2020, the U.S.

oilfield services sector alone had lost more than 100,000 jobs since the start of the pandemic, dropping the sector to its lowest employment levels since March 2017.<sup>9</sup>

Other sectors with an increase in total workforce turnover in 2020 compared to the prior period included industrials (up by 7.9%), real estate (up by 5.1%) and materials (up by 2.8%).

<sup>7</sup> "No place to go: Oil storage filling up amid collapsing demand, excess production," S&P Capital IQ Pro, April 6, 2020, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/no-place-to-go-oil-storage-filling-up-amid-collapsing-demand-excess-production-57865154>.

<sup>8</sup> "UPDATE: Oil price war fallout: Capital spending cuts sweep through shale," S&P Capital IQ Pro, April 7, 2020, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/update-oil-price-war-fallout-capital-spending-cuts-sweep-through-shale-57505881>.

<sup>9</sup> "Oilfield services sector job losses surpass 100,000 since start of pandemic," S&P Capital IQ Pro, Sept. 9, 2020, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/oilfield-services-sector-job-losses-surpass-100-000-since-start-of-pandemic-60264764>.



### Companies in most regions saw a decline in employee turnover rates in 2020

Region	Average change in voluntary turnover in 2020 vs. prior three-year average	Average change in total turnover in 2020 vs. prior three-year average
Asia-Pacific	-8.03%	2.95%
Europe	-8.03%	-5.03%
Latin America	-19.90%	-9.57%
North America	-20.08%	-9.62%

Data as of November 2021. Voluntary turnover refers to the proportion of employees who choose to leave an organization (e.g., resignation, retirement, early retirement) over a set period expressed as a percentage of the total employees. Total turnover refers to the proportion of employees who leave an organization for any reason over a set period, expressed as a percentage of the total employees. Voluntary and total turnover figures are as reported by companies. Results based on responses from 511 companies. Africa was excluded from this regional analysis due to a small universe of companies with relevant data. Negative numbers represent a lower turnover rate, or more employees retained. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

### Voluntary turnover lowest in North America in 2020

Overall, for all four regions included in the analysis – Asia-Pacific, Latin America, North America and Europe – voluntary turnover rates decreased more than total turnover rates in 2020 compared to the prior period. Africa was excluded from this regional analysis due to a small universe of companies with relevant data. The only region of the four that saw an increase in total turnover in 2020 compared to the past period was Asia-Pacific.

The average voluntary and total turnover rates of North American companies were significantly lower in 2020 compared to the prior three-year period.

Countries around the world have taken steps to provide discretionary fiscal measures to help their citizens and businesses recover from the economic impacts of the pandemic. For example, from January 2020 through late September 2021, the U.S. government provided federal discretionary fiscal spending and foregone revenues equivalent



There are still millions of people around the world who haven't returned to the labor force since the pandemic started.



<sup>10</sup> "Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic," International Monetary Fund, October 2021, <https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19>.

<sup>11</sup> "Economic Research: Where Are The Workers? Three Explanations Point To An Answer," S&P Global Ratings, Nov. 4, 2021, <https://www.spglobal.com/ratings/en/research/articles/211104-economic-research-where-are-the-workers-three-explanations-point-to-an-answer-12173966>.

<sup>12</sup> "More than half of employees globally would quit their jobs if not provided post-pandemic flexibility, EY survey finds," EY, May 12, 2021, [https://www.ey.com/en\\_us/news/2021/05/more-than-half-of-employees-globally-would-quit-their-jobs-if-not-provided-post-pandemic-flexibility-ey-survey-finds](https://www.ey.com/en_us/news/2021/05/more-than-half-of-employees-globally-would-quit-their-jobs-if-not-provided-post-pandemic-flexibility-ey-survey-finds).

to 25.5% of its 2020 GDP, according to the International Monetary Fund.<sup>10</sup> The CSA data shows that companies in the U.S. saw a 9.2% average decrease in total turnover in 2020 compared to the prior three years.

And while U.S. government programs such as extended unemployment benefits may have helped ease some of the economic impacts on workers who were laid off, a November 2021 study by S&P Global Ratings suggests that workers were reluctant to return to the workforce even when those benefits ended.<sup>11</sup> "The reason workers aren't filling jobs today seems to stem more from the decision to drop out of the workforce entirely, indicating a structural shift rather than a temporary change," S&P Global Ratings wrote.

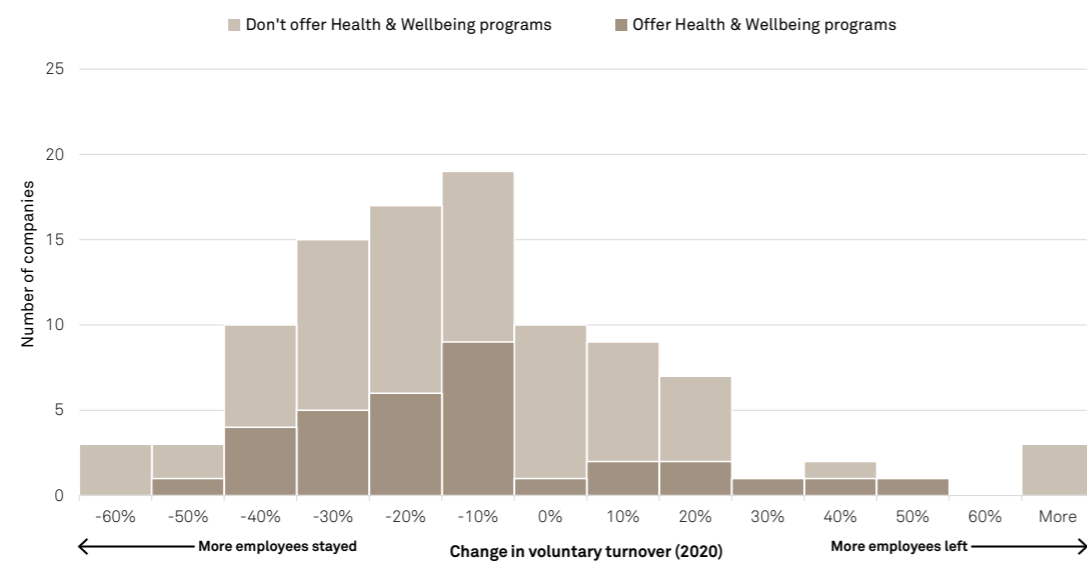
### Corporate health and wellness programs can help with employee retention

An analysis of CSA data for 2020 compared to the prior three years shows that companies that had certain health and wellness programs tended to see slightly fewer employees leaving voluntarily than those that did not offer those programs. These programs include flexible hours, work from home arrangements and childcare assistance.

To be sure, other factors likely influenced turnover rates. For example, COVID-19 and the economic uncertainty it caused may have played a bigger role in employees holding onto their jobs in 2020 than health and wellness benefits.

Other research has shown that employee health and wellness programs help with employee retention. A study in May 2021 by the professional services firm Ernst &

## Companies that offered health and wellbeing programs in 2020 retained staff slightly better than companies that did not



Data as of November 2021. Health and wellbeing programs in the above analysis include the following: work from home, flexible working hours or provision by employer of childcare facilities or contributions. Voluntary turnover refers to the proportion of employees who choose to leave an organization (e.g., resignation, retirement, early retirement) over a set period expressed as a percentage of the total employees. Change in voluntary turnover is calculated as the change in voluntary turnover in 2020 versus the prior three-year average. Negative numbers represent a lower turnover rate, or more employees retained. Results based on responses from 132 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

Young Global, doing business as EY, found that more than half of employees surveyed around the world would consider leaving their jobs after the pandemic ends if their company does not provide them flexible work hours and flexible work location options, such as the ability to work from home for some or part of their weekly schedule.<sup>12</sup>

The Great Resignation is not the only workforce-related challenge companies face globally, according to Sher Verick, head of employment strategies at the International Labour Organization. There are still millions of people around the world who haven't returned to the labor force since the pandemic started. This challenge is especially true for younger workers and women who had to quit jobs to take care of children and sick family members, he said in an interview with S&P Global Sustainable1.

For people in those situations, it's not just a matter of choice. "Not everyone is able to return to the labor force," Verick said. Corporate programs that remove barriers to

returning to the workforce, such as access to childcare, could help alleviate the situation.

### Adapting to the Great Resignation

The Great Resignation is impacting all industries to some extent, but not all were equally prepared to offer the health and wellness benefits that can help improve retention.

For example, half of the companies surveyed in the media, movies and entertainment industry do not offer flexible working hours, and two-thirds of companies in the industry don't offer work from home options or childcare facilities, 2021 CSA data shows.

These kinds of benefits are even less prevalent in the transportation and transportation infrastructure industry: 93% of these companies don't offer work from home, 67% don't provide flex work hours, and 91% don't offer childcare facilities or related financial programs.

## Industries worst prepared for trend of higher resignations in 2021

	% of companies without analytics tools for strategic workforce planning	% of companies without work from home programs	% of companies without flexible working hours	% of companies without childcare facilities or contributions
Retailing	55%	73%	9%	Data unavailable
Casinos and gaming	60%	60%	0%	Data unavailable
Media, movies and entertainment	67%	67%	50%	67%
Real estate	73%	85%	58%	67%
Transportation and transportation infrastructure	73%	93%	67%	91%
Trading companies and distributors	75%	88%	50%	75%
Leisure equipment and products and consumer electronics	100%	20%	20%	Data unavailable
Household products	100%	50%	50%	50%

Data as of November 2021. Analytics tools for strategic workforce planning refers to the use of people analytics to create strategic alignment of an organization's human capital with its business direction. Results based on responses from 516 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

Those industries may need to consider adding health and wellness programs or better employee benefits in the future to improve employee retention. Companies could also consider using strategic workforce planning analytics tools to help them understand better how to manage workforce shortages and skill gaps in the face of higher resignations.

But the Great Resignation may be more than just employees leaving one company in a year. The pandemic has prompted some people to reconsider their career fields or to change jobs more than once in 2021 as

they try to find work they are passionate about, according to a recent survey Indeed commissioned.<sup>13</sup> The survey covered 1,000 workers globally who voluntarily resigned from at least two jobs since March 2020.

The pandemic created a "very large forced social experiment where the old way of doing things was no longer an option," Scott Bonneau, Indeed's vice president of global talent attraction, said in an interview with S&P Global Sustainable1.



The Great Resignation is impacting all industries to some extent, but not all were equally prepared to offer the health and wellness benefits that can help improve retention.

This prompted people to rethink their jobs and their careers more broadly, Bonneau said. The survey found workers most valued four factors: remote work options, flexibility for parents and caregivers, flexible work hours and the ability to feel safe or follow health safety guidelines in their positions. Pay and the ability to work at a company that closely aligns with an employee's personal values are also important. Bonneau noted that employees, especially millennials, have been trending in this direction for several years.

And as for worker health and safety programs once considered optional perks, potential employees are increasingly

listening for companies to offer these benefits in their hiring pitches. If companies want to attract and retain employees amid the continued uncertainty of the pandemic and the Great Resignation, they would be wise to adapt accordingly ■

*This piece was published by S&P Global Sustainable1 and not by S&P Global Ratings, which is a separately managed division of S&P Global.*

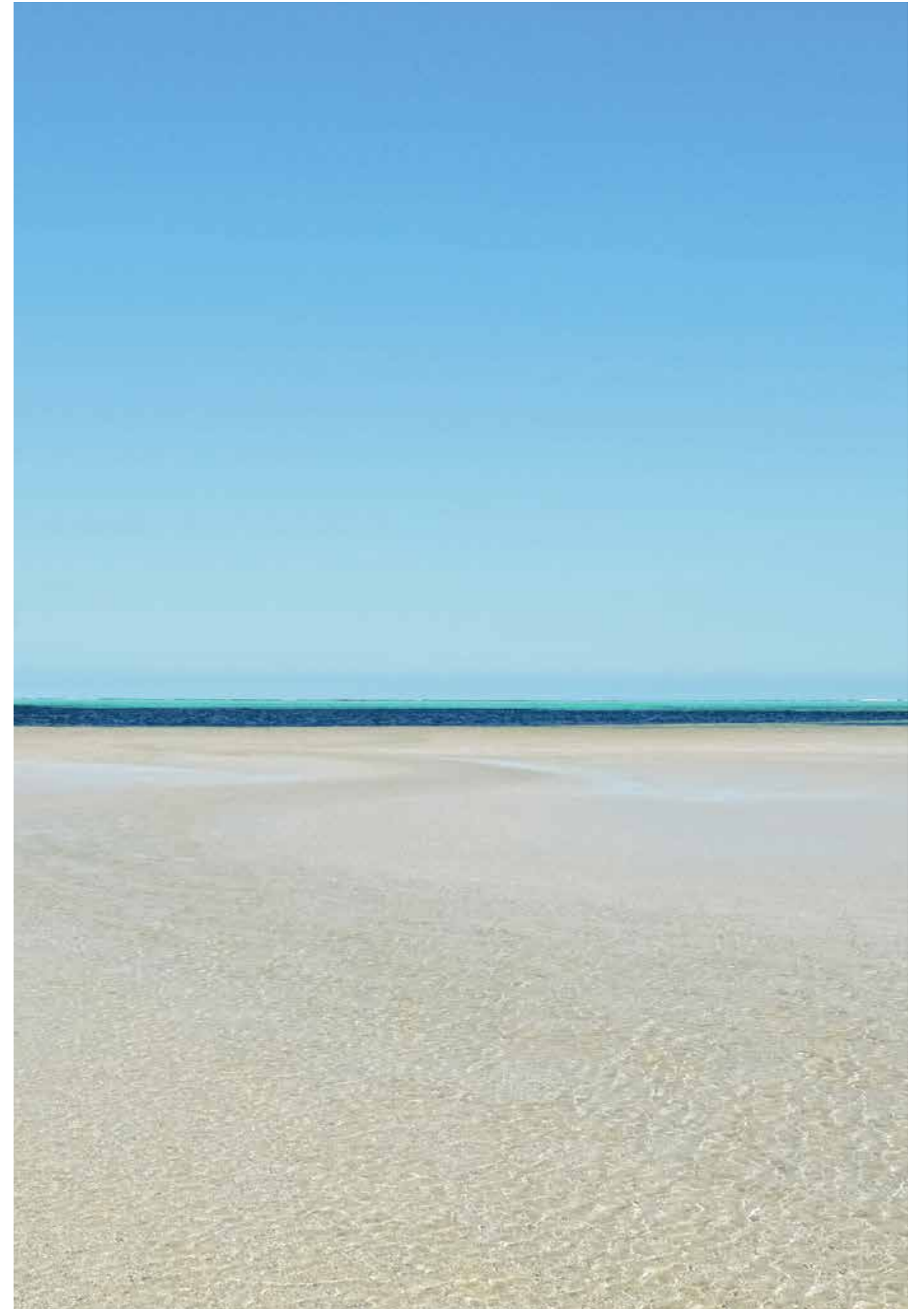
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<sup>13</sup> "News: 92% of COVID Job Switchers Report, 'Life is Too Short To Stay in a Job You're Not Passionate About,'" Indeed, Dec. 2, 2021, <https://www.indeed.com/career-advice/career-development/covid-job-switching>.



A photograph of a field of purple leaves with a single green leaf in the center, symbolizing diversity.

**Progress toward  
corporate diversity  
requires more than  
ticked boxes and  
token hires**

## Key takeaways:

- Embracing holistic diversity, the 2021 S&P Global Corporate Sustainability Assessment includes new questions on race, ethnicity, nationality, age, LGBTQI+ status and disability, alongside existing questions on gender equity. Similar patterns of underrepresentation can be observed across indicators. For example, Black employees make up 10.7% of the U.S. workforce but only 5.3% of all management positions in surveyed U.S. companies.
- While these quantitative metrics are essential to grasp the effectiveness of diversity, equity and inclusion policies, measurement needs to be carried out with caution. Only 32% of companies surveyed headquartered in Europe were able to disclose on the breakdown of their workforce based on race, ethnicity or nationality. This speaks to the legal and cultural challenges that still exist in this space, and the need for localized data collection approaches.
- Overall, real progress on diversity and the corresponding benefits will only come from a willingness to critically reevaluate existing power dynamics and embrace cultural change.

<sup>1</sup> Frank Cooper III and Ranjay Gulati, "What Do Black Executives Really Want?" Harvard Business Review, November 2021, <https://hbr.org/2021/11/what-do-black-executives-really-want>; Olumide Cole, "Hiring more employees of color isn't your first step to diversity," Human Resource Executive, November 2021, <https://hr executive.com/hiring-more-employees-of-color-isnt-your-first-step-to-diversity/>

<sup>2</sup> Paul Gompers and Silpa Kovvali, "The Other Diversity Dividend," Harvard Business Review, July 2018, <https://hbr.org/2018/07/the-other-diversity-dividend>; Daniel Sandberg, "When Women Lead, Firms Win," S&P Global, October 2019, <https://www.spglobal.com/en/research-insights/featured/when-women-lead-firms-win>; Beth Ann Bovino and Rafia Zafar, "How the Advancement of Black Women Will Build a Better Economy for All," S&P Global, June 2021, <https://www.spglobal.com/en/research-insights/featured/how-the-advancement-of-black-women-will-build-a-better-economy-for-all>

The social aspect of the ESG movement can be harder to pin down than the environmental or governance components. But social issues have gained prominence in the corporate world during the coronavirus pandemic, and as a result companies are increasingly turning to diversity, equity and inclusion as part of the effort to grapple with the S in ESG.

Many companies have embarked on their diversity journey, recognizing the benefits that can be felt beyond improved financial metrics. Increasing diversity can create a virtuous cycle, improving businesses' ability to attract and retain talent. Companies with diverse



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workforces and management teams are more appealing to employees, who are more likely to stay where they feel included.<sup>1</sup> Companies that are willing to look outside their usual networks can also tap into sources of talent that others are neglecting. And research has shown that more diversity in workforces and leadership teams is associated with improved profit, market and economic outcomes.<sup>2</sup>

But even if representation numbers improve, much of the real progress – and attending benefits of diversity, equity and inclusion – will come from a willingness to critically reevaluate existing power dynamics.<sup>3</sup> This involves not just choosing who is empowered

to make decisions in a business but also who is involved in determining the questions that require decisions. For example, pushback against the use of facial recognition software in the tech industry or certain skin-lightening products in the cosmetics industry demonstrates that sometimes the right question is not how best to put a product to work but whether to do so at all. Organizations must think critically about whose voices are heard and the extent to which colleagues listen to those voices receptively and respectfully. Differences in lived experiences, ways of thinking, underlying assumptions and leadership styles are all valuable components of a truly diverse organization.<sup>4</sup>

relatively nebulous factors are harder to pin down than typically external markers of diversity such as gender and race. But even these present their own challenges when it comes to the practicalities and ethics of data collection and analysis. And questions of how to effectively use the data we do have only add to what has become a daunting task after years of glacial progress.

Mindful of these challenges but also committed to facilitating transparency and progress, we added several new questions to the S&P Global 2021 Corporate Sustainability Assessment, or CSA, asking companies about the breakdown of their workforces based on race, ethnicity and nationality, as well as age, LGBTQI+ status and disability. Building on our historical data related to gender diversity, responses to these questions yield a unique new data set that deepens our understanding of the complexities of defining, analyzing and improving holistic diversity in the global business community.

## The lessons of gender

But defining diversity and measuring progress often seem elusive. There are many reasons for this, starting with the sheer variety of identities and characteristics that merit attention in any discussion of diversity. Such

As one of the more extensively researched areas of diversity, the topic of gender representation and equity shows how slow progress on the diversity journey can be.

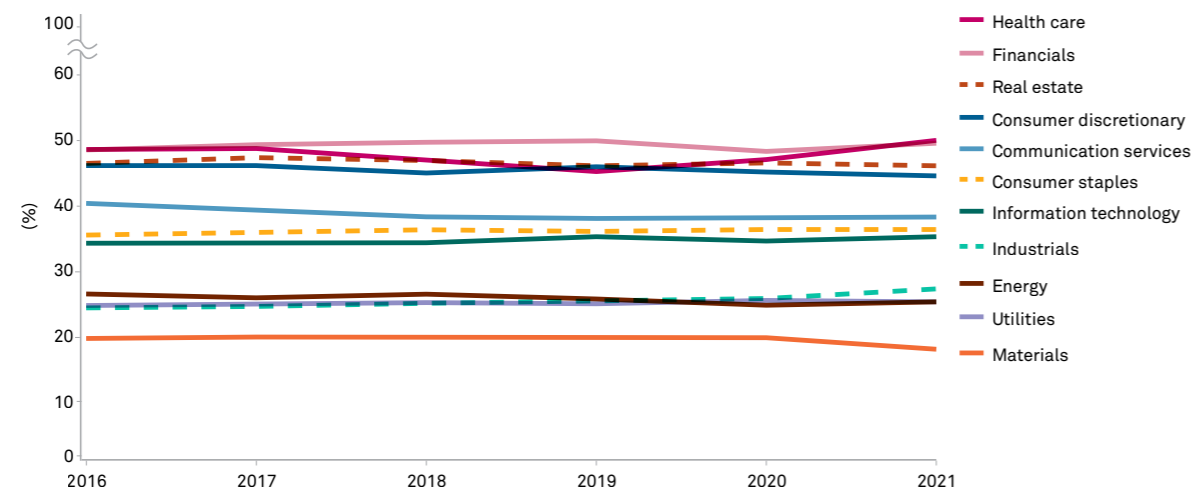
Companies with diverse workforces and management teams are more appealing to employees, who are more likely to stay where they feel included.

<sup>3</sup> Robin Ely and David Thomas, "Getting Serious About Diversity: Enough Already with the Business Case," Harvard Business Review, November 2020, <https://hbr.org/2020/11/getting-serious-about-diversity-enough-already-with-the-business-case>.

<sup>4</sup> S&P Global and Paris 2 Pantheon-Assas University, "Leadership in Turbulent Times: Women CEOs During COVID-19," May 2021, <https://www.spglobal.com/en/research-insights/featured/women-ceos-covid>; Amelia Tan, "Inclusion and diversity," Blackrock, <https://www.blackrock.com/uk/individual/insights/blog/investing-in-inclusion-diversity>

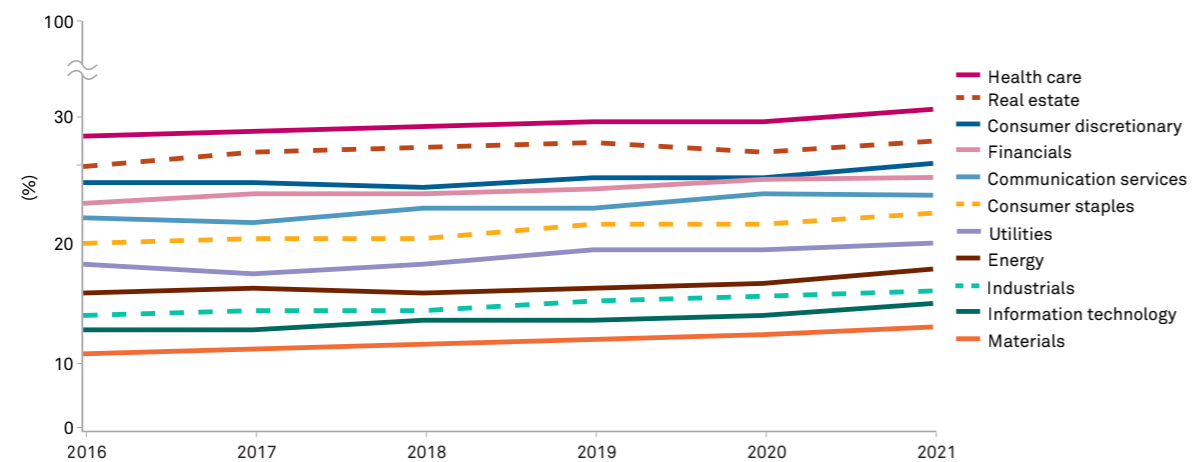


**Average ratio of women to total full-time employees reported by companies in select sectors**



Data as of November 2021. Results based on responses from 3,745 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

**Average ratio of women to senior management positions reported by companies in select sectors**



Data as of November 2021. Results based on responses from 2,339 companies. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

It also exemplifies the actionable insights that can grow out of responsible, wide-reaching data collection and analysis.

Existing research shows that gender equity is still very much a work in progress. CSA data over the past six years illustrates the

still-significant gap between the share of women in the workforce and the share of women in management positions at companies worldwide. Ensuring that women have an equitable opportunity to access those decision-making positions is a challenge that companies should tackle



Being more inclusive in the way we think about diversity recognizes that getting closer to true equity requires a complex, evolving approach to measurement and action.

women without giving them access to the full range of compensation available to men.<sup>5</sup>

Much of the existing research analyzes gender in a binary way – men and women. More work and data are needed to better understand the challenges faced by people of nonbinary and other gender identities in the workplace.

from multiple angles and at all levels of their organization. Gender disparities start far down in organizational structures; this can create a self-perpetuating effect that ultimately results in the bleakly homogenous makeup of most boards and senior leadership teams.<sup>5</sup>

Holistic diversity, equity and inclusion strategies recognize that people have various identity markers that intersect and influence their lives and experiences in the workplace in specific ways. Gender is only one of those identities. Discrimination and inequities in the workplace are linked to a range of other factors, such as educational background, class, ethnicity, race, nationality, religion, age, sexual orientation and disability. Being more inclusive in the way we think about diversity does not mean that we have achieved gender equality in the workplace and are now moving on to the next challenge; it simply recognizes that getting closer to true equity requires a complex, evolving approach to measurement and action.

Inequities also persist in the realm of compensation. Not only do women earn less than men overall because of inequitable power distributions in the workplace, they earn less when compared to men in the same positions. A common way of measuring pay equity improvement might be obscuring the true nature of the problem. Recent S&P Global Market Intelligence research found that companies seem to be artificially addressing pay gaps by increasing the median compensation for

<sup>5</sup> Yuhao Du, Jessica Nordell and Kenneth Joseph, "Insidious Nonetheless: How Small Effects and Hierarchical Norms Create and Maintain Gender Disparities in Organizations," ArXiv, October 2021, <https://arxiv.org/abs/2110.04196>

<sup>6</sup> Daniel Sandberg, "Glass Floors and Ceilings: Why Closing the Median Wage Gap Isn't Fair," S&P Global, October 2021, <https://www.spglobal.com/marketintelligence/en/news-insights/research/glass-floors-and-ceilings-why-closing-the-median-wage-gap-isnt-fair>



## Measure with caution

If what gets measured gets done, as the saying goes, then the argument is strong for measuring diversity in various categories.

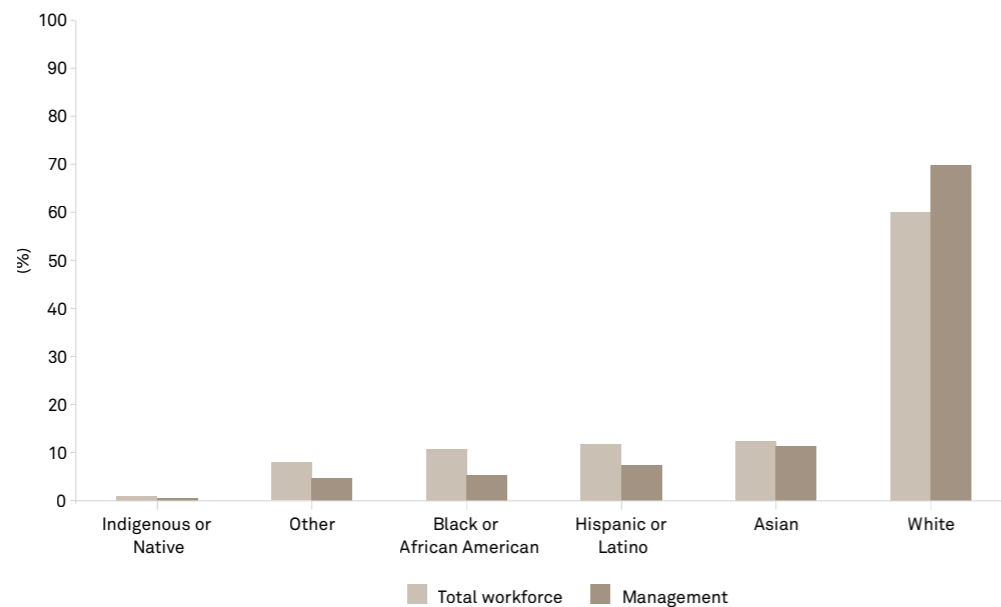
Persuaded to that effect, governments, investors and other market players are taking action. Many companies already face increased external motivation to publicly disclose diversity-related metrics. The U.S. Securities and Exchange Commission recently approved a Nasdaq rule requiring listed companies to diversify their boards or explain why they have not done so. The rule requires companies with more than five directors to have at least two board members who are “diverse,” meaning one director who self-identifies as a woman and one who self-identifies as either an underrepresented minority or LGBTQ+. Partial compliance is due in August 2023, with full compliance required by August 2025 or 2026, depending on the company.

And the SEC could get more specific on its recently introduced human capital

disclosure requirements.<sup>7</sup> Such measures in the U.S. would add to pressures from certain state and local authorities, not to mention investors, to step up diversity efforts and provide additional transparency.<sup>8</sup>

These actions are badly needed. In 2021, the CSA asked companies for the first time whether they provide a breakdown of their workforce by racial and ethnic self-identifications or by nationality. If companies indicated that at least 20% of their workforce was based in the U.S., they were asked to provide a breakdown by certain racial and ethnic categories. The resulting data confirms how underrepresented certain racial and ethnic minority groups are at management levels in the U.S. For example, across the 641 companies included in this part of the analysis, Black or African American people represented 10.7% of the total workforce but only 5.3% of management. With new board members frequently sourced from the ranks of experienced executives, the problem ends up compounded across corporate leadership bodies.

## Share of employees in total workforce and in management positions by ethnicity/race in US-based companies



Data as of November 2021. Results based on responses from 641 companies. Companies included in the analysis have at least 20% of their workforce based in the U.S. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

A truly inclusive company culture can empower employees to draw on their whole range of identities and life experiences without feeling the need to hide any of them, leading to better productivity, engagement and innovation.

But with such a sensitive and complex topic as diversity, it is important to proceed with caution on quantitative data, avoiding the impulse to look for one-size-fits-all measurements.<sup>9</sup> The CSA data shows some of the complexities involved in thinking about racial, ethnic and national diversity globally. Recognizing that providing a breakdown of the workforce based on race/ethnicity might not be legally possible or be the most relevant indicator in some geographies, the CSA gave the option to companies with less than 20% of their employees in the U.S. to report either on race/ethnicity or on nationality.

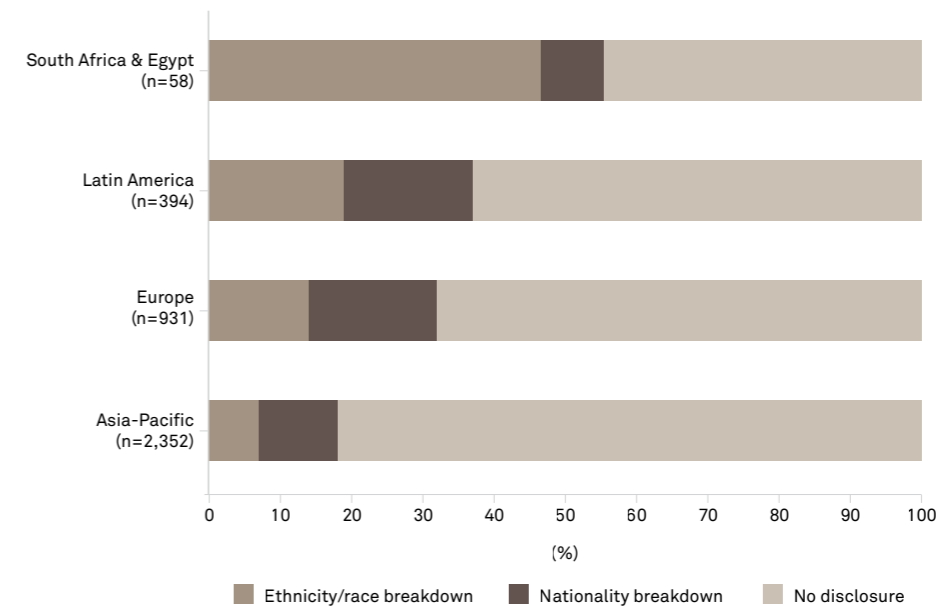
Some regions in our analysis have a fairly even split of disclosures by race/ethnicity and nationality. But more than 60% of companies surveyed in Latin America, Europe and Asia-

Pacific had no such disclosures. Achieving more transparency in these areas of diversity is a challenge and should be a high priority for companies, as well as for governments, investors and researchers. A key element of this is asking the right questions and using the right categories. The questions and categories that are most meaningful will vary widely depending on the geographic and cultural context. Some companies even face legal challenges in collecting the data they need to measure progress in their diversity journey.

Governments will need to adapt to protect employees' privacy without impeding companies' diversity efforts.

The CSA 2021 also asked companies about the percentages of their full-time employees

## Share of companies by region disclosing the breakdown of their workforce by race/ethnicity or nationality



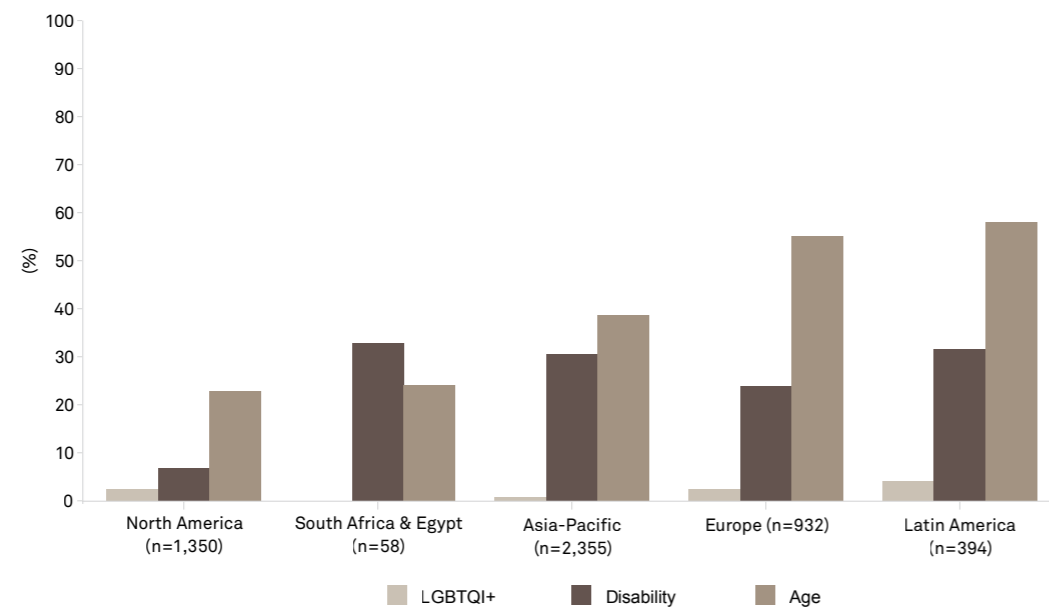
Data as of November 2021. Mexico is included in the Latin American region for the purpose of this analysis. African companies assessed were only based in South Africa and Egypt. The analysis for North American companies is in a separate graph. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

<sup>7</sup> Gibson Dunn & Crutcher LLP, “Discussing Human Capital: A Survey of the S&P 500’s Compliance with the New SEC Disclosure Requirement One Year After Adoption,” November 2021, [https://www.gibsondunn.com/discussing-human-capital-survey-of-sp-500-compliance-with-new-sec-disclosure-requirement-one-year-after-adoption/#\\_ftn6](https://www.gibsondunn.com/discussing-human-capital-survey-of-sp-500-compliance-with-new-sec-disclosure-requirement-one-year-after-adoption/#_ftn6)

<sup>8</sup> Lyuba Goltser, Andrew Holt and Ellen Odoner, “NYC Comptroller Seeks Public Disclosure of EEO-1 Reports: Shareholder Proposals Expected for 2021,” Weil Gotshal & Manges LLP, July 2020, [https://www.weil.com/-/media/weil\\_nyc\\_comptroller\\_seeks\\_public\\_disclosure\\_eeo1\\_reports.pdf](https://www.weil.com/-/media/weil_nyc_comptroller_seeks_public_disclosure_eeo1_reports.pdf); Richard Benton and Eunmi Mun, “Illinois Corporate Board Diversity, Inclusion, and Representation Report – 2020,” <https://ler.illinois.edu/wp-content/uploads/2021/07/Illinois-Board-Diversity-Report-2020-Revised-2.pdf>

<sup>9</sup> “Mindful Metrics: Data Analytics’ Role in Effective and Compliant Diversity, Equity, and Inclusion Programs,” Sarah Platt, Bonnie Puckett, Jimmy Robinson Jr., and Justin Tarka, Ogletree Deakins Nash Smoak & Stewart PC, October 2020, [https://www.researchgate.net/publication/344656243\\_2020\\_corporate\\_labor\\_and\\_employment\\_counsel\\_exclusive\\_creating\\_effective\\_and\\_legal\\_diversity\\_equity\\_and\\_inclusion\\_programs](https://www.researchgate.net/publication/344656243_2020_corporate_labor_and_employment_counsel_exclusive_creating_effective_and_legal_diversity_equity_and_inclusion_programs).

## Share of companies by region publicly disclosing the breakdown of their workforce based on disability, age and/or LGBTQI+ status



Data as of November 2021. LGBTQI+ refers to lesbian, gay, bisexual, transgender, queer, intersex and further sexual and/or gender identities. Mexico is included in the Latin American region for the purpose of this analysis. African companies assessed were only based in South Africa and Egypt. Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1

who are LGBTQI+, who belong to certain age groups and/or who have a disability. These are just some of the indicators that companies can use to better assess the extent to which they are pursuing holistic diversity and accessing the full pool of talent available to them.<sup>10</sup> Companies should increasingly aim to measure how these identities interact with each other rather than understanding them as separate pillars, in order to fully grasp the way experiences are shaped by intersecting identities. For example, the challenges that a Black woman faces in the workplace are likely to be different than those a woman with disabilities encounters. To be effective in furthering professional opportunities for all women, an inclusive gender equity policy would therefore need to understand how different factors such as race and ability

influence women's experiences in specific ways and account for these differences.

These indicators also pertain to identities or characteristics that may be less visible in the workplace than categories such as gender and race, especially if employees do not discuss them openly. Employees can make this choice for various reasons, including personal preference, privacy concerns or fear of discrimination. A truly inclusive company culture can empower employees to draw on their whole range of identities and life experiences without feeling the need to hide any of them, leading to better productivity, engagement and innovation.

<sup>10</sup> Accenture, "Getting to Equal: The Disability Inclusion Advantage," [https://www.accenture.com/\\_acnmedia/pdf-89/accenture-disability-inclusion-research-report.pdf](https://www.accenture.com/_acnmedia/pdf-89/accenture-disability-inclusion-research-report.pdf)

<sup>11</sup> Janice Gassam Asare, "If You Really Care About Equity And Inclusion, Stop Cutting Your Diversity Budget," *Forbes*, August 2020, <https://www.forbes.com/sites/janicegassam/2020/08/30/if-you-really-care-about-equity-and-inclusion-stop-cutting-your-diversity-budget/?sh=22c7b1824549>; Ben Brooks, "HR, it's time to go big on your budget requests this year," *Human Resource Executive*, September 2021, <https://hrxexecutive.com/brooks-hr-its-time-to-go-big-on-your-budget-requests-this-year/>

<sup>12</sup> Malav Parekh, "ESG adoption, spending and addressing rising hiring challenges among businesses," 451 Research, December 2021, <https://clients.451research.com/reportaction/103144/ToC>; Hanover Research and OneStream Software, "Financial Decision-Makers Outlook," April 2021, [https://onestreamsoftware.com/resources/lp-hanover-research-enterprise-financial-decision-making-2021/?utm\\_medium=Google&utm\\_source=PPC&utm\\_campaign=Brand\\_NA&utm\\_term=OneStream\\_Software](https://onestreamsoftware.com/resources/lp-hanover-research-enterprise-financial-decision-making-2021/?utm_medium=Google&utm_source=PPC&utm_campaign=Brand_NA&utm_term=OneStream_Software)



Employers must provide their workforce with a clear understanding of why that information is useful, how it will help create a more inclusive workplace, and how they can be sure it will be held in strict confidentiality and never used against them.

### The destination and the journey

Organizations cannot fully unlock the benefits of diversity unless they move beyond ticking boxes pertaining to certain identity categories and commit to a holistic embrace of diversity, equity and inclusion.

That commitment must not be limited to rhetoric, sporadic hiring decisions and occasional internal training sessions. In many cases, it will require net new resources.<sup>11</sup> Many companies are trying to bridge the gap between their commitments and actions, including by increasing spending on diversity and inclusion efforts.<sup>12</sup>

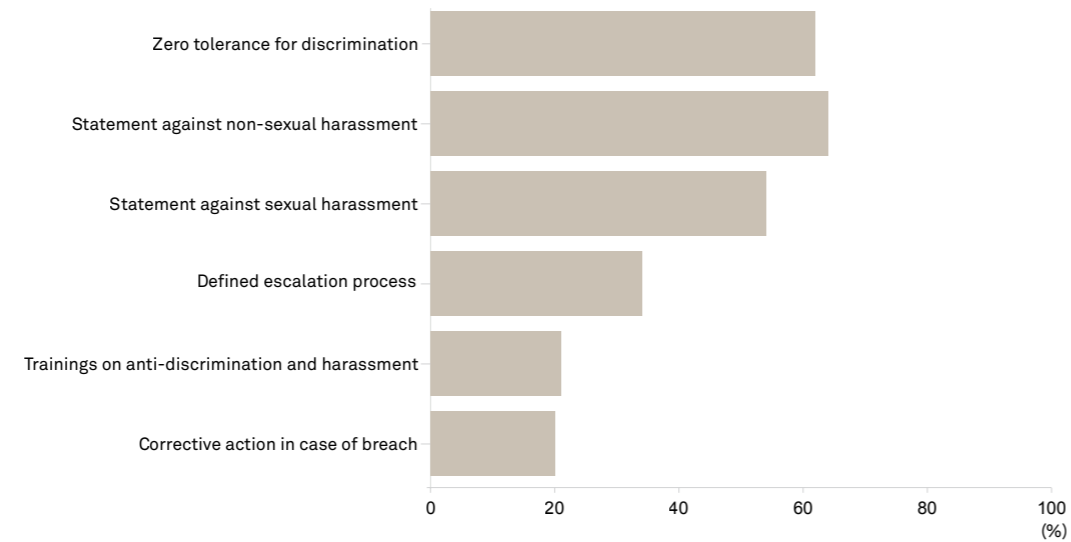
Investing resources is necessary to overcome a lack of diversity, but merely throwing

money at the problem will not solve it. Nor does having good intentions and policies pertaining to diversity, equity and inclusion automatically create the necessary structures for their implementation in practice. The 2021 CSA included a new question on anti-discrimination and anti-harassment policies and measures. We found that while around 60% of companies had policies in place against non-sexual harassment and discrimination, only 34% had a defined escalation process in place and around 20% had trainings for all their employees and corrective measures in case of discriminatory behavior.

Corporate policies are an important first step, but they do not provide assurance that they have shaped or will shape a company's culture in meaningful ways. Companies may have more policies in place because of previous experience with controversies or because of a heightened awareness of the risk of breaches, rather than because they have a strong inclusive culture.

While measurement is key to ensuring the effectiveness of diversity, equity and inclusion programs, how you collect a metric is just as important as the metric itself. Even where companies' intentions are good and

### Share of companies with the following aspects covered in their public anti-discrimination and harassment policies



Data as of November 2021. Results based on responses from 5,091 companies.  
Source: Corporate Sustainability Assessment 2021, S&P Global Sustainable1.

regulations permit, efforts to collect diversity data can backfire if employees feel pressured to disclose personal information that might play to their disadvantage in the future. Even the experience of being asked about topics such as sexual orientation can be unsettling for employees. Employers must provide their workforce with a clear understanding of why that information is useful, how it will help create a more inclusive workplace, and how they can be sure it will be held in strict confidentiality and never used against them.

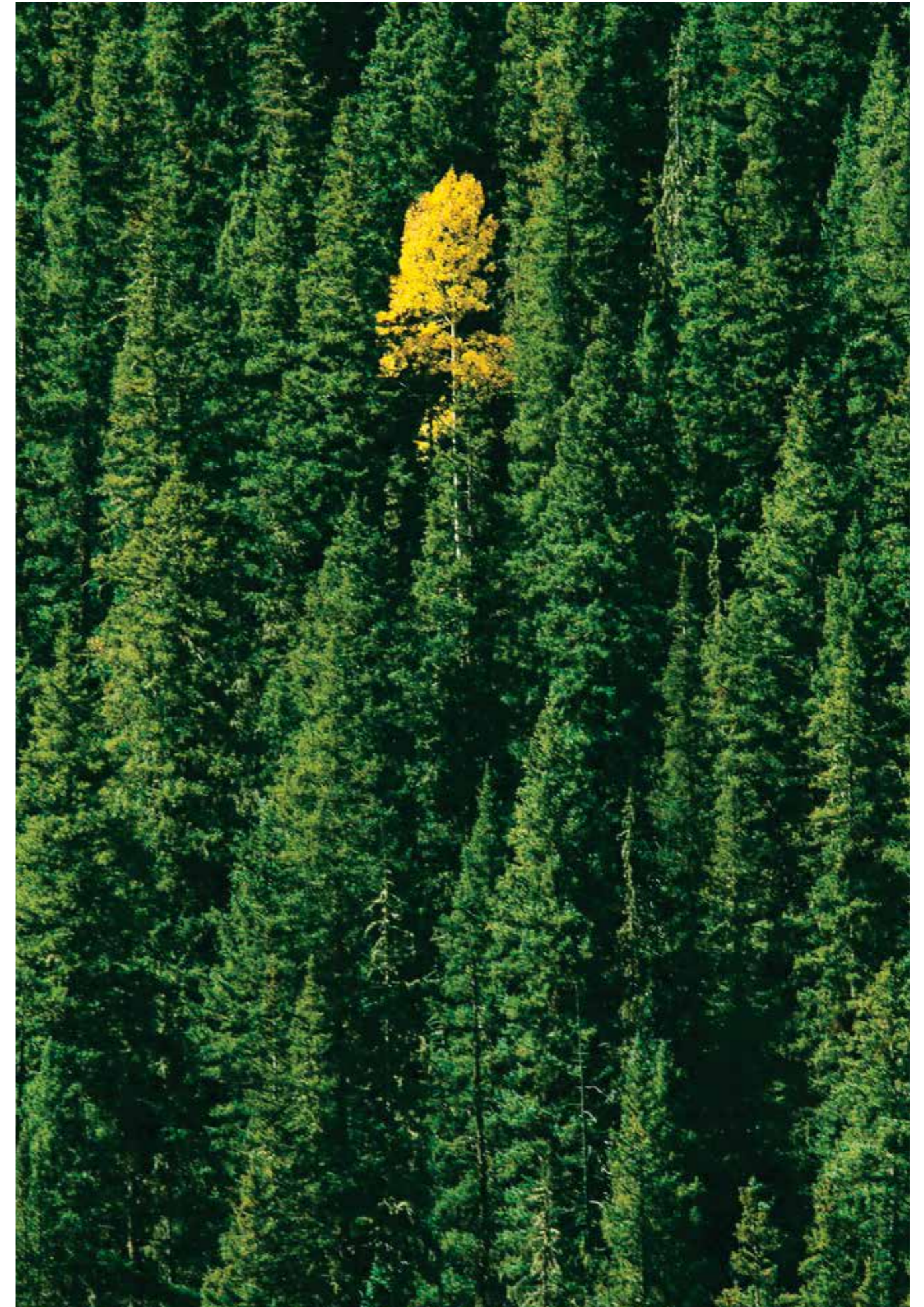
Despite its pitfalls, quantitative data can help companies evaluate the actual results of policies. It can push companies to pursue the most effective, well-informed strategies and tactics pertaining to diversity. A company might have strong policies in place, in addition to numerous employee resource groups and other initiatives, while still consistently underrepresenting certain groups in leadership roles. High-quality metrics can help an organization understand how quickly its initiatives are moving it in the right direction, or the extent to which further work is needed to root out discriminatory and inequitable work cultures.

After a long history of discrimination and structural barriers to full professional development for people of various identities and backgrounds in the business community, we still hear that “change takes time” and that underrepresented people need to “be patient” as organizations work toward diversity. But the destination matters as much as the journey. Organizations cannot achieve diversity in the sense of ever being done with it. Hiring certain numbers of underrepresented people or even getting certain numbers of such people on boards or in management teams is a positive step. But this ticking-boxes approach is a recipe for complacency. The true value of diversity is arguably the lack of complacency that comes from a continuous willingness to question assumptions, shift power dynamics and take risks. In that sense, the destination is really another journey. ■

Contributor



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An aerial photograph of rolling green hills, likely in the Marlborough Downs of England. The hills are covered in lush green grass and are illuminated by soft, golden light, creating a sense of depth and texture. In the lower right foreground, a small herd of sheep is grazing on a slope. The overall scene is peaceful and natural.

# Sustainability Awards 2022

## S&P Global Sustainability Awards

**7554**

companies assessed in the 2021 Corporate Sustainability Assessment (CSA) were considered for The Sustainability Yearbook

Only

**716**

companies with top scores made it into the Yearbook

with

**323**

Yearbook distinctions:

**75**

Gold Class

**89**

Silver Class

**106**

Bronze Class

**53**

Industry Movers

### Sustainability Award

Gold Class 2022

#### S&P Global

Companies achieving an S&P Global ESG Score within 1% of the industry's top-performing company's score, and a minimum score of 60, are awarded a Gold Class distinction.

### Sustainability Award

Silver Class 2022

#### S&P Global

Companies achieving an S&P Global ESG Score within a range of 1% to 5% of the top-performing company's score in their industry, and a minimum score of 57, are awarded a Silver Class distinction.

### Sustainability Award

Bronze Class 2022

#### S&P Global

Companies achieving an S&P Global ESG Score within a range of 5% to 10% of the top-performing company's score in their industry, and a minimum score of 54, are awarded a Bronze Class distinction.

### Sustainability Award

Industry Mover 2022

#### S&P Global

Companies within the top 15% of each industry that participated in the CSA last year and this year, achieved an improvement in their S&P Global ESG Score of at least five percent, and achieved the strongest improvement in their industry, are awarded an Industry Mover distinction.

### Sustainability Yearbook

Member 2022

#### S&P Global

Companies within the top 15% of their industry and an S&P Global ESG score within 30% of their industry's top performing company are awarded as Yearbook Member.

## Methodology

### Universe

The selection of companies in The Sustainability Yearbook 2022 is based on the 2021 Corporate Sustainability Assessment (CSA). The underlying universe of companies was determined on January 21, 2022, covering all companies assessed in the 2021 CSA until that date. A first batch of 5,300 companies was assessed in November 2021, to select leading companies for inclusion in relevant Dow Jones Sustainability Indices. An additional 2,400 companies were assessed since for inclusion in The Sustainability Yearbook, as part of our continuous assessment process. This includes dozens of large private companies that contracted the CSA as a service. By April 2022, S&P Global will increase the number of assessed companies to over 11,000. As a result, the ranking of companies within an industry may also change. The most up to date S&P Global ESG Scores and ranks for all assessed companies are available on the S&P Global website [www.spglobal.com/esg/scores](http://www.spglobal.com/esg/scores).

### Selection

In order to be listed in the Yearbook, companies must be within the top 15% of their industry and must achieve an S&P Global ESG Score within 30% of their industry's top-performing company. The Sustainability Yearbook aims to distinguish those companies that have each demonstrated their strengths in the area of corporate sustainability. As sustainability performance accelerates, S&P Global increasingly sees value in rewarding groups of top-performing companies, rather than focusing on individual company ranks. The selection of companies into the different Yearbook award classes is explained on the previous page.

### S&P Global ESG Scores

S&P Global ESG Scores are based on the assessment of corporate sustainability performance in the S&P Global Corporate Sustainability Assessment (CSA). Scores are from 0 – 100 (best). As the CSA applies

61 industry-specific questionnaires, the scores should not be used to rank companies across industries and should be reviewed within the context of each CSA industry. All scores used for the Yearbook selection reflect the results of S&P Global's Media & Stakeholder Analysis (MSA) as of January 21st, 2022 as well as the most recent decisions regarding company exclusions from the DJSI that have been taken by the Dow Jones Sustainability Index Committee.

### Controversy Screening

As a prerequisite, a qualitative screen based on the MSA is applied to determine eligibility for inclusion in The Sustainability Yearbook regardless of the score derived from the CSA. The MSA is based on an examination of media coverage and publicly available stakeholder information provided by RepRisk ESG Business Intelligence and evaluates a company's response to critical sustainability issues that may arise during the year. This process aligns the Yearbook's methodology with any decision by the Dow Jones Sustainability Indices Committee to exclude a company from the DJSI, which is also based on the MSA.

### Corporate Actions

S&P Global monitors corporate actions throughout the year. For merged companies, the surviving entity will be considered for the Yearbook based on the score of the company assessed which S&P Global deems to be the surviving entity. If a company is delisted as a result of a corporate action prior to the end of October, it will no longer be eligible for inclusion in the Sustainability Yearbook, given that the entity no longer exists. Company names and locations are reviewed periodically and updated to the best of S&P Global's knowledge at the time of publication. Changes occurring after this date may not be reflected in the printed version of the Yearbook, but may be updated on the S&P Global Sustainability Yearbook website.

## Reading Instructions

The information below provides an explanation on how to interpret the various sections contained in each of the Industry Profiles on the following pages.

### 1 Driving forces

Highlights current and future challenges shaping the competitive landscape of each industry and impacting the sources of value creation for companies.

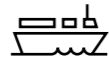
### 2 Highlighted criteria

Highlights selected industry-specific and general criteria that are applied in the 2021 Corporate Sustainability Assessment, including the weights of the three dimensions within the overall score.

### 3 Industry statistics

This section displays the research coverage in 2021 CSA for the respective industry. Assessed companies include those that actively participated in the CSA and companies assessed by S&P Global based on publicly available information.

## This is an example



### Transportation and Transportation Infrastructure

#### 1 Driving forces

The transportation industry consists of several sub-industries, each with distinctive sustainability issues. The sudden decline of global travel and trade due to the COVID-19 pandemic will have long-lasting impacts. Flexibility in adapting the transportation and logistics systems that enable global supply chains has been a key challenge as pandemic restrictions evolved in 2021. Personnel and passenger safety remain the top priority, despite growing financial pressure on these companies and their fleets. Factors such as fuel efficiency and operational eco-efficiency will continue to remain focus areas. Lower-carbon transportation options provide an opportunity to acquire new customers and retain existing ones as more companies commit to reducing their carbon footprint. Offering a high-quality, reliable service requires companies to develop an engaged workforce through effective development programs.

#### 2 Highlighted criteria & dimension weights

Environmental Dimension: 27%  
 - Climate Strategy  
 - Fuel Efficiency  
 - Operational Eco-Efficiency  
 Social Dimension: 39%  
 - Occupational Health and Safety  
 - Stakeholder Engagement  
 - Talent Attraction & Retention  
 Governance & Economic Dimension: 34%  
 - Codes of Business Conduct  
 - Customer Relationship Management  
 - Risk & Crisis Management

#### 3 Industry statistics

##### Industry Awards 2022

S&P Global ESG Score	Company	Country	Score
Gold Class	BTS Group Holdings Public	Thailand	85
Silver Class	Royal Mail plc	United Kingdom	82
Bronze Class	Airports of Thailand Public	Thailand	78
	Transurban Group	Australia	76

##### Sustainability Yearbook Members

PostNL N.V.	Netherlands	76
Canadian National		
Railway Company	Canada	75
Hyundai Glovis Co., Ltd.	Rep. of Korea	75
Canadian Pacific Railway Limited*	Canada	73
Deutsche Post AG	Germany	70
Sydney Airport Limited	Australia	67
Nippon Yusen Kabushiki Kaisha	Japan	67
CSX Corporation	United States	63
CJ Logistics Corporation	Rep. of Korea	62
MTR Corporation Limited	Hong Kong	60
Aena S.M.E., S.A.	Spain	60

\* S&P Global Industry Mover

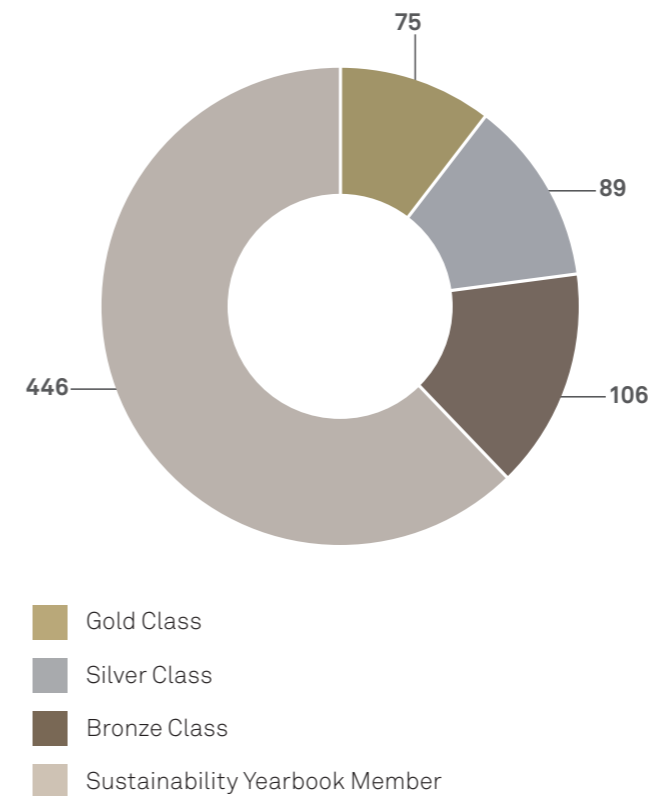
Number of companies assessed	Market capitalization of assessed companies (in USD billion)	Number of companies in Yearbook	Market capitalization of companies in Yearbook (in USD billion)
211	2,736.4	15	440.7

## Where are the Yearbook members located?

**7,554**

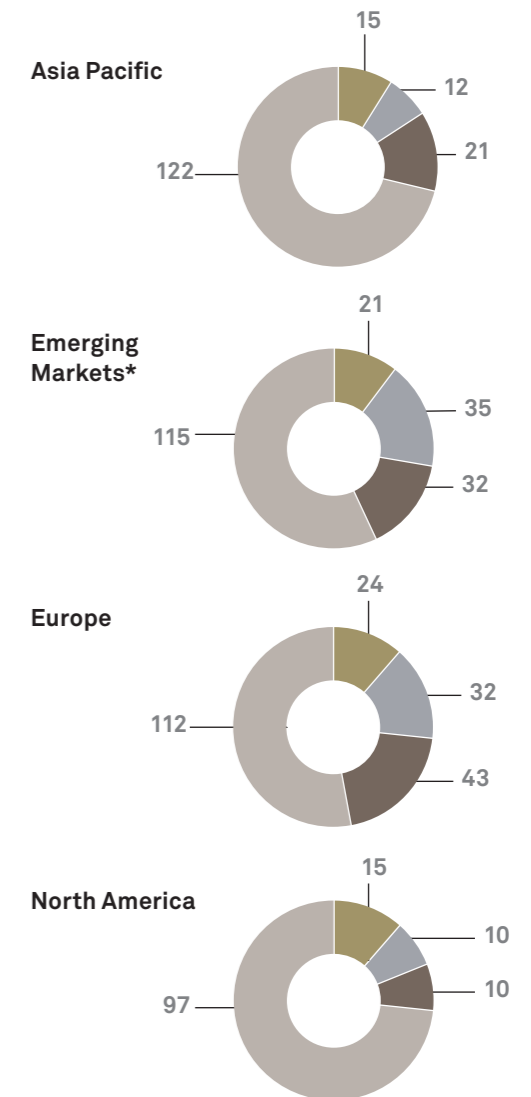
Companies were assessed in the 2021 CSA as of January 21, 2022

**716** companies from **66** locations qualified for the Sustainability Yearbook 2022



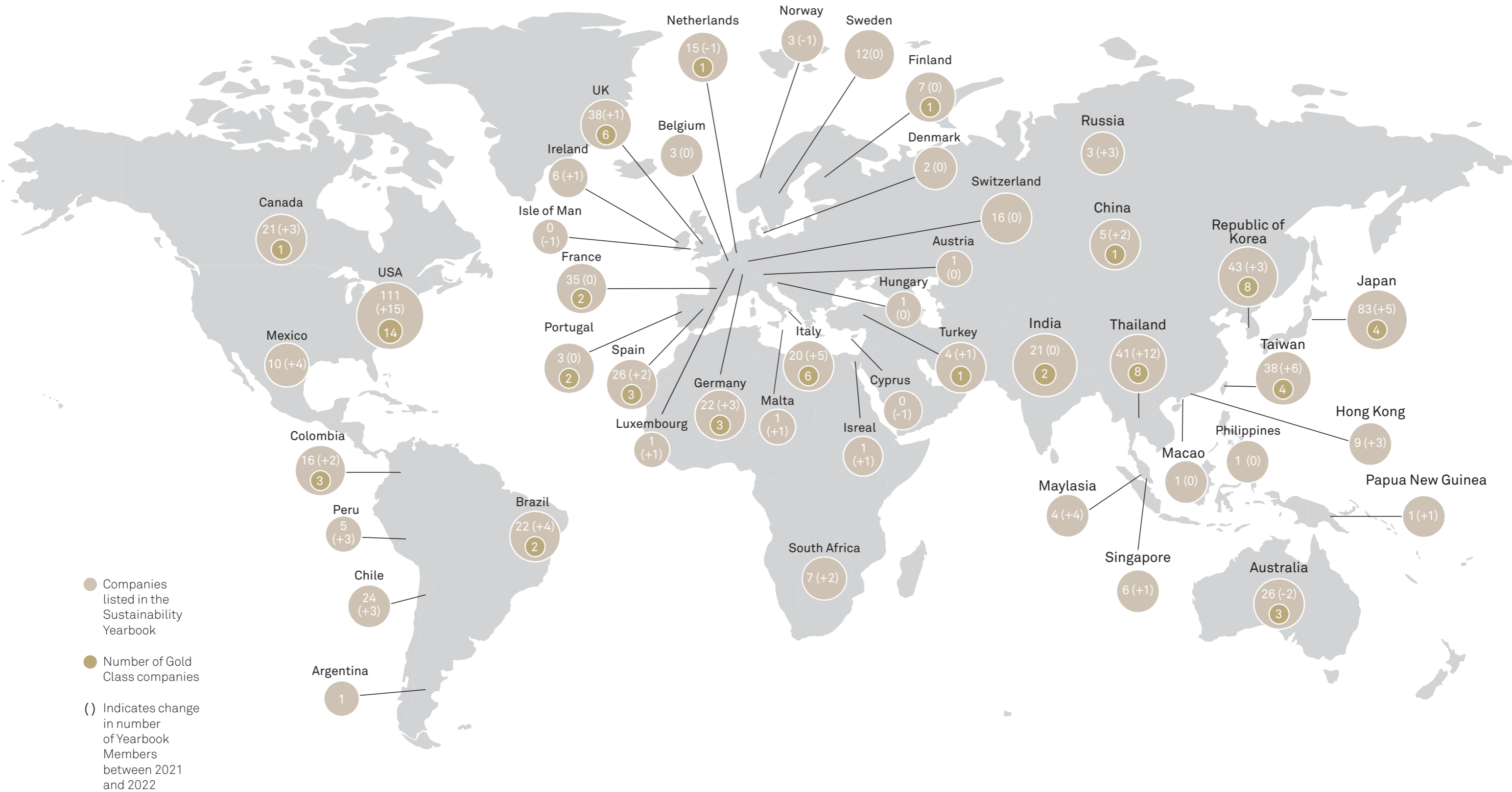
## Market capitalization of assessed companies in USD trillion as of January 21, 2022:

Asia Pacific: 11.2  
 Emerging Markets: 20.9  
 Europe: 17.9  
 North America: 47.8



\*Argentina, Brazil, Chile, China, Colombia, Hungary, India, Malaysia, Mexico, Peru, Philippines, Russia, South Africa, Taiwan, Thailand, and Turkey

## Geographic breakdown



# Industry Profiles: 61 Industries at a Glance



## Aerospace & Defense

### Driving forces

The aerospace and defense industry is heavily reliant on product innovation to develop safer and more efficient modes of transportation, space exploration technologies and military and defense systems. Operational eco-efficiency is an important focus of R&D initiatives due to increasing demand for cleaner and quieter aircraft. While technological advancement improves performance, it also deepens the complexity of aircraft systems. At the same time, original equipment manufacturers are facing continuous cost pressures from both competitors and customers. The confluence of these factors has pushed manufacturers toward outsourcing practices, potentially increasing the risks to product quality and safety. Aerospace and defense companies have also come under increased scrutiny for developing certain weaponry and the potential for harm caused to civilians. Corruption, bribery and anti-competitive practices also remain primary areas of concern across the industry. Therefore, performing thorough governance and social due diligence is of utmost importance.

### Highlighted criteria & dimension weights

- Environmental Dimension ... 27%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 33%
  - Human Capital Development
  - Human Rights
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 40%
  - Codes of Business Conduct
  - Compliance with Applicable Export Control Regimes
  - Supply Chain Management

Industry	Page	Industry	Page
Aerospace & Defense	79	Household Durables	111
Airlines	80	Household Products	112
Aluminum	81	Industrial Conglomerates	113
Auto Components	82	Insurance	114
Automobiles	83	Interactive Media, Services & Home Entertainment	115
Banks	84	IT Services	116
Beverages	86	Leisure Equipment & Products and Consumer Electronics	117
Biotechnology	87	Life Sciences Tools & Services	118
Building Products	88	Machinery and Electrical Equipment	119
Casinos & Gaming	89	Media, Movies & Entertainment	120
Chemicals	90	Metals & Mining	121
Coal & Consumable Fuels	91	Multi and Water Utilities	122
Commercial Services & Supplies	92	Oil & Gas Refining & Marketing	123
Communications Equipment	93	Oil & Gas Storage & Transportation	124
Computers & Peripherals and Office Electronics	94	Oil & Gas Upstream & Integrated	125
Construction & Engineering	95	Paper & Forest Products	126
Construction Materials	96	Personal Products	127
Containers & Packaging	97	Pharmaceuticals	128
Diversified Consumer Services	98	Professional Services	129
Diversified Financial Services and Capital Markets	99	Real Estate	130
Electric Utilities	100	Restaurants & Leisure Facilities	132
Electrical Components & Equipment	101	Retailing	133
Electronic Equipment, Instruments & Components	102	Semiconductors & Semiconductor Equipment	134
Energy Equipment & Services	103	Software	135
Food & Staples Retailing	104	Steel	136
Food Products	105	Telecommunication Services	137
Gas Utilities	106	Textiles, Apparel & Luxury Goods	138
Health Care Equipment & Supplies	107	Tobacco	139
Health Care Providers & Services	108	Trading Companies & Distributors	140
Homebuilding	109	Transportation and Transportation Infrastructure	141
Hotels, Resorts & Cruise Lines	110		

### Industry Awards 2022

	S&P Global ESG Score
S&P Global Gold Class	
Leonardo S.p.a.	Italy 81
Sustainability Yearbook Members	
Lockheed Martin Corporation	United States 72
Northrop Grumman Corporation*	United States 70
Rolls-Royce Holdings plc	United Kingdom 69
BAE Systems plc	United Kingdom 69
Spirit AeroSystems Holding, Inc	United States 63
Thales S.A.	France 63

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	74
Market capitalization of assessed companies (in USD billion)	1,072.3
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	233.6





# Airlines

## Driving forces

The COVID-19 crisis has had a significant effect on airlines, with countries across the globe closing borders and limiting travel. While overall air travel volume is on the upswing, demand for business travel remains comparatively low. In addition to the usual customer expectations linked to reliability, affordability, safety and comfort, customers are increasingly gravitating toward eco-friendly transport modes – a potential issue for airlines given the high greenhouse gas emissions associated with air travel. Enhancing operational eco-efficiency, therefore, remains a priority, as it helps drive resource efficiency and reduces the risk of being impacted by future environmental regulations. Reducing plastic packaging will also be a key priority for the coming years. On the social side, passenger safety will remain a critical issue to prevent reputational risks. The importance of labor practices will also persist given the highly unionized workforce and the risk of strikes, which can result in operational disruptions and lower customer satisfaction while impacting revenue generation.

## Highlighted criteria & dimension weights

- Environmental Dimension .. 26%
  - Climate Strategy
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
- Social Dimension ..... 33%
  - Labor Practice Indicators
  - Passenger Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 41%
  - Efficiency
  - Fleet Management
  - Risk & Crisis Management

## Industry Awards 2022

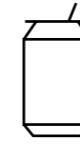
		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
ANA Holdings Inc.	Japan	77
<b>S&amp;P Global Silver Class</b>		
China Airlines, Ltd.	Taiwan	76
EVA Airways Corp.	Taiwan	75
<b>S&amp;P Global Bronze Class</b>		
LATAM Airlines Group S.A.	Chile	72

## Sustainably Yearbook Members

Air France-KLM SA	France	68
Japan Airlines Co., Ltd.	Japan	65
American Airlines Group Inc.	United States	54

## Industry Statistics

Number of companies assessed	51
Market capitalization of assessed companies (in USD billion)	308.8
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	41.8



# Aluminum

## Driving forces

The aluminum industry has an important role to play in the circular economy of the future. It can contribute to lower waste and energy savings in the products it produces, but company operations still have significant environmental impacts. Aluminum products can contribute to energy savings because aluminum is lightweight, and its recycling consumes significantly less energy than most other materials. However, producing aluminum continues to have a significant environmental impact due to the energy-intensive nature of processing, which often relies on fossil-fuel sourced energy. Opportunities lie in improving energy efficiency and cutting the significant energy costs involved in aluminum production, although climate regulation may reshape those costs in the future. The responsible management of air emissions, waste and wastewater discharge are also important for maintaining a license to operate with both environmental regulators and local communities. Consequently, having a forward-looking climate strategy is critical, as is the continued protection of employee health and safety.

## Highlighted criteria & dimension weights

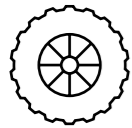
- Environmental Dimension.. 33%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Biodiversity
- Social Dimension ..... 33%
  - Human Rights
  - Occupational Health and Safety
  - Social Impacts on Communities
- Governance & Economic Dimension ..... 34%
  - Codes of Business Conduct
  - Corporate Governance
  - Supply Chain Management

## Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Hindalco Industries Limited	India	73
<b>S&amp;P Global Bronze Class</b>		
Alcoa Corporation	United States	69

## Industry Statistics

Number of companies assessed	16
Market capitalization of assessed companies (in USD billion)	105
Number of companies in Yearbook	2
Market capitalization of companies in Yearbook (in USD billion)	25.5



## Auto Components

### Driving forces

Auto parts suppliers play a critical role in improving vehicle efficiency and safety, making innovation a key method of creating a competitive advantage. The goal of adopting a circular economy approach that emphasizes recycling and the reuse of resources is vital because raw materials make up a significant portion of the cost of goods sold and comprise an important waste stream. As such, there is a need to increase recycling and to use product lifecycle assessments for selecting the most appropriate, cost-effective and sustainable raw materials. Together with the growing use of conflict minerals and rare earth elements in alternative drivetrains, manufacturers are under pressure to identify responsible suppliers and increase transparency. Passenger safety is critical since auto parts suppliers must detect and respond to any potential safety hazards to protect companies from legal actions or lawsuits. Assisted/autonomous driving technologies supplied by auto component manufacturers represent an emerging business opportunity but also present new challenges for quality standards.

### Highlighted criteria & dimension weights

Environmental Dimension ..35%  
 – Climate Strategy  
 – Operational Eco-Efficiency  
 – Product Stewardship

Social Dimension ..... 33%  
 – Human Capital Development  
 – Occupational Health and Safety  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 32%  
 – Corporate Governance  
 – Innovation Management  
 – Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Hankook Tire & Technology Co., Ltd.	Rep. of Korea	78
Pirelli & C. S.p.A.	Italy	77
<b>S&amp;P Global Silver Class</b>		
Hyundai Mobis Co.,Ltd	Rep. of Korea	76
<b>S&amp;P Global Bronze Class</b>		
Valeo SA	France	72
Nokian Renkaat Oyj	Finland	71

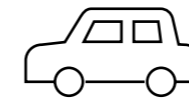
### Sustainability Yearbook Members

Bridgestone Corporation	Japan	68
NGK Spark Plug Co., Ltd.	Japan	65
Gestamp Automoción, S.A.	Spain	59
Aptiv PLC	Ireland	59
Dana Incorporated	United States	58
TS TECH Co., Ltd.*	Japan	57
Sumitomo Electric Industries, Ltd.	Japan	56

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	112
Market capitalization of assessed companies (in USD billion)	593.7
Number of companies in Yearbook	12
Market capitalization of companies in Yearbook (in USD billion)	132.7



## Automobiles

### Driving forces

As stricter emission regulations on new vehicles are enacted this decade, coupled with incentive programs tailored for electric vehicles and related infrastructure, automobile companies are on the cusp of opportunity in both the passenger and commercial vehicle segments. Those diversifying their portfolios for alternative drivetrains will be best situated to address growing consumer demand and emissions compliance requirements. Innovation is essential to a company's long-term success, requiring movement away from simple engine enhancements or hybrid vehicles to fully electric drivetrains. This will lead to changes in the supply chain, so automobile manufacturers must carefully assess risks (e.g., dependency on critical suppliers and the use of rare earth elements), while also taking advantage of new opportunities (e.g., material innovation and recycling) across the entire value chain. A comprehensive understanding of embedded environmental costs in the production of combustion engines and electric vehicles will help support adequate product lifecycle assessments. Finally, robust corporate governance structures and compliance practices are critical to check compliance with environmental standards and help avoid reputational and legal issues.

### Highlighted criteria & dimension weights

Environmental Dimension .31%  
 – Climate Strategy  
 – Low Carbon Strategy  
 – Operational Eco-Efficiency

Social Dimension .....31%  
 – Human Capital Development  
 – Occupational Health and Safety  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 38%  
 – Corporate Governance  
 – Innovation Management  
 – Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Hyundai Motor Company*	Rep. of Korea	78
General Motors Company	United States	78
<b>S&amp;P Global Silver Class</b>		
Honda Motor Co., Ltd.	Japan	75
Bayerische Motoren Werke Aktiengesellschaft	Germany	74
Mahindra & Mahindra Limited	India	74
<b>S&amp;P Global Bronze Class</b>		
Volvo Car AB (publ.)	Sweden	73

### Sustainability Yearbook Members

Mazda Motor Corporation	Japan	67
Yamaha Motor Co., Ltd.	Japan	66

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	58
Market capitalization of assessed companies (in USD billion)	2,594.1
Number of companies in Yearbook	8
Market capitalization of companies in Yearbook (in USD billion)	288.6



# Banks

## Driving forces

Functioning at the heart of economies by financing business formation and growth, banks face a wide range of sustainability risks and opportunities. Banks are largely exposed to climate transition risks based on their lending and underwriting activities, such as financed emissions, with the risk of carrying stranded assets increasing as fossil fuels phase out. However, banks are risk management experts, and financing the energy transition also represents a business opportunity. Ethical business practices and keeping consumers' trust also play large roles in a bank's ability to differentiate itself from competitors. As the banking sector becomes more digital and startup online-only banks gather more assets, incumbent banks must invest in their consumer-facing technology with an emphasis on ease of use, consumer data privacy and cybersecurity. High-profile lapses in business ethics, such as the mis-selling of financial products or instances of discrimination against particular customers or employees, have the potential to undermine confidence in banks and raise concerns of soundness and good governance for regulators.

## Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
KB Financial Group Inc.	Rep. of Korea	89
Banco Bilbao Vizcaya Argentaria, S.A.	Spain	89
Kasikornbank Public Company Limited	Thailand	88
S&P Global Silver Class		
Banco do Brasil S.A.	Brazil	87
Bancolombia S.A.	Colombia	87
First Financial Holding Co., Ltd.	Taiwan	87
The Siam Commercial Bank Public Company Limited	Thailand	87
Banco Bradesco S.A.	Brazil	87
SinoPac Financial Holdings Company Limited	Taiwan	86
National Australia Bank Limited	Australia	86
CaixaBank, S.A.	Spain	86
E.SUN Financial Holding Company, Ltd.	Taiwan	86
Banco Santander, S.A.	Spain	85
Australia and New Zealand Banking Group Limited	Australia	85
The Toronto-Dominion Bank	Canada	84
Swedbank AB (publ)	Sweden	84
Itaú Unibanco Holding S.A.	Brazil	84
S&P Global Bronze Class		
CTBC Financial Holding Co., Ltd.	Taiwan	84
Shinhan Financial Group Co., Ltd.	Rep. of Korea	83
Intesa Sanpaolo S.p.A.	Italy	83
Bankinter, S.A.	Spain	83
BNP Paribas SA	France	82
Taishin Financial Holding Co., Ltd.	Taiwan	81
Itaúsa - Investimentos Itaú SA	Brazil	81
Bank of Montreal	Canada	81
Société Générale Société anonyme	France	80
Sustainability Yearbook Members		
The Bank of Nova Scotia	Canada	79
Banco de Bogotá S.A.	Colombia	79
Woori Financial Group Inc.*	Rep. of Korea	78
Barclays PLC	United Kingdom	78
Royal Bank of Canada	Canada	77
Banco Santander-Chile	Chile	77
The Shanghai Commercial & Savings Bank, Ltd.	Taiwan	76
Commonwealth Bank of Australia	Australia	76
Hana Financial Group Inc.	Rep. of Korea	76
ABN AMRO Bank N.V.	Netherlands	76

## Highlighted criteria & dimension weights

Environmental Dimension.. 13%  
– Climate Strategy

Social Dimension ..... 32%  
– Financial Inclusion  
– Human Capital Development  
– Talent Attraction & Retention

Governance & Economic Dimension ..... 55%  
– Anti-crime Policy & Measures  
– Codes of Business Conduct  
– Corporate Governance  
– Risk & Crisis Management  
– Sustainable Finance

## Sustainability Yearbook Members

Canadian Imperial Bank of Commerce	Canada	76	Banco de Sabadell, S.A.	Spain	66
Bank of America Corporation	United States	75	Bank Hapoalim B.M.	Israel	66
Banco Davivienda S.A.	Colombia	75	Citigroup Inc.	United States	66
Türkiye Garanti Bankası A.S.	Turkey	74	FinecoBank Banca Fineco S.p.A.	Italy	65
KBC Group NV	Belgium	74	Itaú Corpbanca	Chile	64
Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México	Mexico	72	Sumitomo Mitsui Financial Group, Inc.	Japan	64
Mega Financial Holding Co., Ltd.	Taiwan	72	Mediobanca Banca di Credito Finanziario S.p.A.	Italy	64
IndusInd Bank Limited	India	72	UniCredit S.p.A.	Italy	64
AIB Group plc	Ireland	70	Banco Comercial Português, S.A.	Portugal	64
Westpac Banking Corporation	Australia	69	Yapi ve Kredi Bankası A.S.	Turkey	64
Svenska Handelsbanken AB (publ)	Sweden	69	DBS Group Holdings Ltd	Singapore	64
Mizuho Financial Group, Inc.	Japan	69	Grupo Financiero Banorte, S.A.B. de C.V.	Mexico	63
Nedbank Group Limited	South Africa	68	CIMB Group Holdings Berhad	Malaysia	63
Absa Group Limited	South Africa	68			
Banco del Estado de Chile	Chile	68			
NatWest Group plc	United Kingdom	68			
Bangkok Bank Public Company Limited	Thailand	68			
Hang Seng Bank Limited	Hong Kong	67			
DGB Financial Group Co., Ltd.	Rep. of Korea	67			
TMBThanachart Bank Public Company Limited	Thailand	67			
Banco de Crédito e Inversiones	Chile	66			
Banco BBVA Perú, S.A.	Peru	66			

\* S&P Global Industry Mover

## Industry Statistics

Number of companies assessed	475
Market capitalization of assessed companies (in USD billion)	8,086.9
Number of companies in Yearbook	71
Market capitalization of companies in Yearbook (in USD billion)	2467.8



## Beverages

### Driving forces

The global beverage industry has been significantly disrupted by COVID-19, with impacts felt across the entire value chain having potential long-term implications on sourcing strategies and distribution networks. The focus on health and nutrition continues to drive changes both in the market and in companies' strategies. The demand for carbonated soft drinks has been in decline, particularly in developed markets, with preferences shifting towards more natural ingredients, healthier alternatives and lower-calorie substitutes. Producers of alcoholic beverages have long faced legal barriers in developed markets, but they must also maintain effective and responsible marketing strategies in emerging markets with fewer regulations. Packaging represents a significant sustainability challenge, with companies expected to develop alternative packaging solutions and improve reusability, collection and recycling rates. Water stewardship is an ongoing concern for producers and local governments, making the management of water-related risks key to supporting a sustainable, long-term production base.

### Highlighted criteria & dimension weights

Environmental Dimension	30%
– Climate Strategy	
– Food Loss & Waste	
– Packaging	
– Raw Material Sourcing	
– Water Related Risks	
Social Dimension	26%
– Human Capital Development	
– Talent Attraction & Retention	
Governance & Economic Dimension	44%
– Health & Nutrition	
– Innovation Management	
– Supply Chain Management	

### Industry Awards 2022

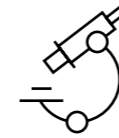
		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Thai Beverage Public Company Limited	Thailand	90
<b>S&amp;P Global Silver Class</b>		
Coca-Cola HBC AG	Switzerland	87
<b>S&amp;P Global Bronze Class</b>		
Coca-Cola Europacific Partners PLC	United Kingdom	85

### Sustainability Yearbook Members

Diageo plc	United Kingdom	79
Embotelladora Andina S.A.	Chile	75
Heineken N.V.	Netherlands	74
Heineken Holding N.V.	Netherlands	73
<b>Coca-Cola Bottlers</b>		
Japan Holdings Inc.	Japan	69
Viña Concha y Toro S.A.	Chile	69
Fraser & Neave Holdings Bhd	Malaysia	69
Coca-Cola FEMSA, S.A.B. de C.V.	Mexico	68

### Industry Statistics

Number of companies assessed	76
Market capitalization of assessed companies (in USD billion)	2,319.1
Number of companies in Yearbook	11
Market capitalization of companies in Yearbook (in USD billion)	280.6



## Biotechnology

### Driving forces

Biotechnology companies are facing scrutiny related to the pricing and reimbursement of their products as governments seek to contain the rise in health care costs. With the COVID-19 pandemic lingering on, companies must demonstrate the value of their products and make sure that their corresponding pricing model is economically and medically justified and balanced against social imperatives to contribute positively to public health. The biotechnology industry relies heavily on human capital for innovation and the continuous development of novel medicines. The industry is characterized by extensive research and development and a high risk of failure in product development, which makes attracting and retaining the most talented researchers and scientists essential. This also means that intellectual property management is critical. Finally, business ethics, competitive practices and product quality and safety remain important. Violations have the potential to cause significant reputational and financial damage, the impact of which has grown due to the fast flow of information resulting from social media and tighter regulatory oversight.

### Highlighted criteria & dimension weights

Environmental Dimension	9%
– Climate Strategy	
– Operational Eco-Efficiency	
Social Dimension	41%
– Addressing Cost Burden	
– Health Outcome Contribution	
– Strategy to Improve Access to Drugs or Products	
– Talent Attraction & Retention	
Governance & Economic Dimension	50%
– Codes of Business Conduct	
– Innovation Management	
– Product Quality and Recall Management	

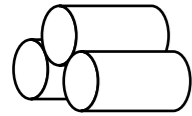
### Industry Awards 2022

		S&P Global ESG Score
<b>SAM Gold Class</b>		
Biogen Inc.	United States	84
<b>SAM Silver Class</b>		
AbbVie Inc.	United States	82
<b>Sustainability Yearbook Members</b>		
Regeneron Pharmaceuticals, Inc.	United States	67
Amgen Inc.	United States	60
Grifols, S.A.*	Spain	60

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	179
Market capitalization of assessed companies (in USD billion)	1,367
Number of companies in Yearbook	5
Market capitalization of companies in Yearbook (in USD billion)	470.1



## Building Products

### Driving forces

The manufacturing of building products and fixtures requires significant energy inputs. As a result, optimizing operational eco-efficiency is a high priority, alongside climate strategy and occupational health and safety. The construction and operation of buildings contributes approximately 40% of global greenhouse gas emissions, according to the World Green Building Council. Companies that integrate lifecycle environmental impacts into their product design and manufacturing will be better positioned to benefit from the demand for more eco-friendly, energy-efficient buildings and greener construction products. Continued areas of focus include: responsibly sourcing raw materials, such as wood and metal; the greater use of recycled materials in production; reducing the use of hazardous substances, such as volatile organic compounds; and a greater emphasis on end-of-life management. Taking such an integrated approach can also help reduce the risk of potential product liabilities.

### Highlighted criteria & dimension weights

Environmental Dimension..35%  
 – Recycling Strategy  
 – Operational Eco-Efficiency  
 – Product Stewardship

Social Dimension .....31%  
 – Human Capital Development  
 – Occupational Health and Safety  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 34%  
 – Corporate Governance  
 – Risk & Crisis Management  
 – Supply Chain Management

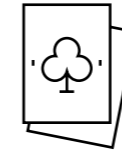
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Owens Corning	United States	89
<b>S&amp;P Global Bronze Class</b>		
LIXIL Corporation	Japan	82
<b>Sustainability Yearbook Members</b>		
Trane Technologies plc	Ireland	78
Toto Ltd.	Japan	77
<b>Johnson Controls</b>		
International plc*	Ireland	74
Daikin Industries, Ltd.	Japan	71
Grupo Rotoplas S.A.B. de C.V.	Mexico	67
LX Hausys, Ltd.	Rep. of Korea	62

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	68
Market capitalization of assessed companies (in USD billion)	585.9
Number of companies in Yearbook	8
Market capitalization of companies in Yearbook (in USD billion)	180.6



## Casinos & Gaming

### Driving forces

Casinos and the gaming industry operate under intense public and regulatory scrutiny. Companies must address concerns such as money laundering through robust compliance systems and sound governance. Social issues, such as gambling addiction and its societal repercussions, are managed inconsistently and often limited to regional legislation or voluntary standards. The rapid growth of online gaming poses significant opportunities for operators, but also threats. These include the proliferation of online platforms that have highlighted the need for effective monitoring. However, companies in this space are increasingly going beyond the minimum legal requirements and taking a proactive stance in addressing these issues. On the environmental side, companies are increasing their efforts to curb energy consumption, as many casinos consume electricity 24 hours a day.

### Highlighted criteria & dimension weights

Environmental Dimension. 19%  
 – Environmental Policy & Management Systems  
 – Operational Eco-Efficiency

Social Dimension ..... 36%  
 – Human Capital Development  
 – Occupational Health & Safety  
 – Stakeholder Engagement

Governance & Economic Dimension ..... 45%  
 – Anti-crime Policy & Measures  
 – Codes of Business Conduct  
 – Corporate Governance  
 – Customer Relationship Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Tabcorp Holdings Limited	Australia	72
<b>S&amp;P Global Silver Class</b>		
Las Vegas Sands Corp.	United States	70
<b>S&amp;P Global Bronze Class</b>		
Entain Plc	United Kingdom	67
Sands China Ltd.	Macao	65

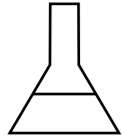
### Sustainability Yearbook Members

<b>La Française des Jeux Société</b>		
anonyme*	France	57
Tipico Group Ltd	Malta	54
Kangwon Land, Inc.	Rep. of Korea	52

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	49
Market capitalization of assessed companies (in USD billion)	329.5
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	89.3



## Chemicals

### Driving forces

The chemicals industry includes companies that manufacture commodity chemicals, plastics, industrial gases, agricultural chemicals and specialty chemicals. These products serve as inputs to critical industries, such as food production and processing, pharmaceuticals and electronics. How chemical companies contribute to sustainability can therefore have major spillover effects into the production processes and end products produced around the world. The industry can contribute to sustainability by supplying products that help make production processes more efficient or by transforming plastic waste into raw material for other products. This requires that companies invest in innovation, product stewardship, operational eco-efficiency, customer relationship management and health and safety. Chemical companies must conduct assessments to measure and monitor the risks of hazardous substances in their products. Managing this successfully can allow them to reap benefits from providing higher-margin, eco-labeled products that can contribute to a more effective circular economy and help reduce the risks of litigation.

### Highlighted criteria & dimension weights

- Environmental Dimension ..33%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
  - Water Related Risks
- Social Dimension ..... 32%
  - Human Capital Development
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 35%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Innovation Management

### Industry Awards 2022

	S&P Global ESG Score		
<b>S&amp;P Global Gold Class</b>			
PTT Global Chemical Public Company Limited	Thailand 92	China Petrochemical Development Corporation	Taiwan 70
		Johnson Matthey Plc	United Kingdom 69
<b>S&amp;P Global Silver Class</b>			
LANXESS Aktiengesellschaft	Germany 87	DIC Corporation	Japan 68
		Enaex S.A.	Chile 67
		Toray Industries, Inc.	Japan 67
		Braskem S.A.	Brazil 66
		UPL Limited	India 66
		Public Joint Stock Company Uralkali	Russia 65
<b>Sustainability Yearbook Members</b>			
Linde plc	United Kingdom 82	* S&P Global Industry Mover	
Arkema S.A.	France 82		
Clariant AG	Switzerland 78		
Mitsubishi Chemical Holdings Corporation	Japan 78		
Indorama Ventures Public Company Limited	Thailand 78		
Ecolab Inc.	United States 77		
<b>PETRONAS Chemicals Group Berhad*</b>			
	Maylasia 77		
<b>International Flavors &amp; Fragrances Inc.</b>			
	United States 75		
<b>Sociedad Química y Minera de Chile S.A.</b>			
	Chile 74		
Air Products and Chemicals, Inc.	United States 72		
Incitec Pivot Limited	Australia 72		
Nissan Chemical Corporation	Japan 72		
Dow Inc.	United States 70		

### Industry statistics

Number of companies assessed	234
Market capitalization of assessed companies (in USD billion)	2,472
Number of companies in Yearbook	23
Market capitalization of companies in Yearbook (in USD billion)	489.5



## Coal & Consumable Fuels

### Driving forces

Coal producers remain central to the debate about energy access and climate change. As power-generating utilities come under pressure to cut their carbon emissions, the increased use of natural gas and renewables is substantially reducing demand for thermal coal. For uranium producers, higher demand for low-carbon energy is tempered by safety concerns about nuclear power generation. Operationally, both coal and uranium producers face ongoing challenges to minimize their environmental impacts, including the release of pollutants and their effects on biodiversity and water quality. Moreover, incidents involving mineral waste or wastewater can quickly become contentious issues for local communities. Where new mining projects are being considered, developers must have a clear understanding of environmental impacts, land rights issues and community engagement. Responsible management of human capital is also a key operational issue, exemplified by occupational health and safety trends and labor practices.

### Highlighted criteria & dimension weights

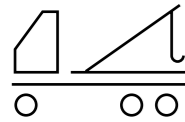
- Environmental Dimension ..32%
  - Biodiversity
  - Climate Strategy
  - Mineral Waste Management
  - Operational Eco-Efficiency
  - Water Related Risks
- Social Dimension ..... 35%
  - Occupational Health and Safety
  - Social Impacts on Communities
- Governance & Economic Dimension ..... 33%
  - Codes of Business Conduct
  - Corporate Governance

### Industry Awards 2022

	S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>	
Banpu Public Company Limited	Thailand 71

### Industry Statistics

Number of companies assessed	29
Market capitalization of assessed companies (in USD billion)	200.7
Number of companies in Yearbook	1
Market capitalization of companies in Yearbook (in USD billion)	2.2



## Commercial Services & Supplies

### Driving forces

Commercial service suppliers include companies providing products and services that are not part of the core business activities of their enterprise customers. Given the industry's sweeping scope, it encompasses both manually intensive and knowledge-intensive skill sets but consistently relies heavily on human capital. Fair labor practices combined with employee development programs, knowledge management, and adequate incentive schemes are important for creating successful, safe and healthy working environments, thereby helping enhance productivity, attract new talent and retain employees. On the demand side, customer relationship management plays a crucial role, as long-lasting relationships are beneficial to both customers and providers. Corporate governance and management quality help industry leaders maintain diversified business models to leverage internal synergies and employ cutting-edge technologies. As business-to-business service partners, commercial service suppliers are ideally placed to spearhead sustainability innovations and promote them among their customer bases.

### Highlighted criteria & dimension weights

- Environmental Dimension...25%
  - Climate Strategy
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
- Social Dimension ..... 36%
  - Human Capital Development
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 39%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Risk & Crisis Management
  - Supply Chain Management

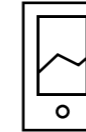
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Waste Management, Inc.	United States	79
<b>S&amp;P Global Bronze Class</b>		
Brambles Limited	Australia	75
<b>Sustainability Yearbook Members</b>		
Toppan Inc.	Japan	69
Rentokil Initial plc	United Kingdom	69
Downer EDI Limited	Australia	68
Republic Services, Inc.	United States	66
Dai Nippon Printing Co., Ltd.*	Japan	65
China Everbright		
Environment Group Limited	Hong Kong	65
Mitie Group plc	United Kingdom	61
ISS A/S	Denmark	59

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	98
Market capitalization of assessed companies (in USD billion)	492.5
Number of companies in Yearbook	10
Market capitalization of companies in Yearbook (in USD billion)	152.5



## Communications Equipment

### Driving forces

Responding to the demands of an increasingly interconnected world, the communications equipment industry creates infrastructure to meet growing data volume demands and improve network coverage and access, while lowering the costs of network operation. With wireless and mobile data traffic increasing twice as fast as fixed internet, the deployment of 4G/5G networks will accelerate digital transformation across many industries, leading to new applications using the internet of things, automation, big data and artificial intelligence. Products must be designed for low energy consumption and responsibly sourced conflict minerals. In addition, systems are shifting from predominantly hardware-only to software-defined networking and cloud-enabled solutions. Increased connectivity brings many benefits, but with the transmission of sensitive data via networks, security concerns are paramount. Communications equipment manufacturers are therefore tasked with preventing cyberattacks by adopting a consistent approach to security across their infrastructure offerings.

### Highlighted criteria & dimension weights

- Environmental Dimension .31%
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 25%
  - Human Capital Development
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 44%
  - Customer Relationship Management
  - Innovation Management
  - Privacy Protection
  - Supply Chain Management

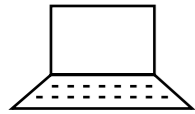
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Cisco Systems, Inc.	United States	77
<b>S&amp;P Global Bronze Class</b>		
Telefonaktiebolaget LM Ericsson (publ)*	Sweden	72
<b>Sustainability Yearbook Member</b>		
Wistron NeWeb Corporation	Taiwan	57

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	60
Market capitalization of assessed companies (in USD billion)	561.3
Number of companies in Yearbook	3
Market capitalization of companies in Yearbook (in USD billion)	277.4



## Computers & Peripherals and Office Electronics

### Driving forces

The computer manufacturing industry is characterized by disruptive innovations, particularly as tablets have driven companies to invest in improving flagship devices like laptops. Cybersecurity is an increasing strategic priority, requiring that products and systems adhere to “security and privacy by design” principles. Effective innovation management requires the right people with the right skill mix. Successful implementation of environmental standards and the monitoring of supplier compliance in areas such as the use of hazardous materials, rare metals and fair working conditions in emerging economies are particularly relevant. Shorter product lifecycles and the ubiquity of electronic devices around the world have resulted in increased overall energy consumption by IT hardware and high disposal volumes of equipment. To address both issues, companies must consider the entire product lifecycle when designing new products.

### Highlighted criteria & dimension weights

- Environmental Dimension...30%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 25%
  - Human Capital Development
  - Human Rights
- Governance & Economic Dimension ..... 45%
  - Information Security/ Cybersecurity & System Availability
  - Innovation Management
  - Privacy Protection
  - Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Ricoh Company, Ltd.	Japan	89
<b>S&amp;P Global Silver Class</b>		
HP Inc.	United States	87
Hewlett Packard Enterprise Company	United States	87
Lite-On Technology Corporation	Taiwan	87
Acer Incorporated	Taiwan	86
<b>S&amp;P Global Bronze Class</b>		
Konica Minolta, Inc.	Japan	82
Wistron Corporation*	Taiwan	81

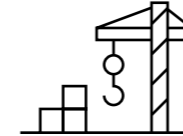
### Sustainability Yearbook Members

FUJIFILM Holdings Corporation	Japan	78
ASUSTeK Computer Inc.	Taiwan	73

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	63
Market capitalization of assessed companies (in USD billion)	3,577.3
Number of companies in Yearbook	9
Market capitalization of companies in Yearbook (in USD billion)	116.1



## Construction & Engineering

### Driving forces

The construction and engineering industry consumes resources on a massive scale to create infrastructure and the built environment, a term used to describe the manmade structures supporting human life and activities. The choice of building materials (e.g., certified wood or recycled concrete), consideration of lifecycle impacts and offering of energy-efficient and green buildings that conform to increasingly strict regulations give developers a competitive advantage. Physical risks from extreme weather and other climate change hazards are key considerations for construction projects. Along with resource efficiency, other important challenges include occupational health and safety, subcontractor management and the attraction and retention of talent. With increasing infrastructure spending in emerging markets, a company’s ability to achieve preferred contractor status depends on its ability to avoid reputational risks associated with antitrust and bribery cases. This makes the establishment and implementation of a rigorous code of conduct a key success factor.

### Highlighted criteria & dimension weights

- Environmental Dimension...31%
  - Building Materials
  - Climate Strategy
  - Operational Eco-Efficiency
  - Resource Conservation and Resource Efficiency
- Social Dimension ..... 34%
  - Labor Practice Indicators
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 35%
  - Codes of Business Conduct
  - Corporate Governance
  - Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Hyundai Engineering & Construction Co., Ltd.	Rep. of Korea	81
<b>S&amp;P Global Silver Class</b>		
CTCI Corporation	Taiwan	79
Ferrovial, S.A.	Spain	79
<b>S&amp;P Global Bronze Class</b>		
HOCHTIEF Aktiengesellschaft	Germany	76

### Sustainability Yearbook Members

ACS, Actividades de Construcción y Servicios, S.A.	Spain	69
Samsung Engineering Co., Ltd.	Rep. of Korea	68
WSP Global Inc.*	Canada	67
CIMIC Group Limited	Australia	66
Sacyr, S.A.	Spain	66
GS Engineering & Construction Corporation	Rep. of Korea	66

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	138
Market capitalization of assessed companies (in USD billion)	561
Number of companies in Yearbook	10
Market capitalization of companies in Yearbook (in USD billion)	66.4





## Construction Materials

### Driving forces

The construction materials industry includes companies that produce cement, aggregates, concrete and related materials. Cement manufacturing alone accounts for about 8% of global CO2 emissions, according to the policy think tank Chatham House, making reducing the construction materials industry's environmental impact a top priority. One of the most powerful ways to control the environmental impact in cement manufacturing is to convert waste materials into fossil fuel alternatives and other raw materials needed in industrial production. Other important environmental issues include reducing water usage. For companies with extraction sites, protecting biodiversity and effective water management are key to maintaining both social and legal licenses to operate. In production and transportation, ensuring occupational health and safety remains a challenge. Companies that can deliver products that meet green building specifications and transform their business models to offer affordable housing and other sustainable construction solutions will hold a competitive advantage.

### Highlighted criteria & dimension weights

- Environmental Dimension...33%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Water Related Risks
- Social Dimension ..... 34%
  - Human Rights
  - Occupational Health and Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 33%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Risk & Crisis Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Grupo Argos S.A.	Colombia	88
Cementos Argos S.A.	Colombia	88
<b>S&amp;P Global Silver Class</b>		
The Siam Cement Public Company Limited	Thailand	87
<b>S&amp;P Global Bronze Class</b>		
CRH plc	Ireland	81
Ambuja Cements Limited	India	80
Holcim Ltd	Switzerland	80

### Sustainability Yearbook Members

UltraTech Cement Limited*	India	79
Cementos Pacasmayo S.A.A.	Peru	75

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	56
Market capitalization of assessed companies (in USD billion)	432.1
Number of companies in Yearbook	8
Market capitalization of companies in Yearbook (in USD billion)	131.4



## Containers & Packaging

### Driving forces

Containers and packaging companies are critical to the global economy and supply virtually every sector with tools to effectively protect, transport, market and preserve their products for sale and use. The importance of packaging has been especially highlighted in the face of the COVID-19 pandemic. Finding sustainable packaging alternatives continues to be a major industry trend, driving product development and innovation. Attention should be given to the sourcing of more recycled, certified and renewable raw materials, as well as reusable packaging. Companies have come under increased pressure from stakeholders to address the crisis of plastic waste, and the global move toward a circular economy will present new challenges as well as opportunities. At the same time, markets in which these companies operate remain highly competitive, with substantial downward pressure on both prices and operating margins. Companies will need to innovate and deliver customized solutions, working collaboratively across the value chain to offer differentiated products.

### Highlighted criteria & dimension weights

- Environmental Dimension...33%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 33%
  - Human Rights
  - Occupational Health and Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 34%
  - Corporate Governance
  - Customer Relationship Management
  - Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Klabin S.A.	Brazil	77
Ball Corporation*	United States	76
<b>S&amp;P Global Silver Class</b>		
BillerudKorsnäs AB (publ)	Sweden	76
SCG Packaging Public Company Limited	Thailand	75
<b>S&amp;P Global Bronze Class</b>		
WestRock Company	United States	71

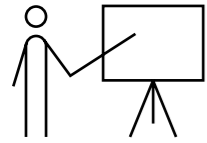
### Sustainability Yearbook Member

Amcor plc	Switzerland	69
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\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	41
Market capitalization of assessed companies (in USD billion)	288.3
Number of companies in Yearbook	6
Market capitalization of companies in Yearbook (in USD billion)	74.9



## Diversified Consumer Services

### Driving forces

The diversified consumer services industry comprises service providers with a range of business models, from education to human resources. Companies operating in this space have direct relationships with customers and must develop strategies to retain and increase their customer base in existing and new markets. Technological innovations are transforming the industry at a rapid pace and offer both risks and opportunities. Companies can differentiate themselves by effectively integrating online tools and platforms that enhance the overall experience for target groups. One consequence of this is that data security has become a key risk for companies in this sector. Strong risk management systems, particularly related to electronic billing, personal data privacy and real-time services are critical to managing risk and offering further growth opportunities. Within service companies, strong employee development and training programs are fundamental to building sustainable businesses and help improve customer satisfaction.

### Highlighted criteria & dimension weights

- Environmental Dimension..17%
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
- Social Dimension ..... 36%
  - Human Capital Development
  - Human Rights
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 47%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Privacy Protection
  - Risk & Crisis Management

### Industry Awards 2022

Sustainability Yearbook Members		S&P Global ESG Score
Grand Canyon Education, Inc.	United States	45
Benesse Holdings, Inc.	Japan	37
Chegg, Inc.	United States	31

### Industry Statistics

Number of companies assessed	48
Market capitalization of assessed companies (in USD billion)	83
Number of companies in Yearbook	3
Market capitalization of companies in Yearbook (in USD billion)	9.1



## Diversified Financial Services and Capital Markets

### Driving forces

The diversified financial services and capital markets industry includes a wide range of business models and sub-industries, but common themes include corporate governance, sustainable finance, risk management and compliance. Bank lending and financing underpins the continued use of fossil fuel energy generation, resulting in high levels of Scope 3 financed emissions, but the global transition to renewable energy also presents an opportunity for financial services firms. Recently, there has been more demand for transparency with regard to the ESG products that firms offer. Financial institutions are also facing a digital transformation resulting in the handling of more confidential data, and protecting customers' financial and personal data by minimizing cyber risk is crucial to maintaining customer trust. Ongoing regulatory pressure and publicized litigation have sensitized the industry to the very real threats posed by unethical business behavior. This is leading to greater scrutiny of questionable practices and a re-shaping of corporate culture and employee behavior to better align with customer needs and public interests.

### Highlighted criteria & dimension weights

- Environmental Dimension..13%
  - Climate Strategy
- Social Dimension ..... 32%
  - Financial Inclusion
  - Human Capital Development
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 55%
  - Codes of Business Conduct
  - Corporate Governance
  - Customer Relationship Management
  - Risk & Crisis Management
  - Sustainable Finance

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Yuanta Financial Holding Co., Ltd	Taiwan	85
S&P Global Silver Class		S&P Global ESG Score
S&P Global Inc.	United States	84
S&P Global Bronze Class		S&P Global ESG Score
UBS Group AG	Switzerland	80
Chailease Holding Company Limited	Taiwan	79
Grupo de Inversiones Suramericana S.A	Colombia	78

Voya Financial, Inc.	United States	62
The Bank of New York Mellon Corporation	United States	60
Daiwa Securities Group Inc.	Japan	60
Deutsche Bank Aktiengesellschaft	Germany	60
Krungthai Card Public Company Limited	Thailand	60

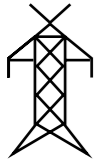
\* S&P Global Industry Mover

### Sustainability Yearbook Members

Wendel	France	76
Samsung Securities Co., Ltd.	Rep. of Korea	76
Mirae Asset Securities Co., Ltd.	Rep. of Korea	74
Deutsche Börse AG	Germany	73
abrdn plc	United Kingdom	69
Nomura Holdings, Inc.	Japan	68
Partners Group Holding AG*	Switzerland	65
Investec Group	South Africa	64
Hong Kong Exchanges and Clearing Limited	Hong Kong	62
State Street Corporation	United States	62

### Industry Statistics

Number of companies assessed	373
Market capitalization of assessed companies (in USD billion)	4,638.2
Number of companies in Yearbook	20
Market capitalization of companies in Yearbook (in USD billion)	511.7



## Electric Utilities

### Driving forces

Electric utilities are facing fundamental challenges, from the need to decarbonize generation to the decentralization of the grid to digitalization. Challenges also include changing regulations, as well as market and power grid dynamics due to the rise of cheap renewable electricity generation. One-time oligopolistic utility operators are now under threat from new market entrants that offer energy along with other conveniently bundled technologies and services. The increasing integration of renewable energies into the energy mix requires flexible power management and smart, integrated energy solutions. Significant efforts are also needed to develop and evolve the current grid to prepare for new requirements, such as expanding electric vehicle charging infrastructure. In emerging markets, industrialization and urbanization require large investments to create sustainable generation capacity. In addition, an uncertain and changing regulatory backdrop increases the risks inherent in some of the long-term financing approaches typical in the industry.

### Highlighted criteria & dimension weights

Environmental Dimension..39%  
 – Climate Strategy  
 – Electricity Generation  
 – Operational Eco-Efficiency

Social Dimension ..... 29%  
 – Occupational Health and Safety  
 – Stakeholder Engagement  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 32%  
 – Codes of Business Conduct  
 – Corporate Governance  
 – Market Opportunities

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
EDP - Energias de Portugal, S.A.	Portugal	91
Acciona, S.A.	Spain	90
<b>S&amp;P Global Silver Class</b>		
Iberdrola, S.A.	Spain	89
Terna - Rete Elettrica		
Nazionale Società per Azioni	Italy	89
Enel Chile S.A.	Chile	88
Enel SpA	Italy	88
Endesa, S.A.	Spain	87
Corporación Acciona		
Energías Renovables, S.A.	Spain	87
Electricity Generating Public		
Company Limited	Thailand	87
Red Eléctrica Corporación, S.A.	Spain	86
<b>S&amp;P Global Bronze Class</b>		
CELSIA S.A. E.S.P.	Colombia	86
Companhia Energética de Minas Gerais	Brazil	85
Enel Américas S.A.	Chile	85
The AES Corporation	United States	84
Global Power Synergy Public		
Company Limited	Thailand	84
Atlantica Sustainable Infrastructure plc	United Kingdom	83
Electricité de France S.A.	France	83
Centrais Elétricas Brasileiras S.A. - Eletrobrás	Brazil	82

\* S&P Global Industry Mover

### Sustainability Yearbook Members

Colbún S.A.	Chile	82
Interconexión Eléctrica S.A. E.S.P.	Colombia	82
Entergy Corporation	United States	80
AES Andes S.A.	Chile	79
Neoenergia S.A.	Brazil	78
Gulf Energy Development		
Public Company Limite	Thailand	77
CLP Holdings Limited	Hong Kong	77
B.Grimm Power Public		
Company Limited*	Thailand	77
Avangrid, Inc.	United States	76
Duke Energy Corporation	United States	76
Energy Absolute Public		
Company Limited	Thailand	76
Korea Electric Power Corporation	Rep. of Korea	75
Banpu Power Public		
Company Limited	Thailand	72
Exelon Corporation	United States	72

### Industry Statistics

Number of companies assessed	220
Market capitalization of assessed companies (in USD billion)	2115.1
Number of companies in Yearbook	32
Market capitalization of companies in Yearbook (in USD billion)	590.2



## Electrical Components & Equipment

### Driving forces

Companies in the electrical components and equipment industry support access to power distribution and renewable energy generation and provide innovative solutions for improving energy and resource efficiency in manufacturing and process industries. Companies that succeed in bringing newly developed products to market quickly, or in lowering costs, will be best positioned to capture and retain market share. Investments in smart power distribution and clean power generation will increase as developed markets update aging energy infrastructure and emerging markets expand their power grids. These companies play a significant role in helping customers achieve their energy and carbon goals. High exposure to emerging markets and public sector projects can increase the risk of corruption and anti-competitive practices. As components become integrated into wider networks, the risk of cybersecurity threat grows. A highly complex value chain makes strong supply chain management essential. Monitoring issues such as human rights and conflict minerals will remain important.

### Highlighted criteria & dimension weights

Environmental Dimension..28%  
 – Climate Strategy  
 – Operational Eco-Efficiency  
 – Product Stewardship

Social Dimension ..... 28%  
 – Human Capital Development  
 – Occupational Health and Safety

Governance & Economic Dimension ..... 44%  
 – Codes of Business Conduct  
 – Corporate Governance  
 – Innovation Management  
 – Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Signify N.V.	Netherlands	88
<b>S&amp;P Global Silver Class</b>		
Prysmian S.p.A.	Italy	87
Schneider Electric S.E.	France	86
<b>S&amp;P Global Bronze Class</b>		
Legrand SA	France	80

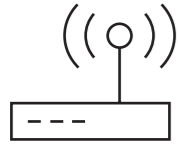
### Sustainability Yearbook Members

TECO Electric & Machinery Co., Ltd.	Taiwan	76
ABB Ltd	Switzerland	68
Havells India Limited	India	66
OSRAM Licht AG	Germany	64
Fuji Electric Co., Ltd.*	Japan	64

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	76
Market capitalization of assessed companies (in USD billion)	1,028.8
Number of companies in Yearbook	9
Market capitalization of companies in Yearbook (in USD billion)	242.3



## Electronic Equipment, Instruments & Components

### Driving forces

Technological innovations, such as 5G, the internet of things, artificial intelligence and maximizing power efficiency are increasing in importance in the electronic equipment, instruments and components industry. Electronic components have complex global supply chains that can lead to issues around unfair labor practices, conflict mineral sourcing and the use of harmful chemicals during manufacturing. The implementation and operation of a transparent, sustainable supply chain is required to address these issues. Superior product stewardship includes measures such as energy-saving features and energy-consumption management, as well as security features such as automatic software/firmware upgrades to harden devices against cyberattacks. Products must be designed with an end-of-life strategy (i.e. repair/reuse, downcycle and recycle), and the use of robotics and automation can help improve the efficiency of resource-intensive production processes. Given the industry's oligopolistic market structure, compliance with antitrust regulation is also important.

### Highlighted criteria & dimension weights

- Environmental Dimension . 30%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 29%
  - Occupational Health and Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 41%
  - Codes of Business Conduct
  - Corporate Governance
  - Innovation Management
  - Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Delta Electronics, Inc.	Taiwan	83
<b>S&amp;P Global Silver Class</b>		
OMRON Corporation	Japan	82
AU Optronics Corp.	Taiwan	79
<b>S&amp;P Global Bronze Class</b>		
Delta Electronics (Thailand) Public Company Limited	Thailand	77
Innolux Corporation	Taiwan	77
Universal Scientific Industrial (Shanghai) Co., Ltd.	China	75
Samsung SDI Co., Ltd.	Rep. of Korea	75

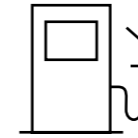
### Sustainability Yearbook Members

LG Innotek Co., Ltd.	Rep. of Korea	72
Kyocera Corporation*	Japan	72
Samsung Electro-Mechanics Co., Ltd.	Rep. of Korea	71
Yokogawa Electric Corporation	Japan	69
Flex Ltd.	Singapore	67
TDK Corporation	Japan	66
E Ink Holdings Inc.	Taiwan	61
LG Display Co., Ltd.	Rep. of Korea	60
TE Connectivity Ltd.	Switzerland	59

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	204
Market capitalization of assessed companies (in USD billion)	1,599.8
Number of companies in Yearbook	16
Market capitalization of companies in Yearbook (in USD billion)	243.1



## Energy Equipment & Services

### Driving forces

The ability of energy equipment and services companies to attract new business is closely tied to their adherence to health and safety, environmental and business conduct standards. In providing a variety of services to government-owned and national oil and gas suppliers, companies carry a measure of responsibility for the public perception of exploration and production activities and their customers' reputations. Direct environmental impacts from operations can be severe, especially from leaks or spills. The need for companies to maintain their standing as safe, reliable partners is challenged when they operate in technically difficult areas and where local jurisdictions provide weak legal and regulatory enforcement. Innovation and solutions to address customers' technological and cost challenges are a potential source of competitive advantage and can serve as tools to control risk. At the same time, the industry needs to attract and retain skilled staff and maintain expertise in technology research and development, while controlling production costs. Supporting high occupational and environmental health and safety standards also helps with talent attraction.

### Highlighted criteria & dimension weights

- Environmental Dimension..25%
  - Climate Strategy
  - Operational Eco-Efficiency
- Social Dimension ..... 37%
  - Human Capital Development
  - Occupational Health and Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 38%
  - Codes of Business Conduct
  - Corporate Governance
  - Innovation Management
  - Risk & Crisis Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Saipem SpA	Italy	78
<b>S&amp;P Global Silver Class</b>		
SBM Offshore N.V.*	Netherlands	75
<b>Sustainability Yearbook Members</b>		
Halliburton Company	United States	61

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	82
Market capitalization of assessed companies (in USD billion)	224.1
Number of companies in Yearbook	3
Market capitalization of companies in Yearbook (in USD billion)	29.7



## Food & Staples Retailing

### Driving forces

The food and staples retailing industry continues to be influenced by IT advances that now shape entire business models and value chains. IT infrastructure remains critical to increase efficiency in operations and to improve communication with customers, particularly as COVID-19 continues to disrupt the industry. Phenomena such as panic buying and growth in online grocery shopping have highlighted the importance of customer relationship management. New technologies enable companies to align with another major industry driver: the growing consumer demand for sustainable, healthy and natural food choices. Food retailers need to enhance transparency in supply chains, integrate ESG thresholds in procurement policies, increase the share of local and responsibly produced foodstuffs and reduce food loss and waste volumes. The expiration of pharmaceutical patents will continue to generate revenue and growth, as drug retailers in the sector offer consumers generic alternatives to name-brand blockbuster drugs.

### Highlighted criteria & dimension weights

Environmental Dimension..33%

- Climate Strategy
- Foold Lodd & Wastre
- Packaging
- Raw Material Sourcing

Social Dimension ..... 30%

- Human Capital Development
- Occupational Health and Safety
- Talent Attraction & Retention

Governance & Economic Dimension ..... 37%

- Customer Relationship Management
- Health & Nutrition
- Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
CP ALL Public Company Limited	Thailand	86
<b>S&amp;P Global Silver Class</b>		
Koninklijke Ahold Delhaize N.V.	Netherlands	83
Berli Jucker Public Company Limited	Thailand	82
President Chain Store Corporation	Taiwan	82

### Sustainability Yearbook Members

Metro AG	Germany	77
Kesko Oyj	Finland	76
Tesco PLC	United Kingdom	73
Carrefour SA	France	72
Seven & i Holdings Co., Ltd.	Japan	72
Casino, Guichard-Perrachon		
Société Anonyme	France	70
Cencosud S.A.	Chile	65
InRetail Perú Corp.*	Peru	63
Almacenes Éxito S.A.	Colombia	63

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	119
Market capitalization of assessed companies (in USD billion)	1,444.7
Number of companies in Yearbook	13
Market capitalization of companies in Yearbook (in USD billion)	177.7



## Food Products

### Driving forces

Changes in the food products industry continue to be driven by a growing middle class in emerging economies. The shock caused by COVID-19 resulted in disruption to the entire value chain and redefined key trends within the industry. Sustainable and natural ingredients, along with convenience and nutrition, remain key drivers. Supply chain disruption, as well as panic buying in retail, led to price spikes passed on to end-customers. To avoid this, food product producers must review existing supply chain strategies and address inefficiencies in their value chains, such as food loss and waste. Furthermore, occupational health and safety practices should continue to be improved in the wake of COVID-19. Alongside social pressures, food producers are expected to uphold commitments to eliminate the environmental impacts of their agricultural commodity supply chains, such as preventing destruction of natural habitats and promoting biodiversity in existing food systems.

### Highlighted criteria & dimension weights

Environmental Dimension..32%

- Climate Strategy
- Operational Eco-Efficiency
- Packaging
- Raw Material Sourcing

Social Dimension ..... 30%

- Human Rights
- Occupational Health and Safety

Governance & Economic Dimension ..... 38%

- Health & Nutrition
- Innovation Management
- Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score		
<b>S&amp;P Global Gold Class</b>				
Grupo Nutresa S. A.	Colombia	88	Archer-Daniels-Midland Company	United States 63
Thai Union Group Public Company Limited	Thailand	88	Kellogg Company	United States 62
<b>S&amp;P Global Silver Class</b>				
Mitr Phol Sugar Corporation Limited	Thailand	86		* S&P Global Industry Mover
Charoen Pokphand Foods Public Company Limited	Thailand	85		

### Industry Statistics

Number of companies assessed	238
Market capitalization of assessed companies (in USD billion)	1,975.8
Number of companies in Yearbook	20
Market capitalization of companies in Yearbook (in USD billion)	325.8

### Sustainability Yearbook Members

CJ Cheiljedang Corporation	Rep. of Korea	78
Nissin Foods Holdings Co.,Ltd.	Japan	77
Colombina S.A.	Colombia	76
Mondelez International, Inc.	United States	73
Ajinomoto Co., Inc.	Japan	72
The Hershey Company	United States	70
Wilmar International Limited	Singapore	70
Ülker Bisküvi Sanayi A.S.	Turkey	68
General Mills, Inc.	United States	68
Campbell Soup Company	United States	64
Salmones Camanchaca S.A.*	Chile	64
Multiexport Foods S.A.	Chile	63
Pulmuone Co., Ltd.	Rep. of Korea	63
Orkla ASA	Norway	63



## Gas Utilities

### Driving forces

Although natural gas is a key contributor to greenhouse gas emissions worldwide, it is also the least carbon-intensive fossil fuel. As a substitute for coal power, or oil in the heating and transportation sectors, it can help reduce CO2 emissions, water consumption and air pollution in the short term. However, as a fossil fuel it still contributes to climate change and therefore is threatened by increased regulatory action. While gas supplies are increasingly readily available – driven by the development of unconventional resources that are reshaping the industry – long-term demand will be threatened by the falling cost of renewables, resulting in an increased risk of stranded assets. Gas utilities must, therefore, explore new business models based on clean energies, such as biogas, wind and solar, or power-to-gas technologies. Moreover, high-profile gas accidents have raised public awareness of aging gas infrastructure and leakage risks. As a result, building stakeholder trust and increasing the safety, reliability, and energy-efficiency of operations are key requirements.

### Highlighted criteria & dimension weights

Environmental Dimension..32%  
 – Climate Strategy  
 – Environmental Policy & Management Systems  
 – Operational Eco-Efficiency  
 – Transmission & Distribution

Social Dimension ..... 35%  
 – Occupational Health and Safety  
 – Stakeholder Engagement

Governance & Economic Dimension ..... 33%  
 – Corporate Governance  
 – Market Opportunities  
 – Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Italgas S.p.A.	Italy	90
<b>S&amp;P Global Silver Class</b>		
Snam S.p.A.	Italy	87
<b>S&amp;P Global Bronze Class</b>		
Enagás, S.A.	Spain	85

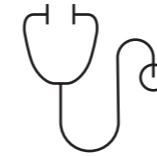
### Sustainability Yearbook Members

Grupo Energía Bogotá S.A. E.S.P.*	Colombia	79
Naturgy Energy Group, S.A.	Spain	77
Korea Gas Corporation	Rep. of Korea	77
Promigas S.A. E.S.P.	Colombia	73

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	49
Market capitalization of assessed companies (in USD billion)	314.2
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	71.8



## Health Care Equipment & Supplies

### Driving forces

The health care equipment and supplies industry develops medical products, such as orthopedic implants and cardiovascular devices, as well as medical supplies and instruments. Product quality and safety, as well as collaboration with stakeholders, are critical for supporting the successful marketing of products and maintaining a company's license to operate. While budget constraints and health care reforms have affected pricing, reimbursement, and utilization, the COVID-19 pandemic, as well as the emergence of less invasive technologies and rising income levels, have created new growth opportunities. Sustainable companies in this sector focus on developing innovative and highly differentiated products, lowering the skills barrier for care providers, expanding eligible patient populations and demonstrating their products' clinical and economic benefits. Moreover, they adopt consistent, value- and stakeholder-oriented corporate strategies and governance systems based on effective human and intellectual capital management and transparent reporting frameworks.

### Highlighted criteria & dimension weights

Environmental Dimension..10%  
 – Climate Strategy

Social Dimension ..... 37%  
 – Health Outcome Contribution  
 – Occupational Health and Safety  
 – Strategy to Improve Access to Drugs or Products

Governance & Economic Dimension ..... 53%  
 – Codes of Business Conduct  
 – Innovation Management  
 – Marketing Practices  
 – Product Quality and Recall Management  
 – Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Abbott Laboratories	United States	83
<b>S&amp;P Global Silver Class</b>		
Koninklijke Philips N.V.	Netherlands	81
<b>S&amp;P Global Bronze Class</b>		
Sonova Holding AG	Switzerland	78

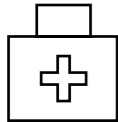
### Sustainability Yearbook Members

Edwards Lifesciences Corporation	United States	75
Baxter International Inc.	United States	73
Olympus Corporation	Japan	72
Systemex Corporation	Japan	71
Medtronic plc	Ireland	68
bioMérieux S.A.	France	68
Smith & Nephew plc	United Kingdom	64
Top Glove Corporation Bhd.*	Malaysia	59
Boston Scientific Corporation	United States	59

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	150
Market capitalization of assessed companies (in USD billion)	2,270.3
Number of companies in Yearbook	12
Market capitalization of companies in Yearbook (in USD billion)	664.3



## Health Care Providers & Services

### Driving forces

The health care providers and services industry includes managed care, insurers, distributors, hospitals and clinics. The COVID-19 pandemic, as well as other trends – such as aging populations, the increasing prevalence of chronic diseases and mounting pressure on health care budgets – are key factors affecting this industry. Rising health care costs and the growing divide in access are major societal challenges. Leading companies search for cost-effective, sustainable health care systems by engaging with stakeholders, including government payers, employers, providers and patients. As the industry moves towards more patient-centric care, companies should focus on labor-saving technologies, human capital management, cost-effective health outcomes, early intervention, prevention over late-stage treatment and ongoing disease management, rather than isolated, disconnected and episodic care. This will help lead to an increase in the importance of customer-oriented services, integrative care and strategic alliances across traditional business boundaries.

### Highlighted criteria & dimension weights

- Environmental Dimension.. 11%
  - Operational Eco-Efficiency
- Social Dimension ..... 42%
  - Human Rights
  - Occupational Health and Safety
  - Partnerships Towards Sustainable Healthcare
- Governance & Economic Dimension ..... 47%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Marketing Practices
  - Risk & Crisis Management
  - Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Cigna Corporation	United States	78
CVS Health Corporation	United States	77
<b>S&amp;P Global Silver Class</b>		
DaVita Inc.	United States	76
UnitedHealth Group Incorporated	United States	74
<b>S&amp;P Global Bronze Class</b>		
Anthem, Inc.	United States	73
Fleury S.A.	Brazil	72

### Sustainability Yearbook Members

Fresenius Medical Care AG & Co.		
KGaA.*	Germany	65
Humana Inc.	United States	65
Quest Diagnostics Incorporated	United States	62
Fresenius SE & Co. KGaA	Germany	61
Bangkok Dusit Medical Services		
Public Company Limited	Thailand	60
AmerisourceBergen Corporation	United States	55
Amplifon S.p.A.	Italy	55

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	126
Market capitalization of assessed companies (in USD billion)	1,516.6
Number of companies in Yearbook	13
Market capitalization of companies in Yearbook (in USD billion)	921.5



## Homebuilding

### Driving forces

Growth in the homebuilding industry is largely driven by external factors, such as interest rates and general economic conditions. It is also driven by highly specific regional and local housing markets, where price pressures and different regulatory regimes present constant challenges. Resource conservation and environmental efficiency are key industry drivers in both the building stage and use stage of the product lifecycle, pushed by increasing customer demand and stricter legal requirements. Housing developers must also consider zoning and other rules that affect construction on coastlines and other land tracts with higher exposure to climate change. Companies that respond to new technological developments – such as low-energy, passive and plus-energy buildings – are likely to remain at the forefront of the industry. In addition, companies that are flexible in adapting to regulations regarding social integration (e.g., quotas for new developments designed for lower-income groups or disadvantaged individuals) can potentially gain a competitive advantage. With occupational health and safety risks high in this industry, there is a sustained need for strict management practices to minimize injuries among employees and contractors.

### Highlighted criteria & dimension weights

- Environmental Dimension.. 37%
  - Biodiversity
  - Building Materials
  - Climate Strategy
  - Operational Eco-Efficiency
  - Resource Conservation and Resource Efficiency
- Social Dimension ..... 34%
  - Occupational Health and Safety
  - Social Integration & Regeneration
- Governance & Economic Dimension ..... 29%
  - Codes of Business Conduct
  - Corporate Governance

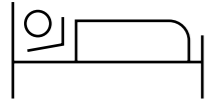
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Sumitomo Forestry Co., Ltd.	Japan	77
<b>S&amp;P Global Silver Class</b>		
Sekisui Chemical Co., Ltd.	Japan	74
Sekisui House, Ltd.	Japan	73
Sustainability Yearbook Members		
Taylor Wimpey plc	United Kingdom	66
Countryside Properties PLC*	United Kingdom	59

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	59
Market capitalization of assessed companies (in USD billion)	252.1
Number of companies in Yearbook	5
Market capitalization of companies in Yearbook (in USD billion)	34.6



## Hotels, Resorts & Cruise Lines

### Driving forces

The COVID-19 pandemic has had an unprecedented impact on hotels, resorts and cruise lines. Going forward, sustainability will be even more central to attract customers, enhance product offerings and engage more actively with stakeholders. Environmental preservation and an increased interest in eco-tourism and volunteer tourism have created new business opportunities, while hotels, resorts and cruise operators are placing greater emphasis on reducing their environmental impact. Hotels consume electricity 24 hours a day, while resorts and cruises that operate in tropical climates must monitor their impacts on local ecosystems. Human rights issues linked to local employment must also continue to be addressed. Long-term risk management must address economic, geopolitical and climate risks to support business continuity and adaptability to changing global conditions.

### Highlighted criteria & dimension weights

- Environmental Dimension...26%
  - Climate Strategy
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
- Social Dimension ..... 39%
  - Human Rights
  - Labor Practice Indicators
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 35%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Risk & Crisis Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Hilton Worldwide Holdings Inc.	United States	77
<b>S&amp;P Global Silver Class</b>		
Meliá Hotels International, S.A.	Spain	76
<b>S&amp;P Global Bronze Class</b>		
NH Hotel Group, S.A.	Spain	73

### Sustainability Yearbook Members

Minor International Public		
Company Limited	Thailand	66
Asset World Corp Public		
Company Limited	Thailand	64
InterContinental Hotels Group PLC		
Group PLC	United Kingdom	63

### Industry Statistics

Number of companies assessed	42
Market capitalization of assessed companies (in USD billion)	352.9
Number of companies in Yearbook	6
Market capitalization of companies in Yearbook (in USD billion)	64.3



## Household Durables

### Driving forces

The household durables industry includes home electronics, home furnishings and household appliances. It is characterized by continuously evolving consumer preferences for customized products and advances in technology (e.g., the internet of things), plus increasing demand for eco-friendly products and smart homes. The industry faces opportunities and challenges related to global trends including a growing world population, an expanding middle class, urbanization and climate change. Successful companies in this industry stand out through brand management, innovation, product quality and safety, and customer service. Leading companies proactively integrate sustainability into their business models by focusing on product stewardship, operational eco-efficiency, responsible sourcing, enhanced transparency and product labeling, as well as end-of-life solutions for customers. The increased connectivity of household appliances increases the risks of data breaches, making cybersecurity a top priority.

### Highlighted criteria & dimension weights

- Environmental Dimension...22%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 28%
  - Human Capital Development
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 50%
  - Customer Relationship Management
  - Innovation Management
  - Product Quality and Recall Management
  - Supply Chain Management

### Industry Awards 2022

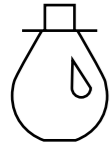
		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Arçelik Anonim Sirketi*	Turkey	86
Sustainability Yearbook Members		
AB Electrolux (publ)	Sweden	74
COWAY Co., Ltd.	Rep. of Korea	69
Whirlpool Corporation	United States	60

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	42
Market capitalization of assessed companies (in USD billion)	305.5
Number of companies in Yearbook	4
Market capitalization of companies in Yearbook (in USD billion)	25.4





## Household Products

### Driving forces

Producers of household products, such as cleaning and related paper-based products, operate in highly competitive markets where large buyers have the most bargaining power and consumers have low switching costs. Therefore, it is essential for industry participants to focus on product stewardship and meet consumer requirements regarding performance, quality and functionality. In particular, the consideration of environmental and social criteria in product design is essential. Manufacturers of household products that phase out substances of concern, choose natural or organic ingredients and develop responsible packaging solutions are better positioned to capitalize on the increasing demand for green products. By improving social and environmental features in products, industry participants can not only accelerate top-line growth but also help respond effectively to regulatory changes, improve margins and enhance brand value.

### Highlighted criteria & dimension weights

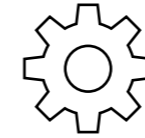
- Environmental Dimension..21%
  - Operational Eco-Efficiency
  - Packaging
  - Product Stewardship
- Social Dimension ..... 26%
  - Human Capital Development
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 53%
  - Customer Relationship Management
  - Innovation Management
  - Product Quality and Recall Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Colgate-Palmolive Company	United States	80
Reckitt Benckiser Group plc	United Kingdom	79
S&P Global Silver Class		S&P Global ESG Score
Essity AB (publ)	Sweden	77

### Industry Statistics

Number of companies assessed	22
Market capitalization of assessed companies (in USD billion)	815.3
Number of companies in Yearbook	3
Market capitalization of companies in Yearbook (in USD billion)	153.7



## Industrial Conglomerates

### Driving forces

Industrial conglomerates are highly dispersed businesses working across globalized value chains. They rely on strong management and governance structures to achieve company synergies and economies of scale, and resource-efficient and lean manufacturing processes are important aspects of their business strategies. Within this framework, the development of new resource-efficient technologies through careful product stewardship is important to gaining market share and increasing growth and profitability. Supply chain management and supplier sustainability risk assessments are particularly important with respect to labor practices. Having strong business ethics throughout operations is critical, as these companies typically have a global presence extending into emerging markets. Such conglomerates must therefore focus on promoting common corporate values that recognize the diversity brought about by multicultural backgrounds, while also developing policies and building compliance systems to prevent corruption and illegal market practices.

### Highlighted criteria & dimension weights

- Environmental Dimension..29%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 28%
  - Human Capital Development
  - Occupational Health and Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 43%
  - Corporate Governance
  - Innovation Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Siemens Aktiengesellschaft	Germany	81
S&P Global Bronze Class		S&P Global ESG Score
SK Inc.	Rep. of Korea	75
Charoen Pokphand Group Co., Ltd.	Thailand	74
Sustainability Yearbook Members		
Doosan Corporation	Rep. of Korea	72
Keppel Corporation Limited*	Singapore	71
Samsung C&T Corporation	Rep. of Korea	70
AntarChile S.A.	Chile	64

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	66
Market capitalization of assessed companies (in USD billion)	1,000.4
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	170.7



## Insurance

### Driving forces

As one of the sectors most directly exposed to losses from climate change events, the insurance industry has demonstrated leadership in integrating sustainability considerations into its core business. Leading insurers are increasingly considering long-term sustainability trends and factors in the development of new sustainable insurance solutions, as well as in their risk assessments and claims-management processes. This includes climate change risk and cybersecurity risk. At the same time, as the industry embraces digitalization, it faces both significant threats and opportunities. Digitalization has provided consumers with increased transparency and choice, while simultaneously providing insurers with new direct-to-consumer channels for delivering products and services. Leading insurers, particularly those in life insurance, are exploring ways to use developments in digital technology to offer innovative products customized to the needs of customers and incentivize healthier lifestyles through lower premiums. Deaths caused by the COVID-19 pandemic, however, have led to an increase in claims and costs for life insurers.

### Highlighted criteria & dimension weights

- Environmental Dimension..15%
  - Climate Strategy
- Social Dimension ..... 34%
  - Financial Inclusion
  - Human Capital Development
  - Labor Practice Indicators
  - Talent Attraction & Retention
- Governance & Economic Dimension .....51%
  - Codes of Business Conduct
  - Corporate Governance
  - Principles for Sustainable Insurance
  - Risk & Crisis Management
  - Sustainable Finance

### Industry Awards 2022

	S&P Global ESG Score			
<b>S&amp;P Global Gold Class</b>		Tokio Marine Holdings, Inc.	Japan	77
Allianz SE	Germany 93	QBE Insurance Group Limited	Australia	76
<b>S&amp;P Global Silver Class</b>		Dai-ichi Life Holdings, Inc.	Japan	75
Swiss Re AG	Switzerland 90	Samsung Fire & Marine Insurance Co., Ltd.	Rep. of Korea	72
<b>S&amp;P Global Bronze Class</b>		Sul América S.A.*	Brazil	70
Zurich Insurance Group AG	Switzerland 88	Suncorp Group Limited	Australia	69
China Development Financial Holding Corporation	Taiwan 88	Insurance Australia Group Limited	Australia	67
Assicurazioni Generali S.p.A.	Italy 87	Ping An Insurance (Group) Company of China, Ltd.	China	66
Cathay Financial Holding Co., Ltd.	Taiwan 87	Aviva plc	United Kingdom	66
AXA SA	France 87	MetLife, Inc.	United States	66
Fubon Financial Holding Co., Ltd.	Taiwan 86			
ASR Nederland N.V.	Netherlands 86			
Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München	Germany 86			
Shin Kong Financial Holding Co., Ltd.	Taiwan 84			

### Sustainability Yearbook Members

Poste Italiane SpA	Italy	83
Storebrand ASA	Norway	82
Sompo Holdings, Inc.	Japan	81
NN Group N.V.	Netherlands	80
MS&AD Insurance Group Holdings, Inc.	Japan	78
Mapfre, S.A.	Spain	78

### Industry statistics

Number of companies assessed	186
Market capitalization of assessed companies (in USD billion)	2,844
Number of companies in Yearbook	27
Market capitalization of companies in Yearbook (in USD billion)	859.3

\* S&P Global Industry Mover



## Interactive Media, Services & Home Entertainment

### Driving forces

This industry includes companies producing and distributing digital content and generating revenues via advertising on social media, search engines and review portals. The audiences of these companies are simultaneously consumer, product and content creator, making personal data storage and privacy a primary issue. Innovation around customer acquisition and experience demands a workforce with highly technical and creative skillsets, especially in the field of gaming applications. Visual media is increasingly mobile based, with freemium business models emerging to combine entertainment, social media, and e-commerce to reach untapped audiences. Regulatory changes regarding consumer and data protection, content limitations, privacy, network security, encryption, antitrust, taxation and payment laws will all continue to challenge the industry, especially since different jurisdictions may choose to follow divergent paths.

### Highlighted criteria & dimension weights

- Environmental Dimension..21%
  - Climate Strategy
  - Operational Eco-Efficiency
- Social Dimension ..... 27%
  - Human Capital Development
  - Responsibility of Content
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 52%
  - Customer Relationship Management
  - Information Security/ Cybersecurity & System Availability
  - Innovation Management
  - Privacy Protection

### Industry Awards 2022

Sustainability Yearbook Members		S&P Global ESG Score
Kakao Corp.	Rep. of Korea	54
Z Holdings Corporation	Japan	52
Snap Inc.	United States	47
Yandex N.V.	Netherlands	47
Alphabet Inc.	United States	47
Adevinta ASA	Norway	43
Modern Times Group Mtg AB	Sweden	41
REA Group Limited	Australia	40
Baidu, Inc.	China	39
NetEase, Inc*	China	39

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	111
Market capitalization of assessed companies (in USD billion)	4,236.3
Number of companies in Yearbook	10
Market capitalization of companies in Yearbook (in USD billion)	2,014.6



## IT Services

### Driving forces

The IT services industry consists of companies offering services and infrastructure for the IT industry, including data centers, cloud storage solutions and hosting services. It also covers companies delivering specialized IT functions, such as consulting and outsourced services, as well as online payments. IT services business models are evolving due to the growth of cloud computing, which is leading to easier procurement of IT services and integration from lower-cost locations. As a result, challengers are being launched at unprecedented speed, with a low-cost base to compete directly with established players. The industry is characterized by companies that place a heavy emphasis on innovation and depend on human and intellectual capital. Talent is therefore the most prominent driver of costs, with investment in skills being particularly important. Technological advancements, security vulnerabilities, and the increased regulatory landscape (e.g., GDPR compliance) are the main factors that will impact a company's future success.

### Highlighted criteria & dimension weights

- Environmental Dimension...21%
  - Climate Strategy
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
- Social Dimension ..... 27%
  - Human Capital Development
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 52%
  - Customer Relationship Management
  - Information Security/ Cybersecurity & System Availability
  - Innovation Management
  - Privacy Protection

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Indra Sistemas, S.A.	Spain	85
Tech Mahindra Limited	India	85
<b>S&amp;P Global Silver Class</b>		
Wipro Limited	India	84
Nomura Research Institute, Ltd.	Japan	83
Atos SE	France	83
<b>S&amp;P Global Bronze Class</b>		
Amadeus IT Group, S.A.	Spain	79
NTT DATA Corporation	Japan	78
Infosys Limited	India	78
NEC Corporation	Japan	77
Capgemini SE	France	77
Vakrangee Limited	India	77

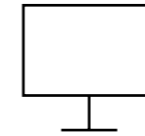
### Sustainability Yearbook Members

Cielo S.A.	Brazil	77
Samsung SDS Co.,Ltd.	Rep. of Korea	76
Tata Consultancy Services Limited	India	76
Fujitsu Limited	Japan	76
Edenred SA*	France	70
Worldline SA	France	70
Nexi S.p.A.	Italy	68
Visa Inc.	United States	62
Globant S.A.	Luxembourg	62
Amdocs Limited	United States	61

### Industry Statistics

Number of companies assessed	179
Market capitalization of assessed companies (in USD billion)	3,253.9
Number of companies in Yearbook	21
Market capitalization of companies in Yearbook (in USD billion)	1,038.3

\* S&P Global Industry Mover



## Leisure Equipment & Products and Consumer Electronics

### Driving forces

The leisure equipment and consumer electronics industry is highly competitive. Key industry drivers include product quality, time to market and brand management. Since new products become commoditized quickly, companies need to focus on research and development to maintain their competitive advantage and brand perception. Similarly, many companies in the industry must manage the cyclical nature of new product releases. Given labor intensity in manufacturing, companies should closely monitor working conditions along their supply chains, particularly in developing countries. In addition, firms must manage environmental challenges throughout the product lifecycle, including product modularity, the use of toxic substances in the manufacturing process and within products, operational eco-efficiency and recycling through effective take-back programs for the proper disposal of used products. The increased connectivity of consumer electronics also increases the risks of data breaches, making cybersecurity a top priority.

### Highlighted criteria & dimension weights

- Environmental Dimension...28%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 29%
  - Human Rights
  - Occupational Health and Safety
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 43%
  - Customer Relationship Management
  - Innovation Management
  - Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
LG Electronics Inc.	Rep. of Korea	75
<b>S&amp;P Global Bronze Class</b>		
Nikon Corporation	Japan	70
<b>Sustainability Yearbook Members</b>		
Yamaha Corporation*	Japan	57
Casio Computer Co.,Ltd.	Japan	56

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	50
Market capitalization of assessed companies (in USD billion)	408.5
Number of companies in Yearbook	4
Market capitalization of companies in Yearbook (in USD billion)	33.9



## Life Sciences Tools & Services

### Driving forces

Life sciences tools and services companies play a leading role in the global effort to diagnose, treat and prevent infections from the COVID-19 pandemic. The industry includes companies developing technologies, instruments and tests that enable scientific and medical progress through research, the development of new medical products and diagnostic testing and analysis. As a knowledge-intensive industry, it depends on a skilled workforce to drive innovation, making human capital management and talent attraction and retention important success factors. Effective customer relationship management is also crucial to gain customer loyalty for established products and technologies and to facilitate the adoption of new technologies. Supply chain management strategies that consider environmental and social factors help companies minimize the economic, social and reputational risks associated with their supply chain. The industry also consumes plastics and other materials to produce tools and devices, making waste management an important consideration.

### Highlighted criteria & dimension weights

Environmental Dimension..10%  
 – Climate Strategy  
 – Environmental Reporting  
 – Operational Eco-Efficiency

Social Dimension ..... 36%  
 – Human Capital Development  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 54%  
 – Codes of Business Conduct  
 – Corporate Governance  
 – Innovation Management  
 – Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Illumina, Inc.*	United States	69

Sustainability Yearbook Members		
Samsung Biologics Co.,Ltd.	Rep. of Korea	56
Agilent Technologies, Inc.	United States	55

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	48
Market capitalization of assessed companies (in USD billion)	955.6
Number of companies in Yearbook	3
Market capitalization of companies in Yearbook (in USD billion)	144.2



## Machinery and Electrical Equipment

### Driving forces

Industrial equipment manufacturers create the machinery customers use in their own manufacturing processes. Innovating through product development is an important determinant of their competitiveness and helps improve their customers' manufacturing productivity through the equipment itself, as well as through value-added services. While improved resource efficiency, particularly with respect to energy and water, is already a well-established goal both in their operations and product design, manufacturers are also shifting from being "equipment suppliers" to "solution providers" (e.g., automation and connected solutions). This includes delivering integrated systems and supplementing hardware with software to optimize the use of the asset (e.g., performance monitoring and predictive solutions to mitigate downtime). This industry shift opens up opportunities for companies to evolve into high-tech players, but also poses new challenges, such as attracting the right talent. Even so, managing employees' physical safety during the manufacturing process remains a key concern for the industry.

### Highlighted criteria & dimension weights

Environmental Dimension..28%  
 – Climate Strategy  
 – Operational Eco-Efficiency  
 – Product Stewardship

Social Dimension ..... 28%  
 – Human Capital Development  
 – Occupational Health and Safety  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 44%  
 – Corporate Governance  
 – Innovation Management  
 – Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
CNH Industrial N.V.	United Kingdom	88

S&P Global Bronze Class		
Siemens Gamesa Renewable Energy, S.A.	Spain	83
Valmet Oyj	Finland	82
Stanley Black & Decker, Inc.	United States	81

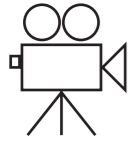
### Sustainability Yearbook Members

Komatsu Ltd.	Japan	79
Nabtesco Corporation	Japan	78
Oshkosh Corporation	United States	77
Wärtsilä Oyj Abp	Finland	75
Alstom SA	France	75
Cummins Inc.	United States	75
Mitsubishi Heavy Industries, Ltd.	Japan	74
Caterpillar Inc.	United States	74
Vestas Wind Systems A/S	Denmark	73
Doosan Heavy Industries & Construction Co., Ltd.		
	Rep. of Korea	71
Ingersoll Rand Inc.*	United States	69
NSK Ltd.	Japan	65
Kubota Corporation	Japan	64
Kawasaki Heavy Industries, Ltd.	Japan	62

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	267
Market capitalization of assessed companies (in USD billion)	2,126.8
Number of companies in Yearbook	18
Market capitalization of companies in Yearbook (in USD billion)	373.9



## Media, Movies & Entertainment

### Driving forces

The highly competitive media industry has seen a major shift toward digitalization. Publishing companies that have embraced this trend and increased their revenue from online market segments are industry leaders. The use of innovative technologies, tailored content and channel management are important in creating new business opportunities. To produce unique, valuable content or services, companies must invest in retaining a talented and digitally skilled workforce. Digitalization has, however, significantly increased the risk of cyberattacks. Implementing a cybersecurity strategy that prevents, detects and remediates those risks is essential to protecting customer information and company data. Meanwhile, increasing connectivity in developing countries is set to be a growth driver over the coming years. Given that media companies have influence in shaping public opinion, accountability and adherence to ethical standards in advertising will be important determinants of long-term success.

### Highlighted criteria & dimension weights

Environmental Dimension..	17%
– Climate Strategy	
– Operational Eco-Efficiency	
Social Dimension .....	39%
– Human Capital Development	
– Labor Practice Indicators	
– Responsibility of Content	
– Talent Attraction & Retention	
Governance & Economic Dimension .....	44%
– Customer Relationship Management	
– Information Security/ Cybersecurity & System Availability	
– Privacy Protection	

### Industry Awards 2022

<b>S&amp;P Global Gold Class</b>	S&P Global ESG Score
Informa plc	United Kingdom 78
<b>S&amp;P Global Silver Class</b>	
Telenet Group Holding NV	Belgium 77
<b>Sustainability Yearbook Members</b>	
<b>Nordic Entertainment</b>	
Group AB (publ)*	Sweden 66
<b>Télévision Française 1</b>	
Société anonyme	France 62
VGI Public Company Limited	Thailand 59
Pearson plc	United Kingdom 59
Lagardere SA	France 58
Publicis Groupe S.A.	France 58
Cogeco Communications Inc.	Canada 56

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	142
Market capitalization of assessed companies (in USD billion)	1,546.6
Number of companies in Yearbook	9
Market capitalization of companies in Yearbook (in USD billion)	53.8



## Metals & Mining

### Driving forces

With increasing regulatory and stakeholder pressure, mining companies must solve key environmental and social issues inherent to their industry. Environmental issues center on land use, mineral waste, tailing and water management. These issues have the potential to expand beyond the confines of the mine, severely impacting natural ecosystems, biodiversity, and relations with local communities, potentially resulting in social conflicts that can jeopardize operating licenses. These risks can result in high remediation costs and operational stoppages. Mining companies must also focus on the safety of their workers and communities. Proactive stakeholder engagement and grievance mechanisms are prerequisites. These long-term challenges are accentuated by an increasing demand for resources set against a backdrop of more complicated resource extraction, declining ore grades and the growing volume of waste rock and process tailings. Regional water scarcity and higher water use are increasing the potential for water conflicts with other users.

### Highlighted criteria & dimension weights

Environmental Dimension..	32%
– Biodiversity	
– Climate Strategy	
– Mineral Waste Management	
– Operational Eco-Efficiency	
Social Dimension .....	35%
– Occupational Health and Safety	
– Social Impacts on Communities	
Governance & Economic Dimension .....	33%
– Codes of Business Conduct	
– Corporate Governance	
– Risk & Crisis Management	

### Industry Awards 2022

<b>S&amp;P Global Gold Class</b>	S&P Global ESG Score
Newmont Corporation	United States 83
Teck Resources Limited	Canada 83
<b>S&amp;P Global Silver Class</b>	
Gold Fields Limited	South Africa 81
<b>S&amp;P Global Bronze Class</b>	
Anglo American plc	United Kingdom 78
Hindustan Zinc Limited	India 76
Rio Tinto Group	United Kingdom 76
Polymetal International plc	Russia 75

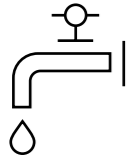
### Sustainability Yearbook Members

Barrick Gold Corporation	Canada 73
Kinross Gold Corporation	Canada 71
Antofagasta plc	United Kingdom 71
AngloGold Ashanti Limited	South Africa 69
Freeport-McMoRan Inc.	United States 69
Anglo American Platinum Limited	South Africa 68
Dundee Precious Metals Inc.	Canada 65
IGO Limited	Australia 63
Vedanta Limited	India 62
Grupo México, S.A.B. de C.V.	Mexico 61
Southern Copper Corporation	United States 61
Impala Platinum Holdings Limited*	South Africa 61

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	154
Market capitalization of assessed companies (in USD billion)	1,505.5
Number of companies in Yearbook	19
Market capitalization of companies in Yearbook (in USD billion)	566



## Multi and Water Utilities

### Driving forces

The multi and water utilities industry is being transformed on numerous fronts. As the electricity market continues to undergo dramatic changes caused by the decarbonization and decentralization of power generation, utilities need to develop innovative business models that can adapt to the new political, economic and technical constraints and demands. Gas markets are being reshaped by the growing use of natural gas as a cleaner and more flexible alternative to coal in power generation. Yet, these markets remain exposed to the long-term phasing out of all fossil fuels. For water utilities, aging distribution and collection networks, along with the opposition to privatization, are key challenges in developed countries. In emerging markets, increasing water stress and deteriorating water quality represent challenges, while increasing consumption and rapid infrastructure expansion are driving growth. Well-positioned companies are active in resource management, foster demand-side efficiency and proactively engage with stakeholders.

### Highlighted criteria & dimension weights

- Environmental Dimension.....42%
  - Climate Strategy
  - Electricity Generation
  - Operational Eco-Efficiency
  - Water Related Risks
- Social Dimension ..... 26%
  - Occupational Health and Safety
  - Stakeholder Engagement
- Governance & Economic Dimension ..... 32%
  - Codes of Business Conduct
  - Corporate Governance
  - Market Opportunities

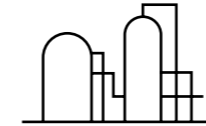
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Hera S.p.A.	Italy	90
<b>S&amp;P Global Bronze Class</b>		
Veolia Environnement S.A.	France	82
<b>Sustainability Yearbook Members</b>		
ENGIE SA	France	81
Sempra	United States	76
United Utilities Group PLC	United Kingdom	76
Aguas Andinas S.A.	Chile	71
A2A S.p.A.	Italy	70
RWE Aktiengesellschaft*	Germany	69
NiSource Inc.	United States	69

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	65
Market capitalization of assessed companies (in USD billion)	700.1
Number of companies in Yearbook	9
Market capitalization of companies in Yearbook (in USD billion)	166.3



## Oil & Gas Refining & Marketing

### Driving forces

Increasingly, refiners are facing the need for a sustainable climate strategy due to the required long-term phase out of fossil fuels. Companies need to increase their exposure to sustainable transportation trends, such as electric and hybrid vehicles or advanced biofuels, and strengthen their refinery portfolios through acquisitions and diversification of feedstocks. Good environmental management of operations includes a reduction of emissions and accidents, which are closely linked to cost competitiveness. Refiners are exposed to issues around water availability, making water recycling an area of focus. This includes maximizing operating availability of refineries and checking compliance with operating permits. Vigilant management of environmental and social issues in the supply chain, as well as contractor health and safety, will help reduce reputational risks.

### Highlighted criteria & dimension weights

- Environmental Dimension...31%
  - Climate Strategy
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
  - Water Related Risks
- Social Dimension ..... 35%
  - Human Capital Development
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 34%
  - Codes of Business Conduct
  - Risk & Crisis Management
  - Supply Chain Management

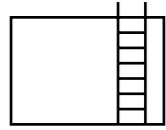
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
S-Oil Corporation*	Rep. of Korea	89
<b>S&amp;P Global Silver Class</b>		
Thai Oil Public Company Limited	Thailand	88
Bangchak Corporation Public Company Limited	Thailand	85
<b>S&amp;P Global Bronze Class</b>		
IRPC Public Company Limited	Thailand	82
Neste Oyj	Finland	81
<b>Sustainability Yearbook Members</b>		
SK Innovation Co., Ltd.	Rep. of Korea	77
Empresas Copec S.A.	Chile	64

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	56
Market capitalization of assessed companies (in USD billion)	586.1
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	81.3



## Oil & Gas Storage & Transportation

### Driving forces

For the oil and gas storage and transportation industry, the ability to meet demand for the transportation of crude oil and natural gas to growing urbanized centers is a key value driver. At the same time, lengthening supply chains increase the industry's challenges, adding upward pressure on costs. Maintaining the integrity of pipeline and storage systems is vital to minimizing environmental impacts, meet compliance with industry and environmental regulations and support community relations. The cost of failure can be significant both for local environments and for operating permits and licenses to launch new projects. Another significant factor in planning and developing new infrastructure is adequate stakeholder engagement during land acquisition and any physical or economic resettlement. Companies leading in this industry manage the twin demands of maximizing capacity utilization in their networks and minimizing impacts through effective environmental management systems, supported by modern risk and crisis management frameworks.

### Highlighted criteria & dimension weights

Environmental Dimension	25%
– Climate Strategy	
– Operational Eco-Efficiency	
Social Dimension	43%
– Human Capital Development	
– Human Rights	
– Occupational Health and Safety	
– Social Impacts on Communities	
Governance & Economic Dimension	32%
– Codes of Business Conduct	
– Corporate Governance	
– Risk & Crisis Management	

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
The Williams Companies, Inc.*	United States	66
<b>S&amp;P Global Silver Class</b>		
Transportadora de Gas Internacional S.A.E.S.P.	Colombia	65
Enbridge Inc.	Canada	63
<b>S&amp;P Global Bronze Class</b>		
Gibson Energy Inc.	Canada	60

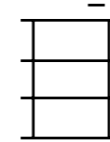
### Sustainability Yearbook Members

ONEOK, Inc.	United States	59
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\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	57
Market capitalization of assessed companies (in USD billion)	384.6
Number of companies in Yearbook	5
Market capitalization of companies in Yearbook (in USD billion)	146.8



## Oil & Gas Upstream & Integrated

### Driving forces

Among upstream and integrated oil and gas companies, there is a need to develop corporate strategies that consider the transition to low-carbon economies. Investors are increasingly linking climate strategy to corporate governance. At the same time, companies need to ensure that their current businesses can generate cash flows to cover investment and dividend requirements and weather significant near-term demand fluctuations as COVID-19 continues to affect consumer behavior. In the upstream segment, this requires diversifying to new growth opportunities in natural gas and renewable energies such as wind and solar. In downstream operations, cost competitiveness is closely linked to environmental and health and safety excellence. In this context, the industry's top performers are those able to manage a broad set of environmental, health and safety, ethical conduct and stakeholder risks. Taking these risks into account is aligned with diversifying the fuel mix and moving toward a low-carbon future that will likely feature much stricter regulation of fossil fuels in the near term.

### Highlighted criteria & dimension weights

Environmental Dimension	26%
– Biodiversity	
– Climate Strategy	
– Operational Eco-Efficiency	
Social Dimension	32%
– Human Rights	
– Occupational Health and Safety	
– Social Impacts on Communities	
Governance & Economic Dimension	42%
– Corporate Governance	
– Energy Mix	
– Risk & Crisis Management	

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Galp Energia, SGPS, S.A.	Portugal	82
<b>S&amp;P Global Silver Class</b>		
PTT Public Company Limited	Thailand	81
PTT Exploration and Production Public Company Limited	Thailand	79
<b>S&amp;P Global Bronze Class</b>		
Woodside Petroleum Ltd	Australia	75

### Sustainability Yearbook Members

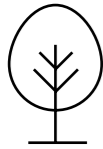
Petróleo Brasileiro S.A. -		
Petrobras	Brazil	74
OMV Aktiengesellschaft	Austria	72
Lundin Energy AB (publ)*	Sweden	72
Oil Search Limited	Papua New Guinea	71
Hess Corporation	United States	71
TotalEnergies SE	France	70
MOL Magyar Olaj- és Gázipari Nyilvánosan Muködo Részvénytársaság	Hungary	69
Inpex Corporation	Japan	69
YPF Sociedad Anónima	Argentina	68

\* S&P Global Industry Mover

Ecopetrol S.A.	Colombia	68
ConocoPhillips	United States	68
PrairieSky Royalty Ltd.	Canada	68
Royal Dutch Shell plc	Netherlands	65
Vermilion Energy Inc.	Canada	63
Suncor Energy Inc.	Canada	63

### Industry Statistics

Number of companies assessed	133
Market capitalization of assessed companies (in USD billion)	4,759.2
Number of companies in Yearbook	19
Market capitalization of companies in Yearbook (in USD billion)	752.1



## Paper & Forest Products

### Driving forces

Companies in the paper and forest products industry offer timber, wood products and paper. Responsible management of plantations and sourcing of wood fibers is demonstrated through certification of forest management and chains of custody schemes. These certifications provide assurance and traceability of the preservation of biodiversity and land rights. Engaging with local stakeholders remains essential in maintaining access to land and a social license to operate. Management of water-related risks is crucial to having productive plantations and reliable production, as droughts have impacted the supply of timber. The priorities for paper production include operational eco-efficiency, climate strategy and occupational health and safety. Innovations such as biomass to bioplastics or enzyme-based processes continue to present new market opportunities and new sources of revenue. Demand for certified sustainable paper and forest products is increasing and will gradually become the norm.

### Highlighted criteria & dimension weights

- Environmental Dimension..33%
  - Biodiversity
  - Operational Eco-Efficiency
  - Product Stewardship
  - Sustainable Forestry Practices
  - Water Related Risks
- Social Dimension ..... 33%
  - Occupational Health and Safety
  - Social Impacts on Communities
- Governance & Economic Dimension ..... 34%
  - Customer Relationship Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
UPM-Kymmene Oyj	Finland	86
Sustainability Yearbook Members		
Empresas CMPC S.A.*	Chile	76
Suzano S.A.	Brazil	75
Mondi plc	United Kingdom	67

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	31
Market capitalization of assessed companies (in USD billion)	145.1
Number of companies in Yearbook	4
Market capitalization of companies in Yearbook (in USD billion)	52.8



## Personal Products

### Driving forces

Personal product companies operate in a highly competitive, multi-brand environment. Brand management and product quality are driven by the need to continuously innovate, retain market positioning or gain market share. Rigorous product stewardship addresses recurring concerns over product safety and a growing demand for advanced products, while pushing companies to develop improved and reformulated versions of traditional products. Along with a changing regulatory environment governing the use of ingredients and chemicals, these pressures drive innovation, which ultimately results in higher-quality and safer products. Using natural and sustainably sourced ingredients and reducing or avoiding plastic packaging are of increasing importance. These factors, as well as restrictions on emissions, energy consumption and water use have a strong impact on production and operating costs. The industry may also face novel challenges caused by widespread store closures, evolving customer needs and value chain disruptions as a result of the COVID-19 pandemic.

### Highlighted criteria & dimension weights

- Environmental Dimension..23%
  - Operational Eco-Efficiency
  - Packaging
  - Product Stewardship
- Social Dimension ..... 26%
  - Human Capital Development
  - Occupational Health and Safety
- Governance & Economic Dimension .....51%
  - Customer Relationship Management
  - Innovation Management
  - Product Quality and Recall Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Unilever PLC	United Kingdom	84
S&P Global Silver Class		
Shiseido Company, Limited*	Japan	80
LG Household & Health Care Ltd.	Rep. of Korea	80
S&P Global Bronze Class		
Amorepacific Corporation	Rep. of Korea	78
Kao Corporation	Japan	78
Natura &Co Holding S.A.	Brazil	76

### Sustainability Yearbook Member

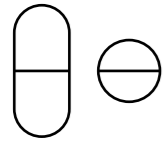
Grupo Boticário	Brazil	73
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\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	51
Market capitalization of assessed companies (in USD billion)	697
Number of companies in Yearbook	7
Market capitalization of companies in Yearbook (in USD billion)	201.1





## Pharmaceuticals

### Driving forces

COVID-19 has placed pharmaceutical companies in the spotlight, as companies' vaccines and treatments are at the heart of society's effort to end the pandemic. But the pharmaceutical industry has also been facing increasing scrutiny related to pricing and reimbursement of their products, as governments seek to slow the rise of health care costs, while the incremental value of innovation within traditional pharmaceuticals has declined. Companies depend heavily on human capital for innovation, continuous development of novel medicines and the quality of marketing strategies. The industry is characterized by extensive capital invested in sales and marketing and research and development, and there is a high risk of failure in product development. This makes process optimization and human capital management critical. Finally, controversies related to business ethics, competitive practices and product quality and safety have the potential to cause significant reputational and financial damage.

### Highlighted criteria & dimension weights

Environmental Dimension ...9%  
 – Climate Strategy  
 – Operational Eco-Efficiency

Social Dimension .....41%  
 – Addressing Cost Burden  
 – Health Outcome Contribution  
 – Strategy to Improve Access to Drugs or Products  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 50%  
 – Codes of Business Conduct  
 – Innovation Management  
 – Product Quality and Recall Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
GlaxoSmithKline plc	United Kingdom	88
<b>S&amp;P Global Silver Class</b>		
Roche Holding AG	Switzerland	86
Chugai Pharmaceutical Co., Ltd.	Japan	86
Sanofi	France	86
<b>S&amp;P Global Bronze Class</b>		
Novartis AG	Switzerland	83
AstraZeneca PLC	United Kingdom	79
Ono Pharmaceutical Co., Ltd.	Japan	79

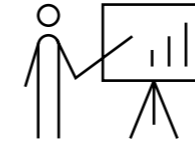
### Sustainability Yearbook Members

Daiichi Sankyo Company, Limited	Japan	77
Dr. Reddy's Laboratories Limited	India	75
Cipla Limited*	India	72
Takeda Pharmaceutical Company Limited		
Company Limited	Japan	71
Eisai Co., Ltd.	Japan	66
Genomma Lab Internacional, S.A.B. de C.V.		
S.A.B. de C.V.	Mexico	64
Santen Pharmaceutical Co., Ltd.	Japan	62

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	180
Market capitalization of assessed companies (in USD billion)	3,709.6
Number of companies in Yearbook	14
Market capitalization of companies in Yearbook (in USD billion)	1,135.6



## Professional Services

### Driving forces

Professional services companies provide a range of business support services in the areas of staffing, consumer credit ratings, research and analytics, plus the testing, inspection, and certification of manufacturing and other business processes. As providers of specialized services, these are knowledge-intensive companies, and their success depends on the quality of their workforce, making human capital development and talent attraction and retention particularly important. A reputation for integrity is critical in retaining customers and winning new business. Consequently, companies must make sure that employees comply with their codes of conduct and that services are delivered according to high ethical standards. Professional services companies are entrusted with customer data, making data security and cybersecurity top priorities if they wish to avoid negative reputational impacts.

### Highlighted criteria & dimension weights

Environmental Dimension..17%  
 – Climate Strategy  
 – Operational Eco-Efficiency

Social Dimension .....41%  
 – Human Capital Development  
 – Human Rights  
 – Labor Practice Indicators  
 – Occupational Health and Safety  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 42%  
 – Codes of Business Conduct  
 – Corporate Governance  
 – Privacy

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Bureau Veritas SA	France	85
<b>S&amp;P Global Bronze Class</b>		
SGS SA	Switzerland	81
RELX PLC	United Kingdom	78

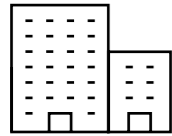
### Sustainability Yearbook Members

Randstad N.V.	Netherlands	73
ManpowerGroup Inc.	United States	68
Jacobs Engineering Group Inc.	United States	67
Nielsen Holdings plc	United States	66
Teleperformance SE*	France	65
Stantec Inc.	Canada	63

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	81
Market capitalization of assessed companies (in USD billion)	718.7
Number of companies in Yearbook	9
Market capitalization of companies in Yearbook (in USD billion)	164.3



## Real Estate

### Driving forces

Real estate is a varied industry consisting of developers and maintenance professionals, as well as property managers and investors. Building and managing real estate provides social benefits but also depletes natural resources and releases pollutants into the environment, bringing regulatory pressure from local governments. The construction and operation of buildings contributes approximately 40% of global greenhouse gas emissions, according to the World Green Building Council. Sustainable real estate companies use recyclable building materials, improve structural efficiency and consider site aspects during the development stage. Refurbishing existing buildings with energy- and water-efficient appliances, improving energy management by using smart meters and engaging with tenants on their energy use is important for sustainable real estate managers. Leading companies can validate their sustainability efforts through credible green building certification schemes. Finally, since real estate assets are highly leveraged, corporate governance plays a key role in efficient and prudent capital management.

### Highlighted criteria & dimension weights

- Environmental Dimension..38%
  - Biodiversity
  - Climate Strategy
  - Operational Eco-Efficiency
  - Resource Conservation and Resource Efficiency
- Social Dimension ..... 34%
  - Social Integration & Regeneration
  - Stakeholder Engagement
- Governance & Economic Dimension ..... 28%
  - Corporate Governance
  - Risk & Crisis Management
  - Supply Chain Management

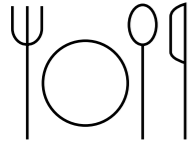
### Industry Awards 2022

		S&P Global ESG Score			
● S&P Global Gold Class	Dexus	Australia	90	FIBRA Prologis	Mexico 69
	GPT Group	Australia	86	Ayala Land, Inc.	Philippines 69
● S&P Global Silver Class	Land Securities Group plc	United Kingdom	85	Jones Lang LaSalle Incorporated	United States 69
	Stockland	Australia	83	Mitsubishi Estate Co., Ltd.	Japan 68
● S&P Global Bronze Class	Vicinity Centres	Australia	82	City Developments Limited	Singapore 68
	Castellum AB (publ)	Sweden	80	Vonovia SE	Germany 68
	Swire Properties Limited	Hong Kong	79	Healthpeak Properties, Inc.	United States 68
	Central Pattana Public Company Limited	Thailand	78	Charter Hall Group	Australia 67
	Kilroy Realty Corporation	United States	77	Boston Properties, Inc.	United States 67
	Ventas, Inc.	United States	76	Fibra UNO	Mexico 67
	Capitaland Investment Limited	Singapore	75	New World Development Company Limited	Hong Kong 66
	Covivio	France	74	Charter Hall Long WALE REIT	Australia 66
	DLF Limited	India	74	Plaza S.A.	Chile 65
	alstria office REIT-AG	Germany	74	Kimco Realty Corporation	United States 65
	Host Hotels & Resorts, Inc.	United States	73	Digital Realty Trust, Inc.	United States 65
	Nippon Prologis REIT, Inc.	Japan	73	CPN Retail Growth Leasehold REIT	Thailand 64
Prologis, Inc.	United States	72	SL Green Realty Corp.	United States 64	
Hammerson plc	United Kingdom	72	Hudson Pacific Properties, Inc.	United States 64	
CBRE Group, Inc.	United States	72	Link Real Estate Investment Trust	Hong Kong 63	
Parque Arauco S.A.	Chile	71	Warehouses De Pauw NV	Belgium 63	
Swire Pacific Limited	Hong Kong	70	Fibra Terrafina*	Mexico 63	
			Welltower Inc.	United States 63	

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	569
Market capitalization of assessed companies (in USD billion)	3,308.8
Number of companies in Yearbook	43
Market capitalization of companies in Yearbook (in USD billion)	587.4



## Restaurants & Leisure Facilities

### Driving forces

The restaurants and leisure facilities industry continues to be scrutinized over accountability and transparency in its supply chain, including issues of food safety, raw material sourcing and accurate labeling. Demands for fair wages and working conditions are attracting more attention from regulators and other stakeholders, putting pressure on franchising, licensing and accountability systems. Health-conscious consumers are pushing for greater innovation in products, and environmental concerns are resulting in demand for more transparency on the use of genetically modified organisms and for replacing single-use plastics and packaging with reusable systems. Long-term effects from the COVID-19 pandemic will make employee safety a larger concern. Other environmental challenges, such as energy and water consumption, will require companies and their franchisees to consolidate their data to effectively implement global sustainability programs.

### Highlighted criteria & dimension weights

- Environmental Dimension...21%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Raw Material Sourcing
- Social Dimension ..... 37%
  - Human Rights
  - Labor Practice Indicators
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 42%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Sodexo S.A.	France	75
Yum China Holdings, Inc.	China	75
Sustainability Yearbook Members		
Yum! Brands, Inc.	United States	61
Oriental Land Co., Ltd.	Japan	57
Alsea, S.A.B. de C.V.*	Mexico	55

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	78
Market capitalization of assessed companies (in USD billion)	727.2
Number of companies in Yearbook	5
Market capitalization of companies in Yearbook (in USD billion)	126.2



## Retailing

### Driving forces

The retailing industry is dominated by multinational companies with global supply and distribution networks focused on sophisticated inventory management, marketing strategies and technological development. Brand management is a determining factor of success, and successful retailers analyze their customers' buying habits to tailor their customer relationship management systems. Doing so also creates the need for robust consumer data privacy policies and cybersecurity, however. Distribution channels, such as e-commerce platforms, home delivery services and pick-up systems are key value drivers, especially as the COVID-19 pandemic stretches on. Companies need to address the safety and sustainability of their supply chain management and distribution systems. Labor and human rights issues, such as living wages and the use and disposal of packaging, are of notable concern. Retailers must establish long-term relationships with suppliers, integrate new technologies and provide enhanced transparency and environmental awareness to minimize reputational risks and increase operational efficiency.

### Highlighted criteria & dimension weights

- Environmental Dimension...24%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Packaging
- Social Dimension ..... 28%
  - Human Rights
  - Labor Practice Indicators
- Governance & Economic Dimension ..... 48%
  - Brand Management
  - Customer Relationship Management
  - Risk & Crisis Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Lojas Renner S.A.	Brazil	80
S&P Global Silver Class		
Home Product Center Public Company Limited	Thailand	78
S&P Global Bronze Class		
eBay Inc.	United States	75
Industria de Diseño Textil, S.A.	Spain	75

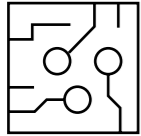
### Industry Statistics

Number of companies assessed	306
Market capitalization of assessed companies (in USD billion)	5,047.2
Number of companies in Yearbook	20
Market capitalization of companies in Yearbook (in USD billion)	361.4

\* S&P Global Industry Mover

### Sustainability Yearbook Members

Falabella S.A.	Chile	71
Rakuten Group, Inc.	Japan	68
H & M Hennes & Mauritz AB (publ)	Sweden	68
WH Smith PLC	United Kingdom	68
Americanas S.A.*	Brazil	67
Lojas Americanas S.A.	Brazil	66
Fast Retailing Co., Ltd.	Japan	66
Etsy, Inc.	United States	65
Wesfarmers Limited	Australia	64
Super Retail Group Limited	Australia	62
The Gap, Inc.	United States	60
Qurate Retail, Inc.	United States	60
Vibra Energia S.A.	Brazil	60
Marui Group Co., Ltd.	Japan	58
Organización Terpel S.A.	Colombia	58
Central Retail Corporation Public Company Limited	Thailand	58



## Semiconductors & Semiconductor Equipment

### Driving forces

The application of advanced semiconductors has progressed beyond traditional computing products to include the internet of things, artificial intelligence, automotive applications, 5G and high-performance computing. Cybersecurity is a strategic priority that is increasing in importance, since security should be included by design during chip R&D. The rate at which the number of transistors on a chip doubles (i.e. Moore's Law) is slowing as integrated circuits become smaller. The semiconductor industry must therefore investigate new architectures, materials and packaging to go beyond current scaling and performance constraints, while also addressing the demand for more energy-efficient products. To sustain a rapid pace of innovation, the industry will need to increase R&D investment that, in turn, will necessitate attracting and retaining a skilled workforce and developing talent. The industry must continue to improve its ultra-pure water usage, pollution prevention and energy and waste management. It must also develop substitutes for hazardous materials and reduce the sourcing of conflict minerals.

### Highlighted criteria & dimension weights

Environmental Dimension...34%  
 – Climate Strategy  
 – Environmental Policy & Management Systems  
 – Operational Eco-Efficiency  
 – Product Stewardship

Social Dimension ..... 23%  
 – Human Capital Development  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 43%  
 – Innovation Management  
 – Product Quality and Recall Management  
 – Supply Chain Management

### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
ASE Technology Holding Co., Ltd.	Taiwan	92
United Microelectronics Corporation	Taiwan	92
<b>S&amp;P Global Bronze Class</b>		
Taiwan Semiconductor Manufacturing Company Limited	Taiwan	87
Nanya Technology Corporation*	Taiwan	87

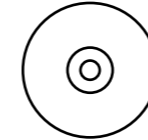
### Sustainability Yearbook Members

Infineon Technologies AG	Germany	83
Vanguard International Semiconductor Corporation	Taiwan	82
WIN Semiconductors Corp.	Taiwan	82
STMicroelectronics N.V.	Switzerland	81
ASML Holding N.V.	Netherlands	80
SK hynix, Inc.	Rep. of Korea	79
Tokyo Electron Limited	Japan	79
NVIDIA Corporation	United States	74
Intel Corporation	United States	67

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	186
Market capitalization of assessed companies (in USD billion)	4,428.4
Number of companies in Yearbook	13
Market capitalization of companies in Yearbook (in USD billion)	1,994.6



## Software

### Driving forces

Innovation and human capital are important sustainability aspects for the software industry. Rapid technological innovation, which demands a highly qualified workforce to identify disruptive trends and develop new products, is characteristic of this industry. Managing, training and developing employees is therefore crucial to generating profitability and growth. Customer loyalty and retention are also key drivers of long-term profitability. Furthermore, companies must comply with increased regulation concerning the privacy and security of a growing amount of stored and processed confidential data. Reducing a software firm's emissions footprint is a critical issue, as data centers require a constant supply of energy to avoid disruption. The industry is competitive, with dominant players in each segment. Scale is no longer the barrier that it used to be. Software can be easily procured and integrated from lower-cost locations, leading to challengers being launched at unprecedented speed with a low-cost base and the ability to compete directly with established players.

### Highlighted criteria & dimension weights

Environmental Dimension...21%  
 – Climate Strategy  
 – Environmental Policy & Management Systems  
 – Operational Eco-Efficiency

Social Dimension ..... 27%  
 – Human Capital Development  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 52%  
 – Customer Relationship Management  
 – Information Security/ Cybersecurity & System Availability  
 – Innovation Management  
 – Privacy Protection

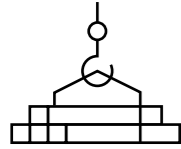
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
SAP SE	Germany	79
<b>S&amp;P Global Silver Class</b>		
Temenos AG*	Switzerland	76
<b>Sustainability Yearbook Members</b>		
Adobe Inc.	United States	68
Microsoft Corporation	United States	60
Dassault Systèmes SE	France	57
VMware, Inc.	United States	56

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	240
Market capitalization of assessed companies (in USD billion)	5,147.4
Number of companies in Yearbook	6
Market capitalization of companies in Yearbook (in USD billion)	2,748.5



## Steel

### Driving forces

Steel production is energy intensive and often relies on fossil fuel-based energy sources as well as chemicals that produce pollutant waste. Blast furnace production of steel directly creates significant greenhouse gas emissions. The recyclable properties of steel provide opportunities for lowering production costs by reducing raw material inputs, energy use and greenhouse gas emissions. Some grades of high-strength steel, such as lightweight steel, also offer opportunities for reducing energy consumption in the use phase. In some regions, community concerns may also arise due to the presence of large production facilities that create excessive noise and air pollution, as well as potential negative impacts on land and property rights. For this industry, employee and contractor health and safety is also a critical indicator of operational excellence.

### Highlighted criteria & dimension weights

Environmental Dimension..33%  
 – Climate Strategy  
 – Operational Eco-Efficiency  
 – Water Related Risks

Social Dimension ..... 33%  
 – Human Rights  
 – Occupational Health and Safety  
 – Social Impacts on Communities

Governance & Economic Dimension ..... 34%  
 – Codes of Business Conduct  
 – Corporate Governance  
 – Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
Hyundai Steel Company	Rep. of Korea	77
Fortescue Metals Group Limited	Australia	77
POSCO	Rep. of Korea	76
S&P Global Silver Class		S&P Global ESG Score
Corporacion Aceros Arequipa S.A.*	Peru	73

### Sustainability Yearbook Members

Schnitzer Steel Industries, Inc.	United States	66
JSW Steel Limited	India	65
Tata Steel Limited	India	65
CAP S.A.	Chile	63
China Steel Corporation	Taiwan	61
Outokumpu Oyj	Finland	60
Public Joint Stock Company		
Magnitogorsk Iron & Steel Works	Russia	56

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	85
Market capitalization of assessed companies (in USD billion)	629.2
Number of companies in Yearbook	11
Market capitalization of companies in Yearbook (in USD billion)	144



## Telecommunication Services

### Driving forces

The telecommunications industry operates in a highly competitive, albeit heavily regulated, environment, where exposure to antitrust action is pronounced. To remain competitive in a market consistently subject to rapid technological change, companies need to adopt efficient and flexible business models. This will help them integrate next-generation technologies, such as 5G, and produce innovative solutions that address social and environmental issues. The increased use of smart devices has led consumers to pay more attention to data privacy, and insufficient database and network protection could further expose companies to reputational and legal risks. Cybersecurity and physical threats to network infrastructure (e.g., extreme weather events) can have significant economic impacts, so investing in data security and upgrading network infrastructure are crucial.

### Highlighted criteria & dimension weights

Environmental Dimension..20%  
 – Climate Strategy  
 – Operational Eco-Efficiency

Social Dimension ..... 33%  
 – Human Capital Development  
 – Talent Attraction & Retention

Governance & Economic Dimension ..... 47%  
 – Customer Relationship Management  
 – Information Security/ Cybersecurity & System Availability  
 – Network Reliability  
 – Privacy Protection  
 – Risk & Crisis Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
True Corporation Public Company Limited	Thailand	93
S&P Global Silver Class		S&P Global ESG Score
Taiwan Mobile Co., Ltd.	Taiwan	91
Deutsche Telekom AG	Germany	90
Far EasTone Telecommunications Co., Ltd.	Taiwan	89
Advanced Info Service Public Company Limited	Thailand	88
S&P Global Bronze Class		S&P Global ESG Score
SK Telecom Co.,Ltd	Rep. of Korea	88
Telecom Italia S.p.A.	Italy	87
Telefónica, S.A.	Spain	87
Chunghwa Telecom Co., Ltd.	Taiwan	86
Koninklijke KPN N.V.	Netherlands	86
TELUS Corporation	Canada	85

### Sustainability Yearbook Members

Telefônica Brasil S.A	Brazil	81
SoftBank Corp.*	Japan	79
Nippon Telegraph and Telephone Corporation	Japan	79
Bharti Airtel Limited	India	78
TIM S.A.	Brazil	78
AT&T Inc.	United States	74
SoftBank Group Corp.	Japan	73

### Industry Statistics

Number of companies assessed	121
Market capitalization of assessed companies (in USD billion)	2,388.2
Number of companies in Yearbook	18
Market capitalization of companies in Yearbook (in USD billion)	763

\* S&P Global Industry Mover



## Textiles, Apparel & Luxury Goods

### Driving forces

Textile, apparel and luxury goods companies leverage strong recognition of their brands, effective supply chain management and marketing and sales strategies to expand into new markets, product categories and consumer segments. Fast fashion and the expansion of online shopping has resulted in continuous customer engagement. Faced with the scrutiny of labor and human rights practices in the supply chain, companies are under pressure to boost transparency throughout all tiers of their operations. Living wage issues have attracted particular attention in the face of the COVID-19 crisis. The industry's sustainability leaders integrate environmental considerations into the entire lifecycle process, from product design and raw material sourcing to recycling used products. Finding alternatives to plastic packaging will create opportunities for brands to differentiate themselves. Engagement with suppliers and subcontractors on sustainability issues, as well as actively monitoring and disclosing their practices, will help support the protection of a company's reputation, brand and long-term value.

### Highlighted criteria & dimension weights

- Environmental Dimension...22%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Product Stewardship
- Social Dimension ..... 37%
  - Human Rights
  - Labor Practice Indicators
  - Occupational Health and Safety
- Governance & Economic Dimension .....41%
  - Customer Relationship Management
  - Risk & Crisis Management
  - Supply Chain Management

### Industry Awards 2022

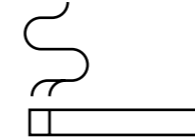
		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
Moncler S.p.A.	Italy	89
<b>S&amp;P Global Silver Class</b>		
Kering SA	France	85
Hugo Boss AG	Germany	85
<b>S&amp;P Global Bronze Class</b>		
Gildan Activewear Inc.	Canada	83
adidas AG	Germany	82

### Sustainability Yearbook Members

Burberry Group plc	United Kingdom	80
PUMA SE	Germany	78
LVMH Moët Hennessy - Louis Vuitton, Société Européenne	France	71
Aditya Birla Fashion and Retail Limited	India	69
ASICS Corporation	Japan	68

### Industry Statistics

Number of companies assessed	85
Market capitalization of assessed companies (in USD billion)	1,728.9
Number of companies in Yearbook	10
Market capitalization of companies in Yearbook (in USD billion)	609.9



## Tobacco

### Driving forces

According to the World Health Organization, global smoking rates and sales are decreasing, but not uniformly across populations. COVID-19 has highlighted the possible risk of increased mortality rates among tobacco users with pre-existing conditions, including non-communicable diseases such as chronic respiratory conditions. The industry's relationship with the public sector is critically important with regards to tax policies, regulations and efforts aimed at reducing cigarette smoking. The industry is under constant scrutiny from policymakers, the media and nongovernmental organizations, which demand well-managed supply and distribution chains and a high degree of transparency. Companies are also under pressure to support communities where crops are grown and harvested by paying living wages to farmers. Tobacco companies are also exploring alternative products such as non-combustible (smokeless) tobacco and reduced-harm nicotine products (with low to zero tobacco), which claim to have lower health risks.

### Highlighted criteria & dimension weights

- Environmental Dimension...27%
  - Climate Strategy
  - Operational Eco-Efficiency
  - Raw Material Sourcing
- Social Dimension ..... 33%
  - Human Capital Development
  - Human Rights
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 40%
  - Codes of Business Conduct
  - Innovation Management
  - Supply Chain Management

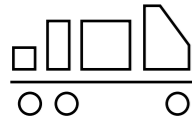
### Industry Awards 2022

		S&P Global ESG Score
<b>S&amp;P Global Gold Class</b>		
British American Tobacco p.l.c.	United Kingdom	86
<b>S&amp;P Global Silver Class</b>		
Philip Morris International Inc.*	United States	83
<b>S&amp;P Global Bronze Class</b>		
Japan Tobacco Inc.	Japan	81

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	16
Market capitalization of assessed companies (in USD billion)	516
Number of companies in Yearbook	3
Market capitalization of companies in Yearbook (in USD billion)	294.3



## Trading Companies & Distributors

### Driving forces

Trading companies and distributors represent companies operating in the wholesale and distribution of a wide range of goods and services. Due to their diverse and complex business lines, these companies rely heavily on strong corporate governance and management structures to operate successfully. It is a knowledge-intensive industry, so fair labor practices, talent attraction and retention and human capital development are key to productivity and business success. Operating across a diverse range of business areas and geographies, companies in this industry can face considerable environmental and social risks, either directly through their own emissions-heavy transportation services, through the products they sell or in their supply chains. As a result, defining clear policies and risk management processes remains important for long-term value creation, and is essential in tackling systemic shocks to supply chains such as the COVID-19 pandemic. Environmental and social impact assessments and transparency with stakeholders are key to mitigate future operational and reputational risks.

### Highlighted criteria & dimension weights

- Environmental Dimension... 19%
  - Climate Strategy
  - Environmental Policy & Management Systems
  - Operational Eco-Efficiency
- Social Dimension ..... 38%
  - Labor Practice Indicators
  - Occupational Health and Safety
- Governance & Economic Dimension ..... 43%
  - Codes of Business Conduct
  - Corporate Governance
  - Customer Relationship Management
  - Supply Chain Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
ITOCHU Corporation	Japan	78
S&P Global Bronze Class		S&P Global ESG Score
Mitsui & Co., Ltd.	Japan	73
Sojitz Corporation	Japan	71
Sustainability Yearbook Members		
Rexel S.A.	France	68
Ferreycorp S.A.A.*	Peru	61
W.W. Grainger, Inc.	United States	55

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	73
Market capitalization of assessed companies (in USD billion)	604.5
Number of companies in Yearbook	6
Market capitalization of companies in Yearbook (in USD billion)	125



## Transportation and Transportation Infrastructure

### Driving forces

The transportation industry consists of several sub-industries, each with distinctive sustainability issues. The sudden decline of global travel and trade due to the COVID-19 pandemic will have long-lasting impacts. Flexibility in adapting the transportation and logistics systems that enable global supply chains has been a key challenge as pandemic restrictions evolved in 2021. Personnel and passenger safety remain the top priority, despite growing financial pressure on these companies and their fleets. Factors such as fuel efficiency and operational eco-efficiency will continue to remain focus areas. Lower-carbon transportation options provide an opportunity to acquire new customers and retain existing ones as more companies commit to reducing their carbon footprint. Offering a high-quality, reliable service requires companies to develop an engaged workforce through effective development programs.

### Highlighted criteria & dimension weights

- Environmental Dimension... 27%
  - Climate Strategy
  - Fuel Efficiency
  - Operational Eco-Efficiency
- Social Dimension ..... 39%
  - Occupational Health and Safety
  - Stakeholder Engagement
  - Talent Attraction & Retention
- Governance & Economic Dimension ..... 34%
  - Codes of Business Conduct
  - Customer Relationship Management
  - Risk & Crisis Management

### Industry Awards 2022

S&P Global Gold Class		S&P Global ESG Score
BTS Group Holdings Public Company Limited	Thailand	85
S&P Global Silver Class		S&P Global ESG Score
Royal Mail plc	United Kingdom	82
S&P Global Bronze Class		S&P Global ESG Score
Airports of Thailand Public Company Limited	Thailand	78
Transurban Group	Australia	78

### Sustainability Yearbook Members

PostNL N.V.	Netherlands	76
Canadian National		
Railway Company	Canada	75
Hyundai Glovis Co., Ltd.	Rep. of Korea	75
Canadian Pacific Railway Limited*	Canada	73
Deutsche Post AG	Germany	70
Sydney Airport Limited	Australia	67
Nippon Yusen Kabushiki Kaisha	Japan	67
CSX Corporation	United States	63
CJ Logistics Corporation	Rep. of Korea	62
MTR Corporation Limited	Hong Kong	60
Aena S.M.E., S.A.	Spain	60

\* S&P Global Industry Mover

### Industry Statistics

Number of companies assessed	211
Market capitalization of assessed companies (in USD billion)	2,280.4
Number of companies in Yearbook	15
Market capitalization of companies in Yearbook (in USD billion)	469.1

# Company Overview

Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
A2A S.p.A.	Multi and Water Utilities	Italy			122
AB Electrolux (publ)	Household Durables	Sweden			111
ABB Ltd	Electrical Components & Equipment	Switzerland			101
Abbott Laboratories	Health Care Equipment & Supplies	United States	●		107
AbbVie Inc.	Biotechnology	United States	●		87
ABN AMRO Bank N.V.	Banks	Netherlands			85
abrdrn plc	Diversified Financial Services and Capital Markets	United Kingdom			99
Absa Group Limited	Banks	South Africa			85
Acciona, S.A.	Electric Utilities	Spain	●		100
Acer Incorporated	Computers & Peripherals and Office Electronics	Taiwan	●		94
ACS, Actividades de Construcción y Servicios, S.A.	Construction & Engineering	Spain			95
Adevinta ASA	Interactive Media, Services & Home Entertainment	Norway			115
adidas AG	Textiles, Apparel & Luxury Goods	Germany	●		138
Aditya Birla Fashion and Retail Limited	Textiles, Apparel & Luxury Goods	India			138
Adobe Inc.	Software	United States			135
Advanced Info Service Public Company Limited	Telecommunication Services	Thailand	●		137
Aena S.M.E., S.A.	Transportation and Transportation Infrastructure	Spain			141
AES Andes S.A.	Electric Utilities	Chile			100
Agilent Technologies, Inc.	Life Sciences Tools & Services	United States			118
Aguas Andinas S.A.	Multi and Water Utilities	Chile			122
AIB Group plc	Banks	Ireland			85
Air France-KLM SA	Airlines	France			80
Air Products and Chemicals, Inc.	Chemicals	United States			90
Airports of Thailand Public Company Limited	Transportation and Transportation Infrastructure	Thailand	●		141
Ajinomoto Co., Inc.	Food Products	Japan			105
Alcoa Corporation	Aluminum	United States	●		81
Allianz SE	Insurance	Germany	●		114
Almacenes Éxito S.A.	Food & Staples Retailing	Colombia			104
Alphabet Inc.	Interactive Media, Services & Home Entertainment	United States			115
Alsea, S.A.B. de C.V.	Restaurants & Leisure Facilities	Mexico		●	132
Alstom SA	Machinery and Electrical Equipment	France			119
alstria office REIT-AG	Real Estate	Germany			130

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Amadeus IT Group, S.A.	IT Services	Spain	●		116
Ambuja Cements Limited	Construction Materials	India	●		96
Amtcor plc	Containers & Packaging	Switzerland			97
Amdocs Limited	IT Services	United States			116
American Airlines Group Inc.	Airlines	United States			80
Americanas S.A.	Retailing	Brazil		●	133
AmerisourceBergen Corporation	Health Care Providers & Services	United States			108
Amgen Inc.	Biotechnology	United States			87
Amorepacific Corporation	Personal Products	Republic of Korea	●		127
Amplifon S.p.A.	Health Care Providers & Services	Italy			108
ANA Holdings Inc.	Airlines	Japan	●		80
Anglo American Platinum Limited	Metals & Mining	South Africa			121
Anglo American plc	Metals & Mining	United Kingdom	●		121
AngloGold Ashanti Limited	Metals & Mining	South Africa			121
AntarChile S.A.	Industrial Conglomerates	Chile			113
Anthem, Inc.	Health Care Providers & Services	United States	●		108
Antofagasta plc	Metals & Mining	United Kingdom			121
Aptiv PLC	Auto Components	Ireland			82
Arçelik Anonim Sirketi	Household Durables	Turkey	●	●	111
Archer-Daniels-Midland Company	Food Products	United States			105
Arkema S.A.	Chemicals	France			90
ASE Technology Holding Co., Ltd.	Semiconductors & Semiconductor Equipment	Taiwan	●		134
ASICS Corporation	Textiles, Apparel & Luxury Goods	Japan			138
ASML Holding N.V.	Semiconductors & Semiconductor Equipment	Netherlands			134
ASR Nederland N.V.	Insurance	Netherlands	●		114
Asset World Corp Public Company Limited	Hotels, Resorts & Cruise Lines	Thailand			110
Assicurazioni Generali S.p.A.	Insurance	Italy	●		114
AstraZeneca PLC	Pharmaceuticals	United Kingdom	●		128
ASUSTeK Computer Inc.	Computers & Peripherals and Office Electronics	Taiwan			94
AT&T Inc.	Telecommunication Services	United States			137
Atlantica Sustainable Infrastructure plc	Electric Utilities	United Kingdom	●		100
Atos SE	IT Services	France	●		116
AU Optronics Corp.	Electronic Equipment, Instruments & Components	Taiwan	●		102
Australia and New Zealand Banking Group Limited	Banks	Australia	●		84

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Avangrid, Inc.	Electric Utilities	United States			90
Aviva plc	Insurance	United Kingdom			114
AXA SA	Insurance	France	●		114
Ayala Land, Inc.	Real Estate	Philippines			130
B.Grimm Power Public Company Limited	Electric Utilities	Thailand		●	90
BAE Systems plc	Aerospace & Defense	United Kingdom			79
Baidu, Inc.	Interactive Media, Services & Home Entertainment	China			115
Ball Corporation	Containers & Packaging	United States	●	●	97
Banco BBVA Perú, S.A.	Banks	Peru			85
Banco Bilbao Vizcaya Argentaria, S.A.	Banks	Spain	●		84
Banco Bradesco S.A.	Banks	Brazil	●		84
Banco Comercial Português, S.A.	Banks	Portugal			85
Banco Davivienda S.A.	Banks	Colombia			85
Banco de Bogotá S.A.	Banks	Colombia			84
Banco de Crédito e Inversiones	Banks	Chile			85
Banco de Sabadell, S.A.	Banks	Spain			85
Banco del Estado de Chile	Banks	Chile			85
Banco do Brasil S.A.	Banks	Brazil	●		84
Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México	Banks	Mexico			84
Banco Santander, S.A.	Banks	Spain	●		84
Banco Santander-Chile	Banks	Chile			84
Bancolombia S.A.	Banks	Colombia	●		84
Bangchak Corporation Public Company Limited	Oil & Gas Refining & Marketing	Thailand	●		84
Bangkok Bank Public Company Limited	Banks	Thailand			85
Bangkok Dusit Medical Services Public Company Limited	Health Care Providers & Services	Thailand			108
Bank Hapoalim B.M.	Banks	Israel			85
Bank of America Corporation	Banks	United States			85
Bank of Montreal	Banks	Canada	●		84
Bankinter, S.A.	Banks	Spain	●		84
Banpu Power Public Company Limited	Electric Utilities	Thailand			100
Banpu Public Company Limited	Coal & Consumable Fuels	Thailand	●		91
Barclays PLC	Banks	United Kingdom			84

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Barrick Gold Corporation	Metals & Mining	Canada			121
Baxter International Inc.	Health Care Equipment & Supplies	United States			107
Bayerische Motoren Werke Aktiengesellschaft	Automobiles	Germany	●		83
Benesse Holdings, Inc.	Diversified Consumer Services	Japan			98
Berli Jucker Public Company Limited	Food & Staples Retailing	Thailand	●		104
Bharti Airtel Limited	Telecommunication Services	India			137
BillerudKorsnäs AB (publ)	Containers & Packaging	Sweden	●		97
Biogen Inc.	Biotechnology	United States	●		87
bioMérieux S.A.	Health Care Equipment & Supplies	France			107
BNP Paribas SA	Banks	France	●		84
Boston Properties, Inc.	Real Estate	United States			130
Boston Scientific Corporation	Health Care Equipment & Supplies	United States			107
Brambles Limited	Commercial Services & Supplies	Australia	●		92
Braskem S.A.	Chemicals	Brazil			90
Bridgestone Corporation	Auto Components	Japan			82
British American Tobacco p.l.c.	Tobacco	United Kingdom	●		139
BTS Group Holdings Public Company Limited	Transportation and Transportation Infrastructure	Thailand	●		141
Burberry Group plc	Textiles, Apparel & Luxury Goods	United Kingdom			138
Bureau Veritas SA	Professional Services	France	●		129
CaixaBank, S.A.	Banks	Spain	●		84
Campbell Soup Company	Food Products	United States			105
Canadian Imperial Bank of Commerce	Banks	Canada			84
Canadian National Railway Company	Transportation and Transportation Infrastructure	Canada			141
Canadian Pacific Railway Limited	Transportation and Transportation Infrastructure	Canada		●	141
CAP S.A.	Steel	Chile			136
Capgemini SE	IT Services	France	●		116
CapitaLand Investment Limited	Real Estate	Singapore			130
Carrefour SA	Food & Staples Retailing	France			104
Casino, Guichard-Perrachon Société Anonyme	Food & Staples Retailing	France			104
Casio Computer Co., Ltd.	Leisure Equipment & Products and Consumer Electronics	Japan			117
Castellum AB (publ)	Real Estate	Sweden			130
Caterpillar Inc.	Machinery and Electrical Equipment	United States			119
Cathay Financial Holding Co., Ltd.	Insurance	Taiwan	●		114
CBRE Group, Inc.	Real Estate	United States			130

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
CELSIA S.A. E.S.P.	Electric Utilities	Colombia	●		100
Cementos Argos S.A.	Construction Materials	Colombia	●		96
Cementos Pacasmayo S.A.A.	Construction Materials	Peru			96
Cencosud S.A.	Food & Staples Retailing	Chile			104
Centrais Elétricas Brasileiras S.A. - Eletrobrás	Electric Utilities	Brazil	●		100
Central Pattana Public Company Limited	Real Estate	Thailand			130
Central Retail Corporation Public Company Limited	Retailing	Thailand			133
Chailease Holding Company Limited	Diversified Financial Services and Capital Markets	Taiwan	●		99
Charoen Pokphand Foods Public Company Limited	Food Products	Thailand	●		105
Charoen Pokphand Group Co., Ltd.	Industrial Conglomerates	Thailand	●		113
Charter Hall Group	Real Estate	Australia			130
Charter Hall Long WALE REIT	Real Estate	Australia			130
Chegg, Inc.	Diversified Consumer Services	United States			98
China Airlines, Ltd.	Airlines	Taiwan	●		80
China Development Financial Holding Corporation	Insurance	Taiwan	●		114
China Everbright Environment Group Limited	Commercial Services & Supplies	Hong Kong			92
China Petrochemical Development Corporation	Chemicals	Taiwan			90
China Steel Corporation	Steel	Taiwan			136
Chugai Pharmaceutical Co., Ltd.	Pharmaceuticals	Japan	●		128
Chunghwa Telecom Co., Ltd.	Telecommunication Services	Taiwan	●		137
Cielo S.A.	IT Services	Brazil			116
Cigna Corporation	Health Care Providers & Services	United States	●		108
CIMB Group Holdings Berhad	Banks	Malaysia			85
CIMIC Group Limited	Construction & Engineering	Australia			95
Cipla Limited	Pharmaceuticals	India		●	128
Cisco Systems, Inc.	Communications Equipment	United States	●		93
Citigroup Inc.	Banks	United States			85
City Developments Limited	Real Estate	Singapore			130
CJ Cheiljedang Corporation	Food Products	Republic of Korea			105
CJ Logistics Corporation	Transportation and Transportation Infrastructure	Republic of Korea			141
Clariant AG	Chemicals	Switzerland			90
CLP Holdings Limited	Electric Utilities	Hong Kong			100

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
CNH Industrial N.V.	Machinery and Electrical Equipment	United Kingdom	●		119
Coca-Cola Bottlers Japan Holdings Inc.	Beverages	Japan			86
Coca-Cola Europacific Partners PLC	Beverages	United Kingdom	●		86
Coca-Cola FEMSA, S.A.B. de C.V.	Beverages	Mexico			86
Coca-Cola HBC AG	Beverages	Switzerland	●		86
Cogeco Communications Inc.	Media, Movies & Entertainment	Canada			120
Colbún S.A.	Electric Utilities	Chile			100
Colgate-Palmolive Company	Household Products	United States	●		112
Colombina S.A.	Food Products	Colombia			105
Commonwealth Bank of Australia	Banks	Australia			84
Companhia Energética de Minas Gerais	Electric Utilities	Brazil	●		100
ConocoPhillips	Oil & Gas Upstream & Integrated	United States			125
Corporación Acciona Energías Renovables, S.A.	Electric Utilities	Spain	●		100
Corporacion Aceros Arequipa S.A.	Steel	Peru	●	●	136
Countryside Properties PLC	Homebuilding	United Kingdom		●	109
Covivio	Real Estate	France			130
COWAY Co., Ltd.	Household Durables	Republic of Korea			111
CP ALL Public Company Limited	Food & Staples Retailing	Thailand	●		104
CPN Retail Growth Leasehold REIT	Real Estate	Thailand			130
CRH plc	Construction Materials	Ireland	●		96
CSX Corporation	Transportation and Transportation Infrastructure	United States			141
CTBC Financial Holding Co., Ltd.	Banks	Taiwan	●		84
CTCI Corporation	Construction & Engineering	Taiwan	●		95
Cummins Inc.	Machinery and Electrical Equipment	United States			119
CVS Health Corporation	Health Care Providers & Services	United States	●		108
Dai Nippon Printing Co., Ltd.	Commercial Services & Supplies	Japan		●	92
Dai-ichi Life Holdings, Inc.	Insurance	Japan			114
Daiichi Sankyo Company, Limited	Pharmaceuticals	Japan			128
Daikin Industries, Ltd.	Building Products	Japan			88
Daiwa Securities Group Inc.	Diversified Financial Services and Capital Markets	Japan			99
Dana Incorporated	Auto Components	United States			82
Dassault Systèmes SE	Software	France			135
DaVita Inc.	Health Care Providers & Services	United States	●		108
DBS Group Holdings Ltd	Banks	Singapore			85

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Delta Electronics (Thailand) Public Company Limited	Electronic Equipment, Instruments & Components	Thailand	●		102
Delta Electronics, Inc.	Electronic Equipment, Instruments & Components	Taiwan	●		102
Deutsche Bank Aktiengesellschaft	Diversified Financial Services and Capital Markets	Germany			99
Deutsche Börse AG	Diversified Financial Services and Capital Markets	Germany			99
Deutsche Post AG	Transportation and Transportation Infrastructure	Germany			141
Deutsche Telekom AG	Telecommunication Services	Germany	●		137
Dexus	Real Estate	Australia	●		130
DGB Financial Group Co., Ltd.	Banks	Republic of Korea			85
Diageo plc	Beverages	United Kingdom			86
DIC Corporation	Chemicals	Japan			90
Digital Realty Trust, Inc.	Real Estate	United States			130
DLF Limited	Real Estate	India			130
Doosan Corporation	Industrial Conglomerates	Republic of Korea			113
Doosan Heavy Industries & Construction Co., Ltd.	Machinery and Electrical Equipment	Republic of Korea			119
Dow Inc.	Chemicals	United States			90
Downer EDI Limited	Commercial Services & Supplies	Australia			92
Dr. Reddy's Laboratories Limited	Pharmaceuticals	India			128
Duke Energy Corporation	Electric Utilities	United States			100
Dundee Precious Metals Inc.	Metals & Mining	Canada			121
E Ink Holdings Inc.	Electronic Equipment, Instruments & Components	Taiwan			102
E.SUN Financial Holding Company, Ltd.	Banks	Taiwan	●		84
eBay Inc.	Retailing	United States	●		133
Ecolab Inc.	Chemicals	United States			90
Ecopetrol S.A.	Oil & Gas Upstream & Integrated	Colombia			125
Edenred SA	IT Services	France		●	116
EDP - Energias de Portugal, S.A.	Electric Utilities	Portugal	●		100
Edwards Lifesciences Corporation	Health Care Equipment & Supplies	United States			107
Eisai Co., Ltd.	Pharmaceuticals	Japan			128
Electricité de France S.A.	Electric Utilities	France	●		100
Electricity Generating Public Company Limited	Electric Utilities	Thailand	●		100
Embotelladora Andina S.A.	Beverages	Chile			86
Empresas CMPC S.A.	Paper & Forest Products	Chile		●	126

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Empresas Copec S.A.	Oil & Gas Refining & Marketing	Chile			123
Enaex S.A.	Chemicals	Chile			90
Enagás, S.A.	Gas Utilities	Spain	●		106
Enbridge Inc.	Oil & Gas Storage & Transportation	Canada	●		106
Endesa, S.A.	Electric Utilities	Spain	●		100
Enel Américas S.A.	Electric Utilities	Chile	●		100
Enel Chile S.A.	Electric Utilities	Chile	●		100
Enel SpA	Electric Utilities	Italy	●		100
Energy Absolute Public Company Limited	Electric Utilities	Thailand			100
ENGIE SA	Multi and Water Utilities	France			122
Entain Plc	Casinos & Gaming	United Kingdom	●		89
Entergy Corporation	Electric Utilities	United States			100
Essity AB (publ)	Household Products	Sweden	●		112
Etsy, Inc.	Retailing	United States			133
EVA Airways Corp.	Airlines	Taiwan	●		80
Exelon Corporation	Electric Utilities	United States			100
Falabella S.A.	Retailing	Chile			133
Far EasTone Telecommunications Co., Ltd.	Telecommunication Services	Taiwan	●		137
Fast Retailing Co., Ltd.	Retailing	Japan			133
Ferreycorp S.A.A.	Trading Companies & Distributors	Peru		●	140
Ferrovial, S.A.	Construction & Engineering	Spain	●		95
FIBRA Prologis	Real Estate	Mexico			130
Fibra Terrafina	Real Estate	Mexico		●	130
Fibra UNO	Real Estate	Mexico			130
FinecoBank Banca Fineco S.p.A.	Banks	Italy			84
First Financial Holding Co., Ltd.	Banks	Taiwan	●		84
Fleury S.A.	Health Care Providers & Services	Brazil	●		108
Flex Ltd.	Electronic Equipment, Instruments & Components	Singapore			102
Fortescue Metals Group Limited	Steel	Australia	●		136
Fraser & Neave Holdings Bhd	Beverages	Malaysia			86
Freeport-McMoRan Inc.	Metals & Mining	United States			121
Fresenius Medical Care AG & Co. KGaA.	Health Care Providers & Services	Germany		●	108
Fresenius SE & Co. KGaA	Health Care Providers & Services	Germany			108
Fubon Financial Holding Co., Ltd.	Insurance	Taiwan	●		114
Fuji Electric Co., Ltd.	Electrical Components & Equipment	Japan		●	101

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
FUJIFILM Holdings Corporation	Computers & Peripherals and Office Electronics	Japan			94
Fujitsu Limited	IT Services	Japan			116
Galp Energia, SGPS, S.A.	Oil & Gas Upstream & Integrated	Portugal	●		125
General Mills, Inc.	Food Products	United States			105
General Motors Company	Automobiles	United States	●		83
Genomma Lab Internacional, S.A.B. de C.V.	Pharmaceuticals	Mexico			128
Gestamp Automoción, S.A.	Auto Components	Spain			82
Gibson Energy Inc.	Oil & Gas Storage & Transportation	Canada	●		124
Gildan Activewear Inc.	Textiles, Apparel & Luxury Goods	Canada	●		138
GlaxoSmithKline plc	Pharmaceuticals	United Kingdom	●		128
Global Power Synergy Public Company Limited	Electric Utilities	Thailand	●		100
Globant S.A.	IT Services	Luxembourg			116
Gold Fields Limited	Metals & Mining	South Africa	●		121
GPT Group	Real Estate	Australia	●		130
Grand Canyon Education, Inc.	Diversified Consumer Services	United States			98
Grifols, S.A.	Biotechnology	Spain		●	87
Grupo Argos S.A.	Construction Materials	Colombia	●		96
Grupo Boticário	Personal Products	Brazil			127
Grupo de Inversiones Suramericana S.A.	Diversified Financial Services and Capital Markets	Colombia	●		99
Grupo Energía Bogotá S.A. E.S.P.	Gas Utilities	Colombia		●	106
Grupo Financiero Banorte, S.A.B. de C.V.	Banks	Mexico			84
Grupo México, S.A.B. de C.V.	Metals & Mining	Mexico			121
Grupo Nutresa S.A.	Food Products	Colombia	●		105
Grupo Rotoplas S.A.B. de C.V.	Building Products	Mexico			88
GS Engineering & Construction Corporation	Construction & Engineering	Republic of Korea			95
Gulf Energy Development Public Company Limited	Electric Utilities	Thailand			100
H & M Hennes & Mauritz AB (publ)	Retailing	Sweden			133
Halliburton Company	Energy Equipment & Services	United States			103
Hammerson plc	Real Estate	United Kingdom			130
Hana Financial Group Inc.	Banks	Republic of Korea			84
Hang Seng Bank Limited	Banks	Hong Kong			85
Hankook Tire & Technology Co., Ltd.	Auto Components	Republic of Korea	●		82
Havells India Limited	Electrical Components & Equipment	India			101

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Healthpeak Properties, Inc.	Real Estate	United States			130
Heineken Holding N.V.	Beverages	Netherlands			86
Heineken N.V.	Beverages	Netherlands			86
Hera S.p.A.	Multi and Water Utilities	Italy	●		122
Hess Corporation	Oil & Gas Upstream & Integrated	United States			125
Hewlett Packard Enterprise Company	Computers & Peripherals and Office Electronics	United States	●		94
Hilton Worldwide Holdings Inc.	Hotels, Resorts & Cruise Lines	United States	●		110
Hindalco Industries Limited	Aluminum	India	●		81
Hindustan Zinc Limited	Metals & Mining	India	●		121
HOCHTIEF Aktiengesellschaft	Construction & Engineering	Germany	●		95
Holcim Ltd	Construction Materials	Switzerland	●		96
Home Product Center Public Company Limited	Retailing	Thailand	●		133
Honda Motor Co., Ltd.	Automobiles	Japan	●		83
Hong Kong Exchanges and Clearing Limited	Diversified Financial Services and Capital Markets	Hong Kong			99
Host Hotels & Resorts, Inc.	Real Estate	United States			130
HP Inc.	Computers & Peripherals and Office Electronics	United States	●		94
Hudson Pacific Properties, Inc.	Real Estate	United States			130
Hugo Boss AG	Textiles, Apparel & Luxury Goods	Germany	●		138
Humana Inc.	Health Care Providers & Services	United States			108
Hyundai Engineering & Construction Co., Ltd.	Construction & Engineering	Republic of Korea	●		95
Hyundai Glovis Co., Ltd.	Transportation and Transportation Infrastructure	Republic of Korea			141
Hyundai Mobis Co.,Ltd	Auto Components	Republic of Korea	●		82
Hyundai Motor Company	Automobiles	Republic of Korea	●	●	83
Hyundai Steel Company	Steel	Republic of Korea	●		136
Iberdrola, S.A.	Electric Utilities	Spain	●		100
IGO Limited	Metals & Mining	Australia			121
Illumina, Inc.	Life Sciences Tools & Services	United States	●	●	118
Impala Platinum Holdings Limited	Metals & Mining	South Africa		●	121
Incitec Pivot Limited	Chemicals	Australia			90
Indorama Ventures Public Company Limited	Chemicals	Thailand			90
Indra Sistemas, S.A.	IT Services	Spain	●		116
IndusInd Bank Limited	Banks	India			85
Industria de Diseño Textil, S.A.	Retailing	Spain	●		133

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Infineon Technologies AG	Semiconductors & Semiconductor Equipment	Germany			134
Informa plc	Media, Movies & Entertainment	United Kingdom	●		120
Infosys Limited	IT Services	India	●		116
Ingersoll Rand Inc.	Machinery and Electrical Equipment	United States		●	119
Innolux Corporation	Electronic Equipment, Instruments & Components	Taiwan	●		102
Inpex Corporation	Oil & Gas Upstream & Integrated	Japan			125
InRetail Perú Corp.	Food & Staples Retailing	Peru		●	104
Insurance Australia Group Limited	Insurance	Australia			114
Intel Corporation	Semiconductors & Semiconductor Equipment	United States			134
Interconexión Eléctrica S.A. E.S.P.	Electric Utilities	Colombia			100
InterContinental Hotels Group PLC	Hotels, Resorts & Cruise Lines	United Kingdom			110
International Flavors & Fragrances Inc.	Chemicals	United States			90
Intesa Sanpaolo S.p.A.	Banks	Italy	●		84
Investec Group	Diversified Financial Services and Capital Markets	South Africa			99
IRPC Public Company Limited	Oil & Gas Refining & Marketing	Thailand	●		123
ISS A/S	Commercial Services & Supplies	Denmark			92
Italgas S.p.A.	Gas Utilities	Italy	●		106
Itaú Corpbanca	Banks	Chile			85
Itaú Unibanco Holding S.A.	Banks	Brazil	●		84
Itaúsa - Investimentos Itaú SA	Banks	Brazil	●		84
ITOCHU Corporation	Trading Companies & Distributors	Japan	●		140
Jacobs Engineering Group Inc.	Professional Services	United States			129
Japan Airlines Co., Ltd.	Airlines	Japan			80
Japan Tobacco Inc.	Tobacco	Japan	●		139
Johnson Controls International plc	Building Products	Ireland		●	88
Johnson Matthey Plc	Chemicals	United Kingdom			90
Jones Lang LaSalle Incorporated	Real Estate	United States			130
JSW Steel Limited	Steel	India			1360
Kakao Corp.	Interactive Media, Services & Home Entertainment	Republic of Korea			115
Kangwon Land, Inc.	Casinos & Gaming	Republic of Korea			89
Kao Corporation	Personal Products	Japan	●		127
Kasikornbank Public Company Limited	Banks	Thailand	●		84
Kawasaki Heavy Industries, Ltd.	Machinery and Electrical Equipment	Japan			119

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
KB Financial Group Inc.	Banks	Republic of Korea	●		84
KBC Group NV	Banks	Belgium			85
Kellogg Company	Food Products	United States			105
Keppel Corporation Limited	Industrial Conglomerates	Singapore		●	113
Kering SA	Textiles, Apparel & Luxury Goods	France	●		138
Kesko Oyj	Food & Staples Retailing	Finland			104
Kilroy Realty Corporation	Real Estate	United States			130
Kimco Realty Corporation	Real Estate	United States			130
Kinross Gold Corporation	Metals & Mining	Canada			121
Klabin S.A.	Containers & Packaging	Brazil	●		97
Komatsu Ltd.	Machinery and Electrical Equipment	Japan			119
Konica Minolta, Inc.	Computers & Peripherals and Office Electronics	Japan	●		94
Koninklijke Ahold Delhaize N.V.	Food & Staples Retailing	Netherlands	●		104
Koninklijke KPN N.V.	Telecommunication Services	Netherlands	●		137
Koninklijke Philips N.V.	Health Care Equipment & Supplies	Netherlands	●		107
Korea Electric Power Corporation	Electric Utilities	Republic of Korea			100
Korea Gas Corporation	Gas Utilities	Republic of Korea			106
Krungthai Card Public Company Limited	Diversified Financial Services and Capital Markets	Thailand			99
Kubota Corporation	Machinery and Electrical Equipment	Japan			119
Kyocera Corporation	Electronic Equipment, Instruments & Components	Japan		●	102
La Française des Jeux Société anonyme	Casinos & Gaming	France		●	89
Lagardere SA	Media, Movies & Entertainment	France			120
Land Securities Group plc	Real Estate	United Kingdom	●		130
LANXESS Aktiengesellschaft	Chemicals	Germany	●		90
Las Vegas Sands Corp.	Casinos & Gaming	United States	●		89
LATAM Airlines Group S.A.	Airlines	Chile	●		80
Legrand SA	Electrical Components & Equipment	France	●		101
Leonardo S.p.a.	Aerospace & Defense	Italy	●		79
LG Display Co., Ltd.	Electronic Equipment, Instruments & Components	Republic of Korea			102
LG Electronics Inc.	Leisure Equipment & Products and Consumer Electronics	Republic of Korea	●		117
LG Household & Health Care Ltd.	Personal Products	Republic of Korea	●		127
LG Innotek Co., Ltd.	Electronic Equipment, Instruments & Components	Republic of Korea			102
Linde plc	Chemicals	United Kingdom			90
Link Real Estate Investment Trust	Real Estate	Hong Kong			130

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Lite-On Technology Corporation	Computers & Peripherals and Office Electronics	Taiwan	●		94
LIXIL Corporation	Building Products	Japan	●		88
Lockheed Martin Corporation	Aerospace & Defense	United States			79
Lojas Americanas S.A.	Retailing	Brazil			133
Lojas Renner S.A.	Retailing	Brazil	●		133
Lundin Energy AB (publ)	Oil & Gas Upstream & Integrated	Sweden		●	125
LVMH Moët Hennessy - Louis Vuitton, Société Européenne	Textiles, Apparel & Luxury Goods	France			138
LX Hausys, Ltd.	Building Products	Republic of Korea			88
Mahindra & Mahindra Limited	Automobiles	India	●		83
ManpowerGroup Inc.	Professional Services	United States			129
Mapfre, S.A.	Insurance	Spain			114
Marui Group Co., Ltd.	Retailing	Japan			133
Mazda Motor Corporation	Automobiles	Japan			83
Mediobanca Banca di Credito Finanziario S.p.A.	Banks	Italy			85
Medtronic plc	Health Care Equipment & Supplies	Ireland			107
Mega Financial Holding Co., Ltd.	Banks	Taiwan			85
Meliá Hotels International, S.A.	Hotels, Resorts & Cruise Lines	Spain	●		110
MetLife, Inc.	Insurance	United States			114
Metro AG	Food & Staples Retailing	Germany			104
Microsoft Corporation	Software	United States			135
Minor International Public Company Limited	Hotels, Resorts & Cruise Lines	Thailand			110
Mirae Asset Securities Co., Ltd.	Diversified Financial Services and Capital Markets	Republic of Korea			99
Mitie Group plc	Commercial Services & Supplies	United Kingdom			92
Mitr Phol Sugar Corporation Limited	Food Products	Thailand	●		105
Mitsubishi Chemical Holdings Corporation	Chemicals	Japan			90
Mitsubishi Estate Co., Ltd.	Real Estate	Japan			130
Mitsubishi Heavy Industries, Ltd.	Machinery and Electrical Equipment	Japan			119
Mitsui & Co., Ltd.	Trading Companies & Distributors	Japan	●		140
Mizuho Financial Group, Inc.	Banks	Japan			85
Modern Times Group Mtg AB	Interactive Media, Services & Home Entertainment	Sweden			115
MOL Magyar Olaj- és Gázipari Nyilvánosan Működő Részvénytársaság	Oil & Gas Upstream & Integrated	Hungary			125
Moncler S.p.A.	Textiles, Apparel & Luxury Goods	Italy	●		138
Mondelez International, Inc.	Food Products	United States			105

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Mondi plc	Paper & Forest Products	United Kingdom			126
MS&AD Insurance Group Holdings, Inc.	Insurance	Japan			114
MTR Corporation Limited	Transportation and Transportation Infrastructure	Hong Kong			141
Multiexport Foods S.A.	Food Products	Chile			105
Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München	Insurance	Germany	●		114
Nabtesco Corporation	Machinery and Electrical Equipment	Japan			119
Nanya Technology Corporation	Semiconductors & Semiconductor Equipment	Taiwan	●	●	134
National Australia Bank Limited	Banks	Australia	●		84
Natura &Co Holding S.A.	Personal Products	Brazil	●		127
Naturgy Energy Group, S.A.	Gas Utilities	Spain			106
NatWest Group plc	Banks	United Kingdom			85
NEC Corporation	IT Services	Japan	●		116
Nedbank Group Limited	Banks	South Africa			85
Neoenergia S.A.	Electric Utilities	Brazil			100
Neste Oyj	Oil & Gas Refining & Marketing	Finland	●		123
NetEase, Inc.	Interactive Media, Services & Home Entertainment	China		●	115
New World Development Company Limited	Real Estate	Hong Kong			130
Newmont Corporation	Metals & Mining	United States	●		121
Nexi S.p.A.	IT Services	Italy			116
NGK Spark Plug Co., Ltd.	Auto Components	Japan			82
NH Hotel Group, S.A.	Hotels, Resorts & Cruise Lines	Spain	●		110
Nielsen Holdings plc	Professional Services	United States			129
Nikon Corporation	Leisure Equipment & Products and Consumer Electronics	Japan	●		117
Nippon Prologis REIT, Inc.	Real Estate	Japan			130
Nippon Telegraph and Telephone Corporation	Telecommunication Services	Japan			137
Nippon Yusen Kabushiki Kaisha	Transportation and Transportation Infrastructure	Japan			141
NiSource Inc.	Multi and Water Utilities	United States			122
Nissan Chemical Corporation	Chemicals	Japan			90
Nissin Foods Holdings Co.,Ltd.	Food Products	Japan			105
NN Group N.V.	Insurance	Netherlands			114
Nokian Renkaat Oyj	Auto Components	Finland	●		82

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Nomura Holdings, Inc.	Diversified Financial Services and Capital Markets	Japan			99
Nomura Research Institute, Ltd.	IT Services	Japan	●		116
Nordic Entertainment Group AB (publ)	Media, Movies & Entertainment	Sweden		●	120
Northrop Grumman Corporation	Aerospace & Defense	United States		●	79
Novartis AG	Pharmaceuticals	Switzerland	●		128
NSK Ltd.	Machinery and Electrical Equipment	Japan			119
NTT DATA Corporation	IT Services	Japan	●		116
NVIDIA Corporation	Semiconductors & Semiconductor Equipment	United States			134
Oil Search Limited	Oil & Gas Upstream & Integrated	Papua New Guinea			125
Olympus Corporation	Health Care Equipment & Supplies	Japan			107
OMRON Corporation	Electronic Equipment, Instruments & Components	Japan	●		102
OMV Aktiengesellschaft	Oil & Gas Upstream & Integrated	Austria			125
ONEOK, Inc.	Oil & Gas Storage & Transportation	United States			124
Ono Pharmaceutical Co., Ltd.	Pharmaceuticals	Japan	●		128
Organización Terpel S.A.	Retailing	Colombia			133
Oriental Land Co., Ltd.	Restaurants & Leisure Facilities	Japan			132
Orkla ASA	Food Products	Norway			105
Oshkosh Corporation	Machinery and Electrical Equipment	United States			119
OSRAM Licht AG	Electrical Components & Equipment	Germany			101
Outokumpu Oyj	Steel	Finland			136
Owens Corning	Building Products	United States	●		88
Parque Arauco S.A.	Real Estate	Chile			130
Partners Group Holding AG	Diversified Financial Services and Capital Markets	Switzerland		●	99
Pearson plc	Media, Movies & Entertainment	United Kingdom			120
Petróleo Brasileiro S.A. - Petrobras	Oil & Gas Upstream & Integrated	Brazil			125
PETRONAS Chemicals Group Berhad	Chemicals	Malaysia		●	90
Philip Morris International Inc.	Tobacco	United States	●	●	139
Ping An Insurance (Group) Company of China, Ltd.	Insurance	China			114
Pirelli & C. S.p.A.	Auto Components	Italy	●		82
Plaza S.A.	Real Estate	Chile			130
Polymetal International plc	Metals & Mining	Russia	●		121
POSCO	Steel	Republic of Korea	●		136
Poste Italiane SpA	Insurance	Italy			114

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
PostNL N.V.	Transportation and Transportation Infrastructure	Netherlands			141
PrairieSky Royalty Ltd.	Oil & Gas Upstream & Integrated	Canada			125
President Chain Store Corporation	Food & Staples Retailing	Taiwan	●		104
Prologis, Inc.	Real Estate	United States			130
Promigas S.A. E.S.P.	Gas Utilities	Colombia			106
Prysmian S.p.A.	Electrical Components & Equipment	Italy	●		101
PTT Exploration and Production Public Company Limited	Oil & Gas Upstream & Integrated	Thailand	●		125
PTT Global Chemical Public Company Limited	Chemicals	Thailand	●		90
PTT Public Company Limited	Oil & Gas Upstream & Integrated	Thailand	●		125
Public Joint Stock Company Magnitogorsk Iron & Steel Works	Steel	Russia			136
Public Joint Stock Company Uralkali	Chemicals	Russia			90
Publicis Groupe S.A.	Media, Movies & Entertainment	France			120
Pulmuone Co., Ltd.	Food Products	Republic of Korea			105
PUMA SE	Textiles, Apparel & Luxury Goods	Germany			138
QBE Insurance Group Limited	Insurance	Australia			114
Quest Diagnostics Incorporated	Health Care Providers & Services	United States			108
Qurate Retail, Inc.	Retailing	United States			133
Rakuten Group, Inc.	Retailing	Japan			133
Randstad N.V.	Professional Services	Netherlands			129
REA Group Limited	Interactive Media, Services & Home Entertainment	Australia			115
Reckitt Benckiser Group plc	Household Products	United Kingdom	●		112
Red Eléctrica Corporación, S.A.	Electric Utilities	Spain	●		100
Regeneron Pharmaceuticals, Inc.	Biotechnology	United States			87
RELX PLC	Professional Services	United Kingdom	●		129
Rentokil Initial plc	Commercial Services & Supplies	United Kingdom			92
Republic Services, Inc.	Commercial Services & Supplies	United States			92
Rexel S.A.	Trading Companies & Distributors	France			140
Ricoh Company, Ltd.	Computers & Peripherals and Office Electronics	Japan	●		94
Rio Tinto Group	Metals & Mining	United Kingdom	●		121
Roche Holding AG	Pharmaceuticals	Switzerland	●		128
Rolls-Royce Holdings plc	Aerospace & Defense	United Kingdom			79
Royal Bank of Canada	Banks	Canada			84
Royal Dutch Shell plc	Oil & Gas Upstream & Integrated	Netherlands			125
Royal Mail plc	Transportation and Transportation Infrastructure	United Kingdom	●		141

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
RWE Aktiengesellschaft	Multi and Water Utilities	Germany		●	122
S-Oil Corporation	Oil & Gas Refining & Marketing	Republic of Korea	●	●	123
S&P Global Inc.	Diversified Financial Services and Capital Markets	United States	●		99
Sacyr, S.A.	Construction & Engineering	Spain			95
Saipem SpA	Energy Equipment & Services	Italy	●		103
Salmones Camanchaca S.A.	Food Products	Chile		●	105
Samsung Biologics Co.,Ltd.	Life Sciences Tools & Services	Republic of Korea			118
Samsung C&T Corporation	Industrial Conglomerates	Republic of Korea			113
Samsung Electro-Mechanics Co., Ltd.	Electronic Equipment, Instruments & Components	Republic of Korea			102
Samsung Engineering Co., Ltd.	Construction & Engineering	Republic of Korea			95
Samsung Fire & Marine Insurance Co., Ltd.	Insurance	Republic of Korea			114
Samsung SDI Co., Ltd.	Electronic Equipment, Instruments & Components	Republic of Korea	●		102
Samsung SDS Co.,Ltd.	IT Services	Republic of Korea			116
Samsung Securities Co., Ltd.	Diversified Financial Services and Capital Markets	Republic of Korea			99
Sands China Ltd.	Casinos & Gaming	Macao	●		89
Sanofi	Pharmaceuticals	France	●		128
Santen Pharmaceutical Co., Ltd.	Pharmaceuticals	Japan			128
SAP SE	Software	Germany	●		135
SBM Offshore N.V.	Energy Equipment & Services	Netherlands	●	●	103
SCG Packaging Public Company Limited	Containers & Packaging	Thailand	●		97
Schneider Electric S.E.	Electrical Components & Equipment	France	●		101
Schnitzer Steel Industries, Inc.	Steel	United States			136
Sekisui Chemical Co., Ltd.	Homebuilding	Japan	●		109
Sekisui House, Ltd.	Homebuilding	Japan	●		109
Sempra	Multi and Water Utilities	United States			122
Seven & i Holdings Co., Ltd.	Food & Staples Retailing	Japan			104
SGS SA	Professional Services	Switzerland	●		128
Shin Kong Financial Holding Co., Ltd.	Insurance	Taiwan	●		114
Shinhan Financial Group Co., Ltd.	Banks	Republic of Korea	●		84
Shiseido Company, Limited	Personal Products	Japan	●	●	127
Siemens Aktiengesellschaft	Industrial Conglomerates	Germany	●		113
Siemens Gamesa Renewable Energy, S.A.	Machinery and Electrical Equipment	Spain	●		119
Signify N.V.	Electrical Components & Equipment	Netherlands	●		101

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
SinoPac Financial Holdings Company Limited	Banks	Taiwan	●		84
SK hynix Inc.	Semiconductors & Semiconductor Equipment	Republic of Korea			134
SK Inc.	Industrial Conglomerates	Republic of Korea	●		113
SK Innovation Co., Ltd.	Oil & Gas Refining & Marketing	Republic of Korea			123
SK Telecom Co., Ltd	Telecommunication Services	Republic of Korea	●		137
SL Green Realty Corp.	Real Estate	United States			130
Smith & Nephew plc	Health Care Equipment & Supplies	United Kingdom			107
Snam S.p.A.	Gas Utilities	Italy	●		106
Snap Inc.	Interactive Media, Services & Home Entertainment	United States			115
Sociedad Química y Minera de Chile S.A.	Chemicals	Chile			90
Société Générale Société anonyme	Banks	France	●		84
Sodexo S.A.	Restaurants & Leisure Facilities	France	●		132
SoftBank Corp.	Telecommunication Services	Japan		●	137
SoftBank Group Corp.	Telecommunication Services	Japan			137
Sojitz Corporation	Trading Companies & Distributors	Japan	●		140
Sompo Holdings, Inc.	Insurance	Japan			114
Sonova Holding AG	Health Care Equipment & Supplies	Switzerland	●		107
Southern Copper Corporation	Metals & Mining	United States			121
Spirit AeroSystems Holdings, Inc.	Aerospace & Defense	United States			79
Stanley Black & Decker, Inc.	Machinery and Electrical Equipment	United States	●		119
Stantec Inc.	Professional Services	Canada			129
State Street Corporation	Diversified Financial Services and Capital Markets	United States			99
STMicroelectronics N.V.	Semiconductors & Semiconductor Equipment	Switzerland			134
Stockland	Real Estate	Australia	●		130
Storebrand ASA	Insurance	Norway			114
Sul América S.A.	Insurance	Brazil		●	114
Sumitomo Electric Industries, Ltd.	Auto Components	Japan			82
Sumitomo Forestry Co., Ltd.	Homebuilding	Japan	●		109
Sumitomo Mitsui Financial Group, Inc.	Banks	Japan			85
Suncor Energy Inc.	Oil & Gas Upstream & Integrated	Canada			125
Suncorp Group Limited	Insurance	Australia			114
Super Retail Group Limited	Retailing	Australia			133
Suzano S.A.	Paper & Forest Products	Brazil			126
Svenska Handelsbanken AB (publ)	Banks	Sweden			85

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Swedbank AB (publ)	Banks	Sweden	●		84
Swire Pacific Limited	Real Estate	Hong Kong			130
Swire Properties Limited	Real Estate	Hong Kong			130
Swiss Re AG	Insurance	Switzerland	●		114
Sydney Airport Limited	Transportation and Transportation Infrastructure	Australia			141
Sysmex Corporation	Health Care Equipment & Supplies	Japan			107
Tabcorp Holdings Limited	Casinos & Gaming	Australia	●		89
Taishin Financial Holding Co., Ltd.	Banks	Taiwan	●		84
Taiwan Mobile Co., Ltd.	Telecommunication Services	Taiwan	●		137
Taiwan Semiconductor Manufacturing Company Limited	Semiconductors & Semiconductor Equipment	Taiwan	●		134
Takeda Pharmaceutical Company Limited	Pharmaceuticals	Japan			128
Tata Consultancy Services Limited	IT Services	India			116
Tata Steel Limited	Steel	India			136
Taylor Wimpey plc	Homebuilding	United Kingdom			109
TDK Corporation	Electronic Equipment, Instruments & Components	Japan			102
TE Connectivity Ltd.	Electronic Equipment, Instruments & Components	Switzerland			102
Tech Mahindra Limited	IT Services	India	●		116
Teck Resources Limited	Metals & Mining	Canada	●		121
TECO Electric & Machinery Co., Ltd.	Electrical Components & Equipment	Taiwan			101
Telecom Italia S.p.A.	Telecommunication Services	Italy	●		137
Telefonaktiebolaget LM Ericsson (publ)	Communications Equipment	Sweden	●	●	93
Telefônica Brasil S.A.	Telecommunication Services	Brazil			137
Telefónica, S.A.	Telecommunication Services	Spain	●		137
Telenet Group Holding NV	Media, Movies & Entertainment	Belgium	●		120
Teleperformance SE	Professional Services	France		●	129
Télévision Française 1 Société anonyme	Media, Movies & Entertainment	France			120
TELUS Corporation	Telecommunication Services	Canada	●		137
Temenos AG	Software	Switzerland	●	●	135
Terna - Rete Elettrica Nazionale Società per Azioni	Electric Utilities	Italy	●		100
Tesco PLC	Food & Staples Retailing	United Kingdom			104
Thai Beverage Public Company Limited	Beverages	Thailand	●		86
Thai Oil Public Company Limited	Oil & Gas Refining & Marketing	Thailand	●		123

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
Thai Union Group Public Company Limited	Food Products	Thailand	●		105
Thales S.A.	Aerospace & Defense	France			79
The AES Corporation	Electric Utilities	United States	●		100
The Bank of New York Mellon Corporation	Diversified Financial Services and Capital Markets	United States			99
The Bank of Nova Scotia	Banks	Canada			84
The Gap, Inc.	Retailing	United States			133
The Hershey Company	Food Products	United States			105
The Shanghai Commercial & Savings Bank, Ltd.	Banks	Taiwan			84
The Siam Cement Public Company Limited	Construction Materials	Thailand	●		96
The Siam Commercial Bank Public Company Limited	Banks	Thailand	●		84
The Toronto-Dominion Bank	Banks	Canada	●		84
The Williams Companies, Inc.	Oil & Gas Storage & Transportation	United States	●	●	124
TIM S.A.	Telecommunication Services	Brazil			137
Tipico Group Ltd	Casinos & Gaming	Malta			89
TMBThanachart Bank Public Company Limited	Banks	Thailand			85
Tokio Marine Holdings, Inc.	Insurance	Japan			114
Tokyo Electron Limited	Semiconductors & Semiconductor Equipment	Japan			134
Top Glove Corporation Bhd.	Health Care Equipment & Supplies	Malaysia		●	107
Toppan Inc.	Commercial Services & Supplies	Japan			92
Toray Industries, Inc.	Chemicals	Japan			90
TotalEnergies SE	Oil & Gas Upstream & Integrated	France			125
Toto Ltd.	Building Products	Japan			88
Trane Technologies plc	Building Products	Ireland			88
Transportadora de Gas Internacional S.A. E.S.P.	Oil & Gas Storage & Transportation	Colombia	●		124
Transurban Group	Transportation and Transportation Infrastructure	Australia	●		141
True Corporation Public Company Limited	Telecommunication Services	Thailand	●		137
TS TECH Co., Ltd.	Auto Components	Japan		●	82
Türkiye Garanti Bankası A.S.	Banks	Turkey			84
UBS Group AG	Diversified Financial Services and Capital Markets	Switzerland	●		99
Ülker Bisküvi Sanayi A.S.	Food Products	Turkey			105
UltraTech Cement Limited	Construction Materials	India		●	96

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
UniCredit S.p.A.	Banks	Italy			84
Unilever PLC	Personal Products	United Kingdom	●		127
United Microelectronics Corporation	Semiconductors & Semiconductor Equipment	Taiwan	●		134
United Utilities Group PLC	Multi and Water Utilities	United Kingdom			122
UnitedHealth Group Incorporated	Health Care Providers & Services	United States	●		108
Universal Scientific Industrial (Shanghai) Co., Ltd.	Electronic Equipment, Instruments & Components	China	●		102
UPL Limited	Chemicals	India			90
UPM-Kymmene Oyj	Paper & Forest Products	Finland	●		126
Vakrangee Limited	IT Services	India	●		116
Valeo SE	Auto Components	France	●		82
Valmet Oyj	Machinery and Electrical Equipment	Finland	●		119
Vanguard International Semiconductor Corporation	Semiconductors & Semiconductor Equipment	Taiwan			134
Vedanta Limited	Metals & Mining	India			121
Ventas, Inc.	Real Estate	United States			133
Veolia Environnement S.A.	Multi and Water Utilities	France	●		122
Vermilion Energy Inc.	Oil & Gas Upstream & Integrated	Canada			125
Vestas Wind Systems A/S	Machinery and Electrical Equipment	Denmark			119
VGI Public Company Limited	Media, Movies & Entertainment	Thailand			120
Vibra Energia S.A.	Retailing	Brazil			133
Vicinity Centres	Real Estate	Australia	●		130
Viña Concha y Toro S.A.	Beverages	Chile			86
Visa Inc.	IT Services	United States			116
VMware, Inc.	Software	United States			135
Volvo Car AB (publ.)	Automobiles	Sweden	●		83
Vonovia SE	Real Estate	Germany			130
Voya Financial, Inc.	Diversified Financial Services and Capital Markets	United States			99
W.W. Grainger, Inc.	Trading Companies & Distributors	United States			140
Warehouses De Pauw NV	Real Estate	Belgium			130
Wärtsilä Oyj Abp	Machinery and Electrical Equipment	Finland			119
Waste Management, Inc.	Commercial Services & Supplies	United States	●		92
Welltower Inc.	Real Estate	United States			130
Wendel	Diversified Financial Services and Capital Markets	France			99
Wesfarmers Limited	Retailing	Australia			133
Westpac Banking Corporation	Banks	Australia			85
WestRock Company	Containers & Packaging	United States	●		97

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Company name	Industry	Location	S&P Global distinction	S&P Global industry mover	Page
WH Smith PLC	Retailing	United Kingdom			133
Whirlpool Corporation	Household Durables	United States			111
Wilmar International Limited	Food Products	Singapore			105
WIN Semiconductors Corp.	Semiconductors & Semiconductor Equipment	Taiwan			134
Wipro Limited	IT Services	India	●		116
Wistron Corporation	Computers & Peripherals and Office Electronics	Taiwan	●	●	94
Wistron NeWeb Corporation	Communications Equipment	Taiwan			93
Woodside Petroleum Ltd	Oil & Gas Upstream & Integrated	Australia	●		125
Woori Financial Group Inc.	Banks	Republic of Korea		●	84
Worldline SA	IT Services	France			116
WSP Global Inc.	Construction & Engineering	Canada		●	95
Yamaha Corporation	Leisure Equipment & Products and Consumer Electronics	Japan		●	117
Yamaha Motor Co., Ltd.	Automobiles	Japan			83
Yandex N.V.	Interactive Media, Services & Home Entertainment	Netherlands			115
Yapi ve Kredi Bankasi A.S.	Banks	Turkey			85
Yokogawa Electric Corporation	Electronic Equipment, Instruments & Components	Japan			102
YPF Sociedad Anónima	Oil & Gas Upstream & Integrated	Argentina			125
Yuanta Financial Holding Co., Ltd	Diversified Financial Services and Capital Markets	Taiwan	●		99
Yum China Holdings, Inc.	Restaurants & Leisure Facilities	China	●		132
Yum! Brands, Inc.	Restaurants & Leisure Facilities	United States			132
Z Holdings Corporation	Interactive Media, Services & Home Entertainment	Japan			115
Zurich Insurance Group AG	Insurance	Switzerland	●		116

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## The S&P Global Corporate Sustainability Assessment

The Corporate Sustainability Assessment (CSA) is a comprehensive annual evaluation of companies' sustainability practices and performance, with a total coverage of over 11,000 of the world's largest companies. The CSA is one of the longest standing ESG rating methodologies worldwide, dating back to 1999. It assesses companies on the basis of 80–120 industry-specific questions across 61 industries.

Over the years, participation rates in the S&P Global Corporate Sustainability Assessment have continuously risen – with a record number of over 2,100 companies taking part in this year's assessment – representing over 45% of global market capitalization relative to the S&P Global Broad Market Index. Companies that do not actively participate are assessed based on publicly available information.

In SustainAbility's Rate the Raters 2019 report, companies rated the CSA as the most useful ESG assessment thanks to its high level of transparency, its sector-specific view of material ESG issues, and its forward-looking incorporation of emerging sustainability risks and opportunities. In the 2020 report, which looked at the investor perspective, the CSA came out top among the highest-quality ratings and was cited as a "strong signal of sustainability." The CSA focuses on financially material economic, environmental, and social factors that are relevant to companies' success, but that are under-researched in conventional financial analysis. Every year, the CSA undergoes rigorous methodological review to ensure that both the most current and emerging material sustainability topics are reflected. This challenges companies to report on topics of interest to investors that often lack disclosure today.

As of January 2020, the CSA is issued by S&P Global, where it forms the foundation of company ESG disclosure to S&P Global for financially material ESG factors and will underpin the ESG research across our different divisions (S&P Global Ratings, S&P Dow Jones Indices and S&P Global Market Intelligence). For over 20 years the results of the CSA have been used for the annual rebalancing of the iconic Dow Jones Sustainability Indices (DJSI). CSA scores are used in numerous other S&P Dow Jones indices including the S&P 500 ESG.

S&P Global ESG Scores are made available to the global financial markets via S&P Global Market Intelligence platforms, robustly linked to financial and industry data, research and news, providing integral ESG intelligence to make business and financial decisions with conviction.

Companies' data and benchmarks from the CSA can now feed seamlessly into the analysis for S&P Global Ratings ESG Evaluation should companies want a forward-looking long-term opinion of their ability to handle future risk and opportunities.

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