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Net-Zero Alignment:

Engaging on Climate Change

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Contents

Executive summary

This is the fourth paper in our net-zero investment framework series. In the previous three papers, we looked at:

1. Setting objectives and deciding on strategic approaches for net-zero portfolios (Giese, Nagy and Cote 2021);
2. Constructing net-zero portfolios (Cano and Katiyar 2021); and
3. Managing risk in net-zero portfolios (Szikszai, Sze and Verbraken 2022).

A common thread through each of these papers is that **engagement, in tandem with capital allocation, is a key lever for institutional investors who wish to pursue net-zero targets**. This paper is intended to provide investors with a practical and comprehensive overview of how to integrate engagement into a net-zero investment strategy.

This paper expands on net-zero engagement by discussing four key concepts:

- **Prioritization**: In section 1, we show how investors may wish to prioritize companies in their portfolios for net-zero engagement. We do so by creating a model engagement focus group based on companies' financed emissions.
- **Evaluation**: Section 2 discusses methods to evaluate net-zero performance, while section 3 describes how investors can assess effective climate governance practices. Together, these sections show how investors can identify net-zero leaders and laggards within a portfolio.
- **Tactics and Strategy:** Section 4 describes the engagement mechanisms available to investors and how investors can escalate their engagement efforts in response to company behavior. Section 5 discusses how investors can scale up to "beta engagement," including through collaborative engagement and policy engagement.
- **Application:** Section 6 shows how corporate governance may impact the effectiveness of climate engagement efforts. Section 7 returns to the hypothetical focus group we design in section 1 to show the governance-driven challenges and opportunities investors could face if they were to engage with these companies on net-zero alignment.

1 Prioritizing net-zero engagement targets

1.1 Net-zero investing frameworks

For many investors, the core net-zero investment objective may not be only to decarbonize their portfolios in alignment with their investment strategies and manage financial outcomes, but to reduce emissions in the real world in an effort to mitigate the effects of climate change. This presents investors with a challenge when constructing portfolios: how to ensure alignment with the joint objectives of balancing financial risk and return, reaching their own net-zero targets while driving a low carbon transition in the real economy? Reallocating capital is one option — we have already found evidence that the cost of equity has risen for more carbon-intensive companies compared to less-intensive companies (Giese et al 2021). But investors have — and likely need — other levers as well, in particular engaging with companies to change their climate-related disclosures, commitments, or investment strategies.

It is worth re-emphasizing that reorienting the economy to reach net-zero emissions is not expected to be a simple task. Many companies, especially those in high-emitting sectors such as energy, utilities or materials, may require a complete re-orientation of operations, products, and supply chains. Using a time horizon of 2050 has become commonplace, yet many of these operational and strategic changes would likely need to begin much earlier than 2050 to stay within greenhouse gas (GHG) emissions budgets aligned with 1.5 - 2°C of global mean temperature rise. To remain aligned with net-zero by 2050, the world will need to reduce CO_2 emissions by half by 2030 (IPCC 2022). To put this reduction in perspective, global GHG emissions increased every year in the past decade, except for 2020, and the change in emissions from 2018 to 2019 represented the sharpest year-on-year acceleration of emissions in this period.

There is a growing network of standards and frameworks related to net-zero investing, including the Glasgow Financial Alliance for Net-Zero (GFANZ), the UN Race to Zero alliances (e.g., Net Zero Asset Owner Alliance — NZAOA, Net Zero Asset Managers Initiative — NZAM), the Paris Aligned Investment Initiative (from the Institutional Investors Group on Climate Change — IIGCC), Science-Based Targets initiative (SBTi), and Climate Action 100+. These initiatives interact and overlap: The target-setting protocol of the Net Zero Asset Managers Initiative suggests using an approach from IIGCC, SBTi, or NZAOA (Net Zero Asset Managers Initiative 2022). Navigating the specifics of these initiatives is beyond the scope of this paper, however, they share common goals and objectives: **identifying companies that contribute substantially to GHG emissions, assessing whether they align with a net-**

zero pathway, and engaging with those companies to improve that alignment where possible.

In the remainder of the first part of this paper we provide an example of how an investor might select engagement targets and evaluate their disclosure, emissions performance, and net-zero plans in the context of a hypothetical portfolio.[1]

1.2 Identifying net-zero engagement targets

Engagement can serve as a lever to help investors reach their portfolio-level net-zero targets. GFANZ, among others, recommends that investors measure decarbonization through realized emissions: in other words, real emission reductions from portfolio companies are what matters (GFANZ 2022). For this reason, the focus of engagement in this paper — from identifying engagement targets to evaluating progress — is on GHG emissions and company capacity and strategy to reduce them over time. Adjacent potential engagement objectives, including other environmental goals, are therefore outside the scope of this paper.

The Net Zero Asset Owner Alliance suggests that asset owners engage with companies that represent either 65% of their total "owned" emissions or the 20 companies that represent the largest part of their emissions footprint (NZAOA 2022).

There are many potential approaches to quantify the GHG emissions of a portfolio, including emissions per unit invested, emissions per unit of output, total emissions, carbon intensity, weighted average carbon intensity, and financed emissions (Frankel, Shakdwipee and Nishikawa 2015, PCAF 2020). For the purposes of engagement, **financed emissions** may be a useful starting point, as it takes into account a company's emissions (divided by enterprise value including cash – EVIC – to account for company size) as well as the amount of the total company's value owned in the portfolio.[2] This ownership share could indicate the investor's relative influence at the company as well as the investor's responsibility for that company's emissions.

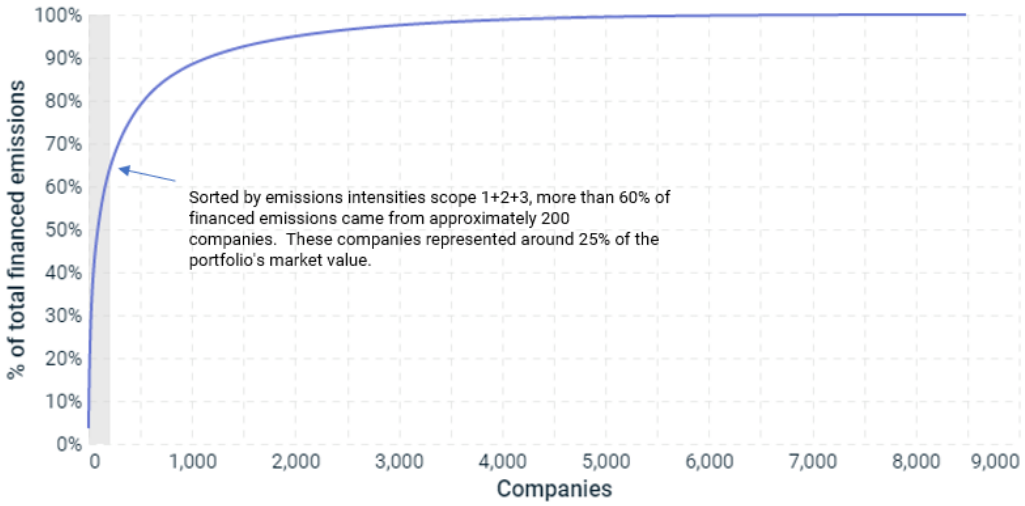
In our hypothetical portfolio of 9,182 market-cap weighted equities, the two options suggested by the NZAOA yielded quite different results. The 20 companies with the largest financed emissions made up just over 27% of the hypothetical portfolio's

[1] The hypothetical portfolio used for this analysis was based on the constituents of the MSCI ACWI Investable Market Index (IMI) as of June 30, 2022, and the stocks were given weights proportional to their weight in the MSCI ACWI IMI as of that date.

[2] Tonnes of CO2 equivalent emitted by the company times the investment as a share of the company's total enterprise value including cash. (tCO2e * USD invested/EVIC)

total financed emissions, while 216 companies represented 65% of the hypothetical portfolio's financed emissions.

Exhibit 1: Cumulative financed emissions in a hypothetical portfolio

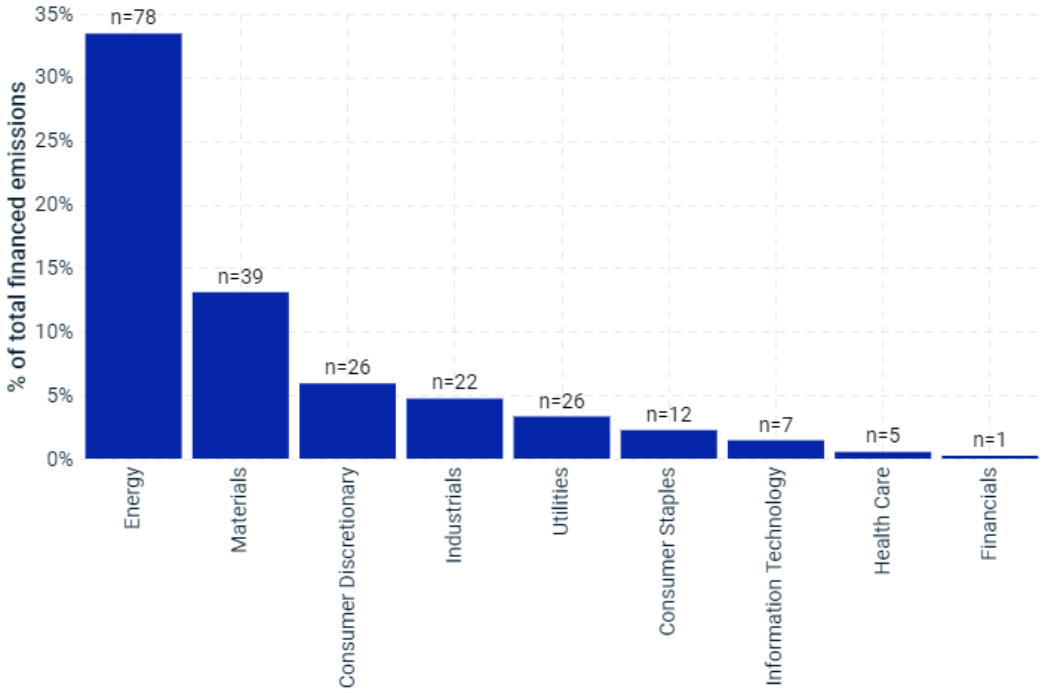


Note: Chart data excluded 681 companies of 9,182 total constituents for which current EVIC or other required data were not available. Source: MSCI ESG Research LLC, as of August 2022.

Of the 216 companies that comprised 65% of financed emissions of the hypothetical portfolio, perhaps unsurprisingly, 143 (66%) were concentrated among the three most emission-intensive sectors: energy (n=78), materials (n=39) and consumer discretionary (n=26). Of the 11 Global Industry Classification Standard (GICS®)[3] sectors, only communication services and real estate were not represented.

[3] GICS is the global industry classification standard jointly developed by MSCI and S&P Global Market Intelligence.

Exhibit 2: Contribution to financed emissions by sector

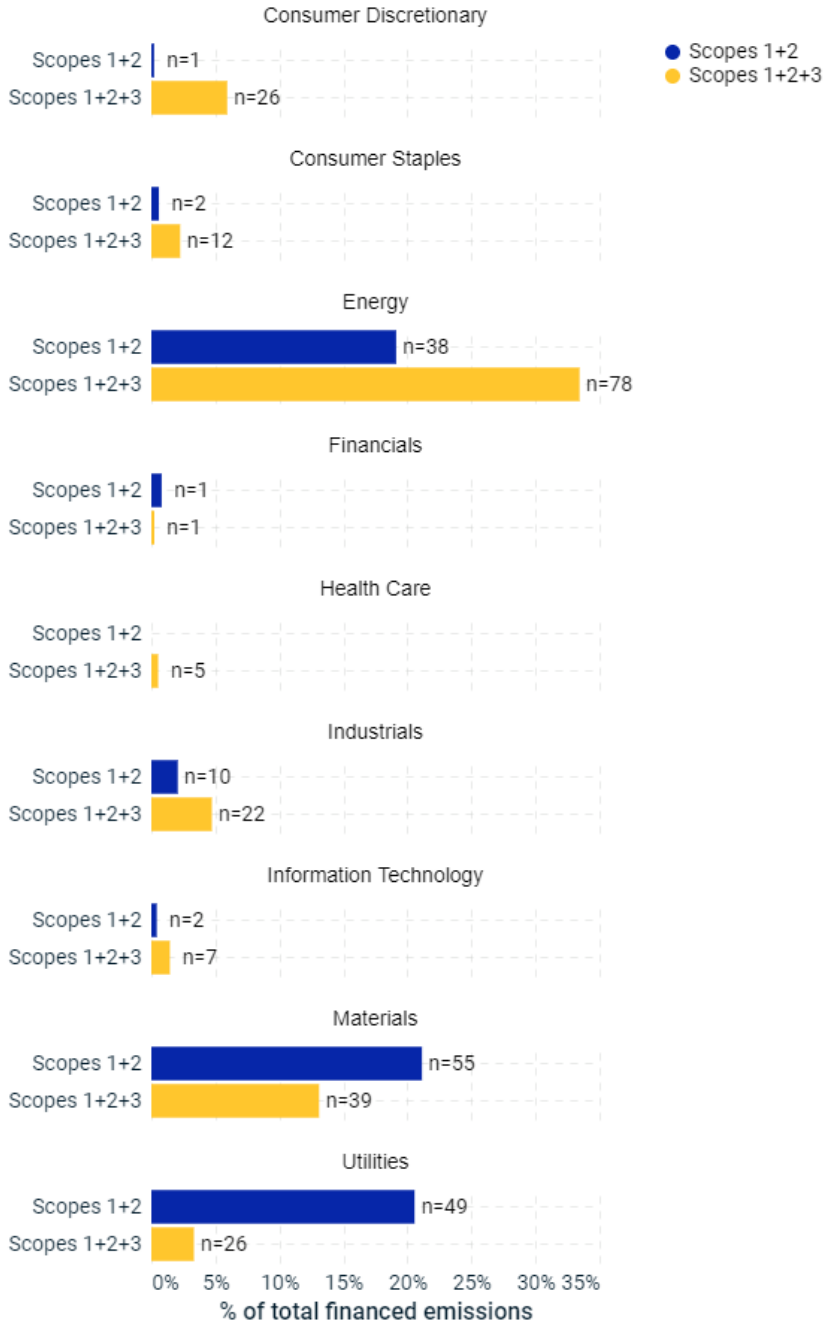


Source: MSCI ESG Research as of August 2022.

Our calculation of financed emissions included all three emission scopes of the GHG Protocol.[4] Including value-chain emissions (Scope 3) significantly influenced the results of which sectors and companies were included in the list of focus companies. We found that including only Scopes 1 and 2 would have shifted the sectoral balance much more toward utilities and materials, away from consumer discretionary, energy and industrials (see Exhibit 3).

[4] Scope 3 data used in this paper are from MSCI ESG Research's Scope 3 Estimation model, and Scope 1 and 2 data, when not disclosed by companies, were estimated by MSCI ESG Research's Scope 1 and 2 carbon emissions estimation model.

Exhibit 3: Sector breakdown of companies contributing to 65% of financed emissions of a hypothetical portfolio replicating the constituents and weights of the MSCI ACWI IMI, with and without Scope 3



Source: MSCI ESG Research as of August 2022.

Such trade-offs are inevitable. But because the goal for many investors is to engage with high emitters, to ultimately reduce emissions and meet portfolio-emission reduction level targets, we would suggest that one option is not necessarily superior to another. Both approaches are ways of generating focus lists of potential engagement targets, and in both cases the resulting lists may be longer (in this example, 158 when considering Scopes 1 and 2 and 216 companies when considering all three scopes) than an investor may perhaps be able to meaningfully engage with in the course of a year.

Instead, the lists should be seen as starting points, taken into consideration along with the time and resources an investor is able to devote to engagement. In general, it may be helpful to look at the companies across a number of other criteria to see whether engagement around net-zero alignment may be more effective in certain cases — e.g., the company is widely-held rather than controlled (see section 7: "Engagement in practice," including Exhibit 22), there is a long-standing relationship between the company and investor, or the engagement target dovetails with other investment priorities.

For the purposes of the next section, we will use the 216 companies that make up 65% of Scope 1, 2 and 3 financed emissions as a hypothetical focus list for engagement on net-zero alignment.

2 Evaluating net-zero alignment

Assessing whether a company is net-zero aligned can take different forms. For the purposes of engagement, investors may opt, as a starting point, to evaluate companies on metrics that are transparent and commonly understood, and over which the company has some control.

Put simply, at a minimum, assessing whether a company is net-zero aligned requires:

- an understanding of the company's current emissions (e.g., what they are today, how they have changed over time, how they compare to sector peers), and
- knowing whether, how, by when and by how much the company plans to reduce its GHG emissions in the future.

We also show an alternative, more robust engagement framework, following the same principles, below.

Exhibit 4: Potential net-zero engagement framework and metrics

GHG emissions disclosure			Emissions performance		Climate targets				Net-zero alignment		Climate solutions	
Scope 1	Scope 2	Scope 3	3-year change	Relative to peers	% of footprint covered	Annual decarb. rate	SBTi status	Short-, medium- and long-term targets	Pathway alignment	Implied temperature rise	Low carbon patent score	Green revenues

Source: MSCI ESG Research as of August 2022.

2.1 Current GHG emissions

Has a company disclosed its emissions, including its value-chain emissions? Without this information, an investor is quickly in the dark. Models that estimate GHG emissions, including those by MSCI ESG Research, are useful but often second-best to emissions data directly disclosed by the company itself. In addition to being necessary to evaluate historical emissions performance (against peers and for the company over time), current GHG emissions form a baseline for future emission reduction plans. Therefore, whether a company has disclosed its GHG emissions forms a potential starting point for engagement.

Among the 216 companies in our focus list, 20% of companies (44) did not disclose Scopes 1 and 2 emissions consecutively from 2018-2020.[5] More than half (23) were in the energy sector.

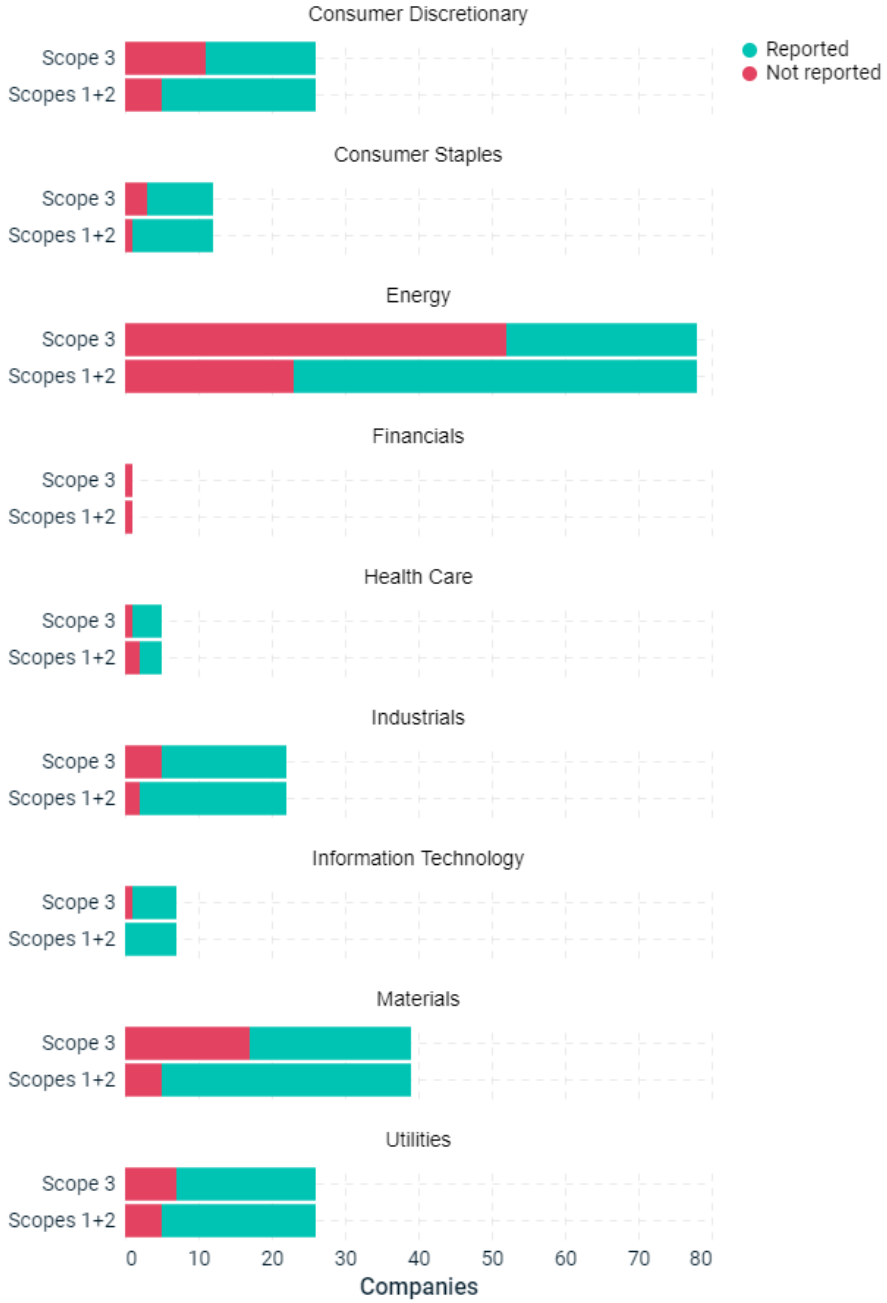
Fewer companies disclosed Scope 3 emissions throughout the same three-year period: 45% of companies (98) did not report any Scope 3 emissions. Of companies that did report any Scope 3 emissions, it is possible that they reported only a portion of their emissions: we compared MSCI ESG Research's estimates for company-level Scope 3 emissions, modeled by individual GHG Protocol category, and found that on a median basis among companies in the hypothetical engagement focus list, disclosures of GHG emissions were much lower than modeled. This was especially true for companies in the consumer discretionary, health care, and IT sectors, which disclosed between 0% and 50% of estimated Scope 3 emissions. Our model under-

[5] Data is collected once per year from most recent corporate sources, including annual reports, corporate social responsibility reports or websites. In addition, MSCI ESG Research uses the carbon emissions data reported through CDP (formerly the Carbon Disclosure Project) or government databases when reported data is not available through direct corporate disclosure.

estimated Scope 3 emissions compared to those disclosed by companies in the consumer staples sector; i.e., those companies disclosed more value-chain emissions than we would expect to see based on GHG protocol Scope 3 category-level estimates.

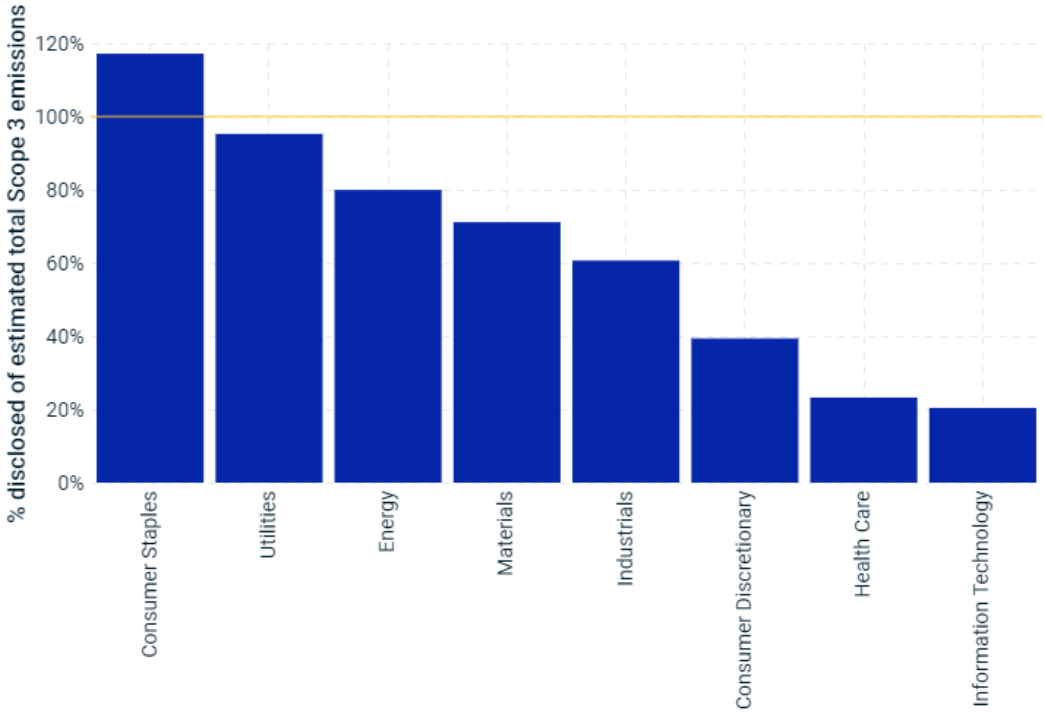
Engaging with companies on their GHG emissions disclosures forms a potential starting point (see Exhibit 5). There are widely accepted GHG accounting frameworks (e.g., the GHG Protocol and Partnership for Carbon Accounting Financials, PCAF) and accurate, agreed-upon data form a strong basis for all other emissions-related analysis.

Exhibit 5: Number of companies that disclosed GHG emissions



Source: MSCI ESG Research as of August 2022.

Exhibit 6: Scope 3 emissions disclosure levels compared to estimates by sector

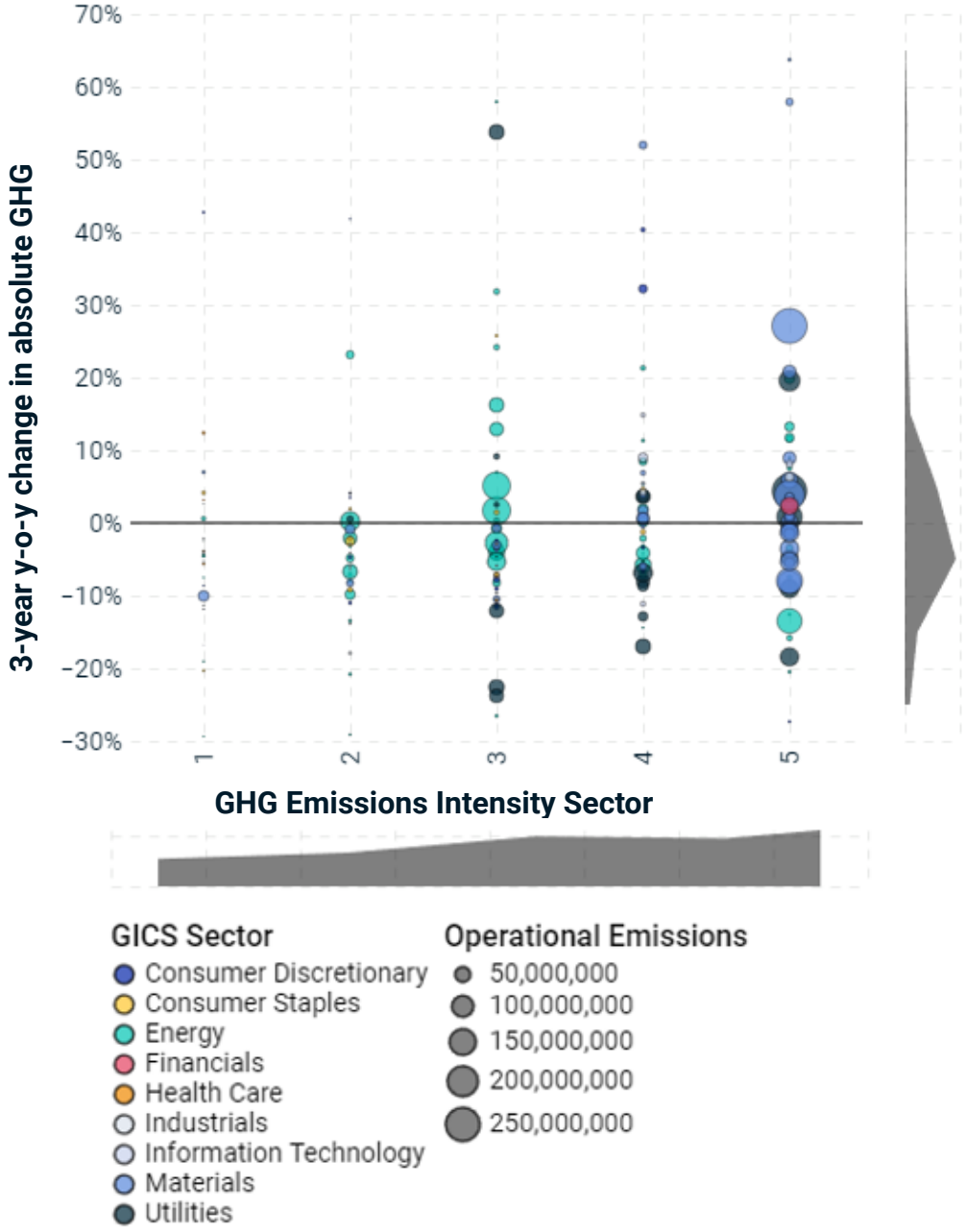


Source: MSCI ESG Research as of August 2022.

2.2 Emissions performance

Disclosure of emissions data is critical but only a starting point. Equipped with emissions data, investors can assess how a company's emissions have changed over time and how they compare to peers, for example. As an example of one approach to assessing GHG emissions performance, in the exhibit below we show a three-year change in Scope 1 and 2 emissions for a company as well as how the company compared to sector peers among constituents of the MSCI ACWI IMI in terms of emissions intensity. 55 of the 216 companies in the hypothetical engagement focus list, as seen in the marginal distribution plots, are in the most emissions-intensive quintile (5); of these, 24 reduced Scope 1 and 2 emissions each year from 2018 to 2020, on average. In other words, many of the companies that contributed most to the hypothetical portfolio's financed emissions are also, perhaps unsurprisingly, among the most emissions-intensive compared to sector peers. This skewed distribution is especially notable for materials sector companies on the focus list.

Exhibit 7: GHG emissions performance



Note: Includes companies in the hypothetical portfolio focus list. The point size is proportional to a company's total Scope 1+2+3 emissions in FY 2020 to provide a comparison of emissions intensity with total emissions. Source: MSCI ESG Research as of August 2022.

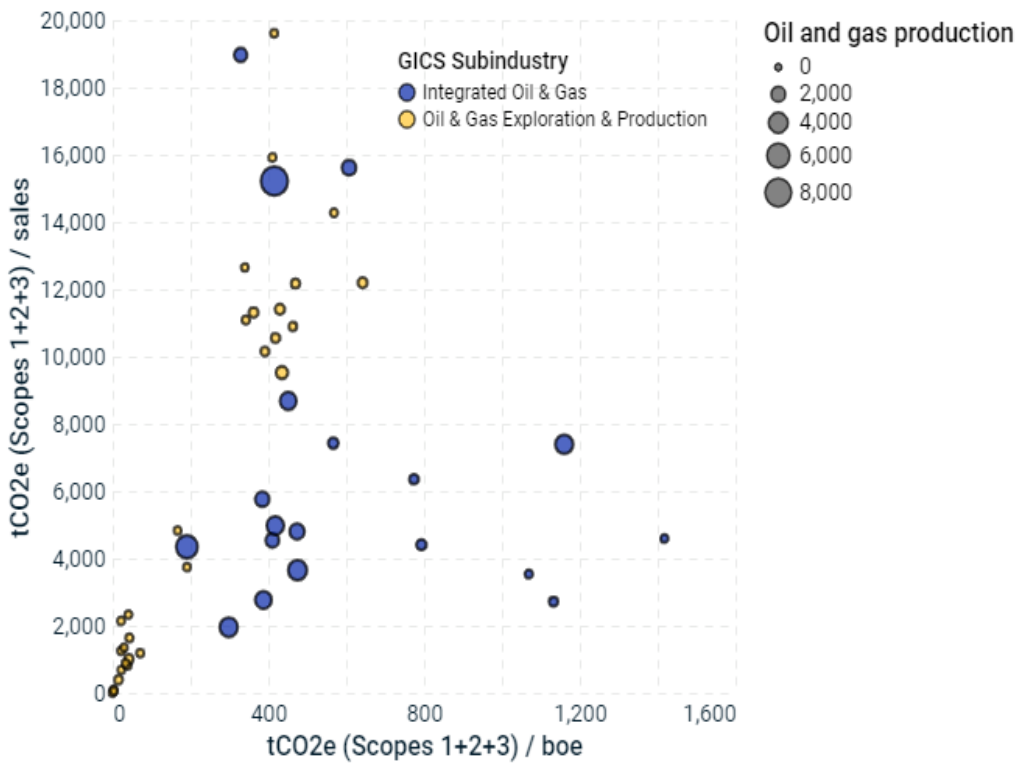
We compared companies across a range of emissions-related metrics because no single metric fully explains a company's emissions performance. For example, a change in absolute emissions over time could be led by growth of production of low-carbon products (such as wind turbines), while a change in sales-denominated emissions intensity could be driven by price increases rather than emissions reductions.

There are other options for intensity calculations. In particular, physical- or production-denominated intensities. For example, tons of CO2 equivalent divided by tons of steel, cement, or barrels of oil may produce a more like-for-like comparison within sectors.

Example intensity calculation tradeoffs: Oil and gas industry

Exhibit 8 below compares constituents of the MSCI ACWI IMI in the integrated oil and gas and oil and gas exploration and production GICS subindustries across sales-denominated and barrels-of-oil-equivalent (boe)-denominated GHG emissions intensities. There are trade-offs in the comparison. Sales-denominated intensities fluctuate with the price of oil (a temporal dimension is not shown here): an increase from USD 50 to USD 110, for example, would translate to a reduction in emissions-intensity, all else equal, without any real-world efficiency improvements. The accuracy of production-denominated metrics in reflecting a company's emissions performance depends on the diversification of the company. In the chart below, the emissions from the refining segment of integrated oil and gas companies are not reflected in the denominator, increasing the boe-based emissions intensity. Even comparing integrated oil and gas companies might require a more detailed metric and availability of more detailed (and often sensitive) data. For example, Shell PLC's "net carbon footprint" methodology shows the complexity of such calculations: it takes into account lifecycle emissions of energy products, with a separate methodology for each, but excludes products not for energy-consumption, such as chemicals (Shell 2020). There may be a tradeoff between accuracy and comparability.

Exhibit 8: Production- and sales-denominated GHG emissions intensities for oil and gas companies



Source: MSCI ESG Research as of August 2022.

The complexities and potential advantages of physical intensities notwithstanding, sales-based (and EVIC-based) intensities allow for comparison across industries and sectors. Although they may fluctuate over time, many companies within an industry may fluctuate together, allowing for temporal comparisons.

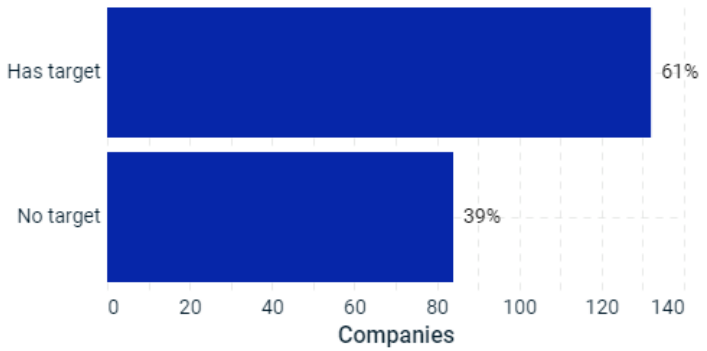
When engaging with a company, it is possible to only point out how emissions have changed over time, how emissions-intensive its operations are, or how high its supply chain emissions are compared to peers relative to company size, for example. But a detailed understanding of *why* a company is emissions-intensive and from which operations those emissions stem may lead to a more realistic assessment of the company's ability to reduce its emissions and, therefore, a fuller engagement.

It is likely that the next step of any investor-company dialogue would be to discuss how a company plans to change its emissions over time. Next, we turn to how an investor may understand and assess company's climate targets or plans to reduce emissions over time.

2.3 Climate targets

At the heart of the Paris Agreement was a decision for countries to reduce their emissions in line with a pathway that reduces global GHG emissions to keep global mean temperature rise well below 2°C. As a complement to these national plans (Nationally Determined Contributions), thousands of companies have set their own targets, pledging to reduce their own emissions over time. The chart below (Exhibit 9) shows that, of companies in the engagement focus list generated from our hypothetical portfolio, 61% had an emissions reduction target.[6]

Exhibit 9: Company has GHG emissions reduction target



Source: MSCI ESG Research as of August 2022.

Standardizing these emission reduction plans so that they can be aggregated, compared, and engaged over can prove challenging. While "net-zero" has emerged as an important (and increasingly common) goal to signify alignment with the Paris Agreement, there remain important distinctions among these plans (Watanabe 2021). Institutional investors, among others, may look for additional assurances that a net-zero target will ensure a company will actually reach net-zero emissions, keeping within their budget.

The target setting rules of the Science-based Targets initiative (SBTi) have emerged as a key standard for vetting the credibility of net-zero targets. Approval of a target's

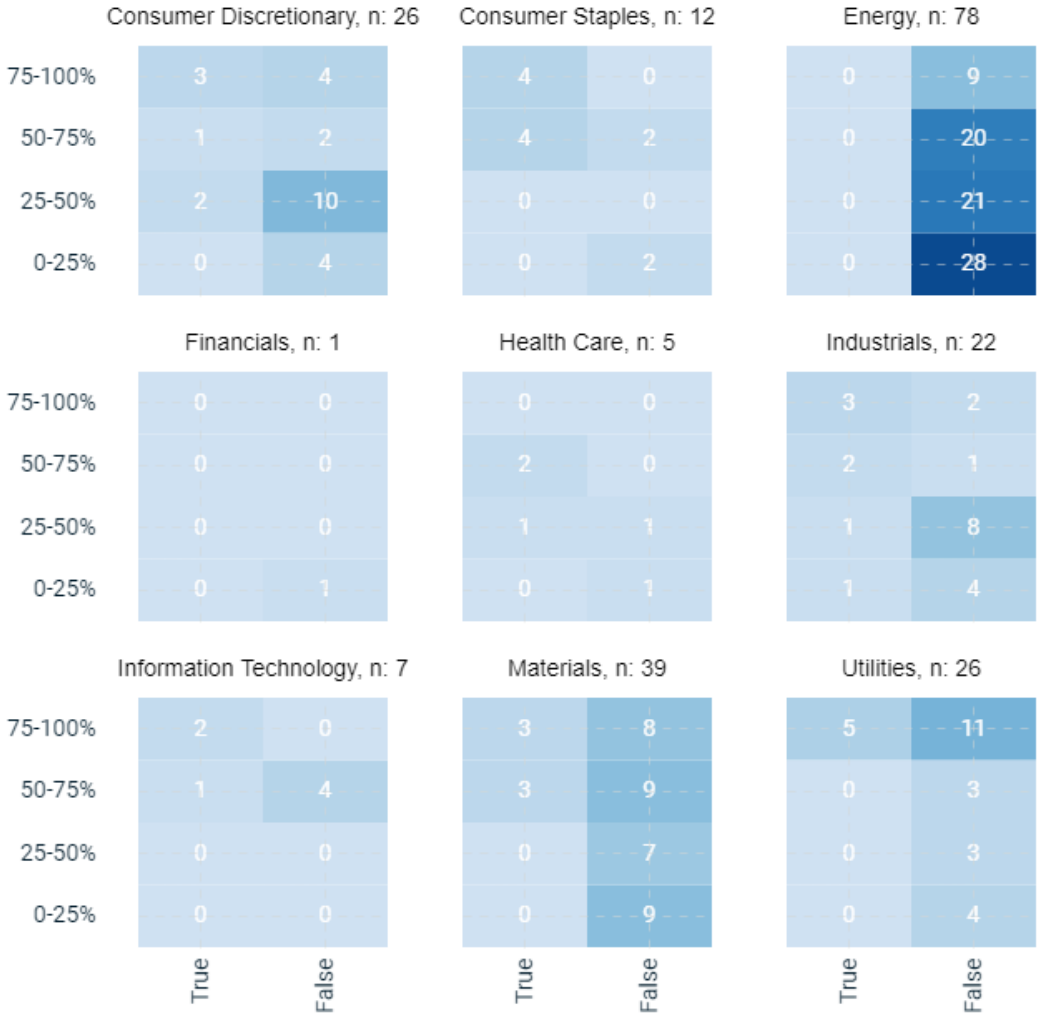
[6] We defined "having an emissions target" as having a comprehensiveness greater than 0 using the MSCI ESG Research Target Scorecard methodology.

alignment with SBTi's net-zero standard carries weight: the standard is stringent, requiring detailed plans, interim milestones, at least a 90-95% reduction in emissions, and a limited amount of carbon removals through technological means only (SBTi 2021), among other requirements. Given the detailed nature of the approval process, even committing to the SBTi process conveys a level of seriousness from the company. For that reason, as well as its simplicity, checking whether a company's emission reduction plans have been approved or are in line to be considered by SBTi is a potential step to prepare for engagement with a company. Have the company's targets received SBTi approval? Does it plan to seek it?

There are other analytical frameworks through which an investor may assess company climate targets. For example, MSCI ESG Research has developed a methodology that looks at a carbon target's **comprehensiveness** (i.e., how much of the company's total GHG emissions footprint is covered), **ambition** (i.e., how much the company would have to reduce emissions per year to reach the target) and **feasibility** (i.e., how realistic the target is for the company to achieve) (Watanabe and Panagiotopoulos 2021).

For the 216 companies in the hypothetical engagement focus list, we compared the binary indicator of whether a company has received or applied for SBTi approval for any of its targets with the comprehensiveness of its targets, as evaluated by MSCI ESG Research. We found that the juxtaposition helped introduce nuance into the assessment. For example, six out of 39 companies in the materials sector had received SBTi approval or had committed to apply for it. Eight companies had not disclosed an intention to apply for SBTi approval but had targets that covered more than 75% of their total footprint. This would lead us to ask whether the targets were not ambitious enough (i.e., covered most of the footprint but would require only slight reduction in emissions per year) or whether the companies simply did not plan to try to align with SBTi? Going further beyond the binary check may reveal other useful insights.

Exhibit 10: Targets' coverage of emissions footprint vs targets' SBTi status



Note: True denotes that a company has an SBTi approved target or has committed to apply for such approval. False denotes that neither is true. Source: MSCI ESG Research as of August 2022.

Another criteria that an investor may choose to look at to assess climate targets is whether a company has set interim targets in addition to long-term targets (2031-2050). Interim targets that lay out goals for 2025 and 2030 as well as 2050, for example, may enhance transparency, monitoring and accountability. Their presence (and quality) can also help shape investor-company engagements.

We found that the 216 hypothetical engagement focus list companies making up 65% of financed emissions in the MSCI ACWI IMI were much more likely to have targets across each term – short, medium and long -- than all constituents of the

MSCI ACWI IMI. These results held at the sector level as well, except in the case where there were few companies per sector (e.g., consumer discretionary or financials). This suggests that understanding the quality and scope of the targets, as well as their credibility, along with measuring progress over time, may be more important for evaluating the emissions trajectories of this group of companies than the simple presence of any targets.

Exhibit 11: Prevalence of emission reduction targets by time horizon

	Short term (2022-2025)	Medium term (2026-2030)	Long term (2031-2050)	In each time horizon
Hypothetical engagement focus list (n=216)	51.6%	68.6%	63.8%	29.1%
MSCI ACWI IMI (n=9,182)	18.3%	21.8%	15.1%	4.9%

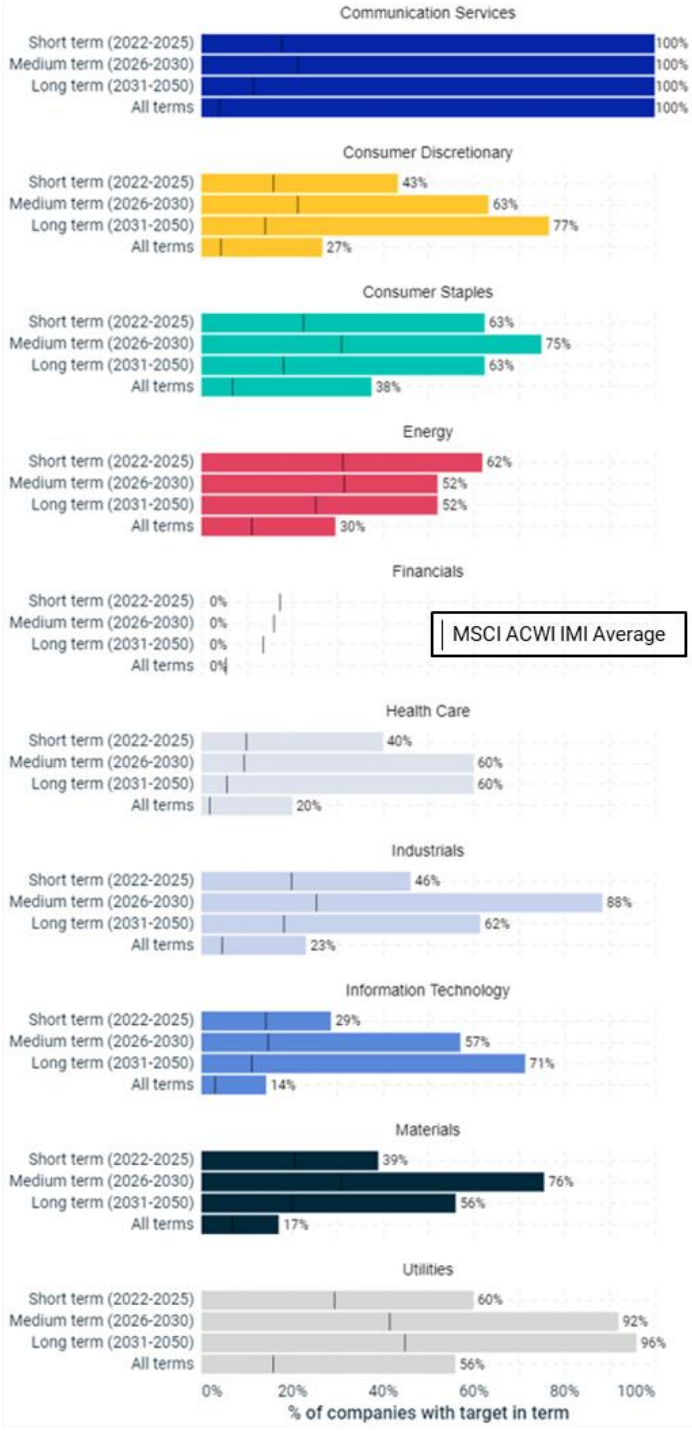
Source: MSCI ESG Research as of February 2023.

An examination of distributions of targets across each time horizon by sector suggested (not surprisingly) that sectors are planning differently for the future, with some more focused on short - term developments (which may be less ambitious) while others are focused on the long - term (which may be short on details).

For example, of companies in the hypothetical engagement focus list:

- 30% of energy companies included in the engagement set had an emissions reduction target in the short-, medium- and long-term time horizons; more companies had short-term targets (62%) than long-term targets (52%).
- On average, utilities were more likely to have targets across all time horizons (56%) compared with other sectors.
- Most internet technology companies had long-term targets (71%) but fewer had short-term targets (29%).

Exhibit 12: Climate targets categorized by end-year



Source: MSCI ESG Research as of February 2023.

2.4 Metrics to assess net-zero alignment

So far, we have conceived of identifying companies and topics for net-zero engagement from the bottom up, with a specific focus on reducing GHG emissions. First, we looked at emissions disclosures as an initial step. Next, we discussed different approaches to assessing current GHG emissions performance, including self-relative (across time) and peer-relative (within sector) performance across a variety of metrics. Third, we looked at ways of assessing climate targets.

Each of these points on its own is an important building block for assessing a company's net-zero alignment, and could be useful, discrete engagement topics. But on their own, they do not show whether a company is net-zero aligned.

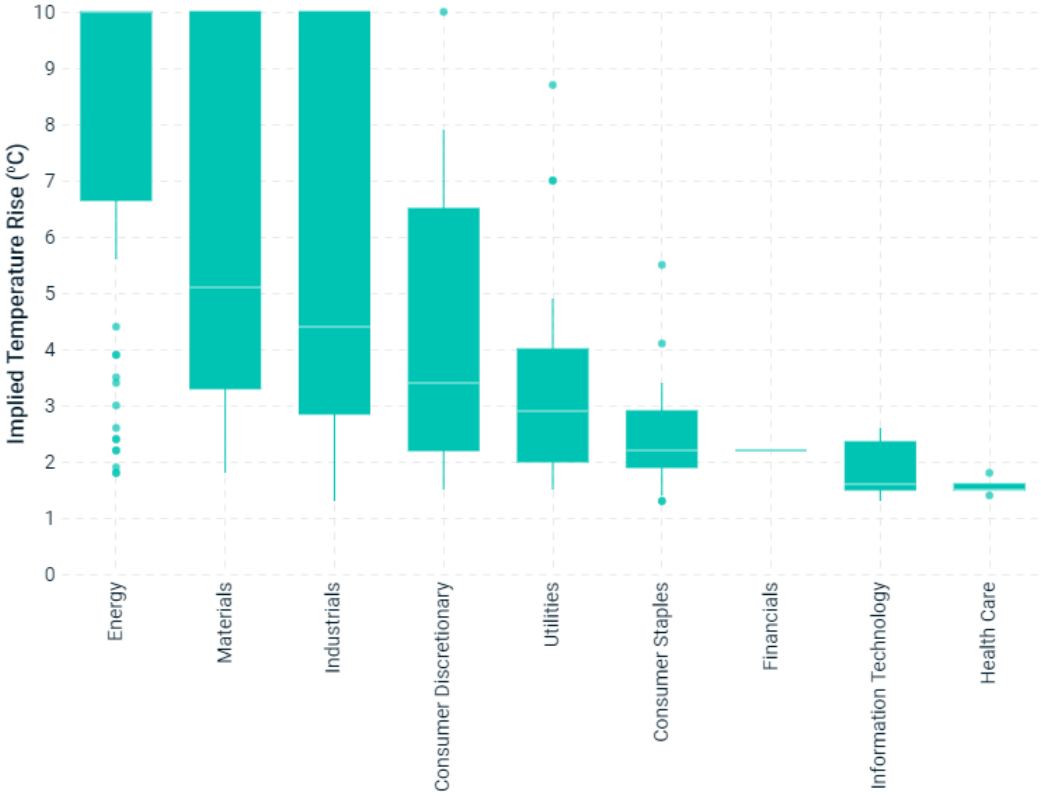
To assess net-zero alignment, a company's current GHG emissions profile and future emissions must be measured against an emissions budget.[7]

MSCI ESG Research developed the Implied Temperature Rise metric that allocates a global GHG emissions budget aligned with net-zero among companies in our climate change metrics coverage based on a company's sector and current revenue. The company alignment is determined based on the company's current and future emissions, as set out in emission reduction targets. The more a company's expected emissions pathway exceeds its total, cumulative emissions budget over time, the higher Implied Temperature Rise (in degrees Celsius) it aligns with. This metric, with inter-quartile ranges shown by sector below, can be compared on an absolute basis or within sector.

The effectiveness of a more complex metric such as Implied Temperature Rise for investor-company engagement may vary depending on joint understanding of the metric and its underlying assumptions. Along with other metrics and data, such as those discussed previously, it deepens the picture of whether a company is net-zero aligned.

[7] This is true at the portfolio level as well, as discussed in the first two papers of this net-zero alignment series, on strategy and portfolio construction.

Exhibit 13: Implied Temperature Rise of target companies by sector



Note: Stripe denotes median, boxes above and below show the inter-quartile range. Points show outliers. Source: MSCI ESG Research as of August 2022.

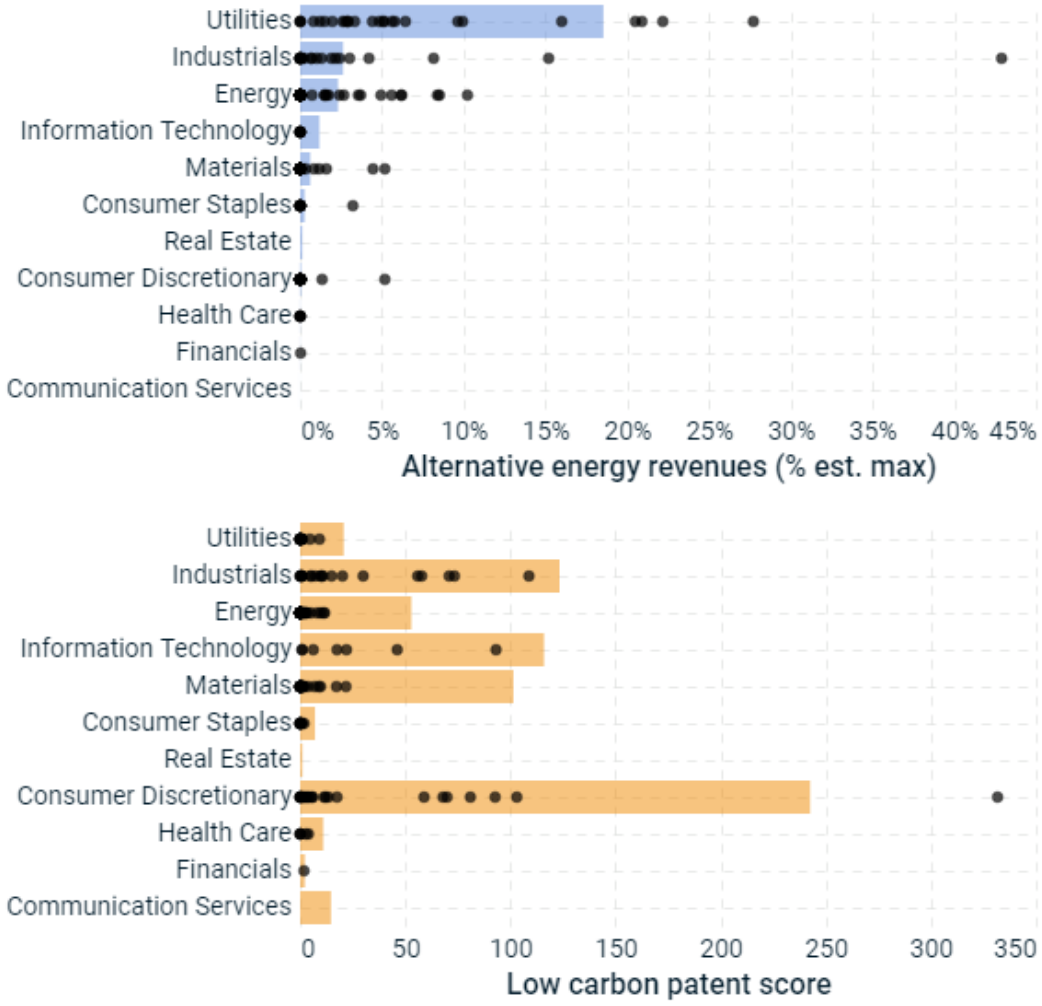
2.5 Climate solutions

Reductions in operational and value-chain emissions are generally made by increasing the efficiency of emissions-intensive processes or by substituting the source of energy, heat and steam used in the process away from fossil fuels toward lower- or zero-emission sources, such as wind, nuclear or green hydrogen. Low carbon technologies — or clean tech, technologies that help reduce emissions — are necessary to drive the net-zero transition.

Net-zero alignment is about reducing emissions compared to a pathway or carbon budget. But when engaging with companies, investors may wish to take into account the company's involvement in clean tech. For example, in preparation for a net-zero focused engagement with a diversified industrial manufacturer that makes wind turbines, an investor may benefit from an awareness of the scope of involvement in clean tech. What percentage of total company revenues come from wind and other clean tech products? Has this increased over time? If the involvement is in a more

nascent technology, an overview of the company's patents and research and development programs may be insightful as well. The exhibit below shows, for our hypothetical engagement focus list, company revenues from alternative energy sources as well as low carbon patent scores for the hypothetical engagement focus list compared to the MSCI ACWI IMI sector averages. The wide distribution of companies within sectors suggests these may be useful differentiating points for engagement.

Exhibit 14: Low carbon revenues and patents



Note: Company-level alternative energy revenues and low carbon patent scores (shown as points for companies in the hypothetical focus list) are provided by MSCI ESG Research. Bars show sector average among MSCI ACWI IMI constituents. Source: MSCI ESG Research as of August 2022.

In addition to GHG emissions performance and targets, investors may want to assess a company's climate-related decision making processes. The next section therefore discusses ways to evaluate a company's climate governance practices.

3 Evaluating climate governance

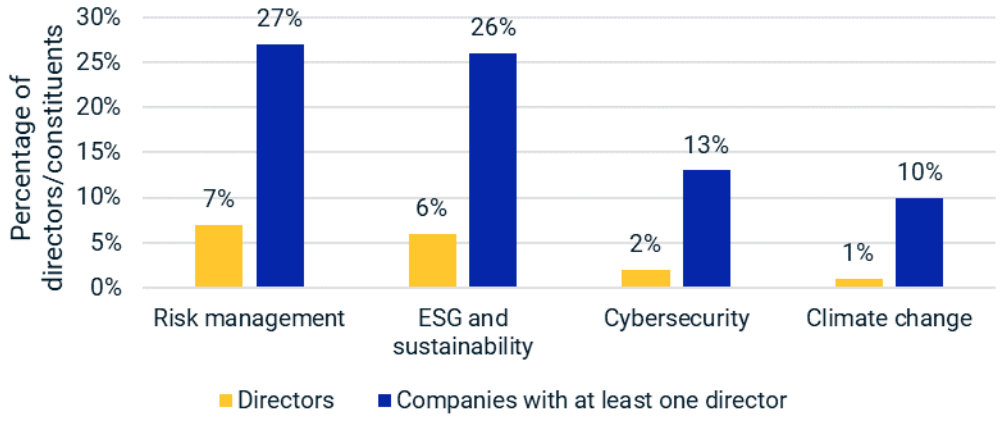
Corporate governance is the system by which companies are directed and controlled (Cadbury 1992). **Climate governance** is the subset of corporate governance concerned with stewarding companies through the climate crisis. It broadly encompasses the decisions boards and managers make in response to climate-related risks, opportunities and realities, and the governance structures that facilitate those decisions.

3.1 Climate governance in context

The governance of climate change has been singled out from corporate governance generally in recognition of the unique and severe challenges that it presents for directors and managers.

Climate change is a complex and systemic issue, and its impact on a given company's operations can vary significantly based on factors such as industry and geography. For many companies, its most significant implications will not be apparent in the near term. Climate change must compete for board and executive attention against other strategic priorities (e.g., business model disruption, cybersecurity, COVID-19), many of which may be more familiar to business leaders, and which may have financial impacts on the company within shorter time horizons (WEF 2019). When boards do focus on climate change, many directors are uncertain about the extent to which their fiduciary duties empower or restrict them in reducing GHG emissions and addressing other climate-related risks and opportunities, particularly when those actions may negatively impact short-term profitability (OECD 2022). In a recent survey of U.S. directors, only 9% stated that climate change was a top priority for their company, while twice as many (19%) stated that climate change was not a concern for their company (Alderman 2022). As suggested by Exhibit 15 below, many boards may lack directors with strong knowledge and expertise related to climate change.

Exhibit 15: Expertise-related keywords in director biographies, MSCI ACWI Index



Based on a keyword search of terms relating to risk management, ESG, sustainability, cybersecurity and climate change/net-zero alignment within director biographies published in proxy circulars. Comprises constituents of the MSCI ACWI Index (n=2,806 companies) and their directors (n=23,814 directors) as of Aug. 31, 2022. Source: MSCI ESG Research

Effective climate governance means overcoming these obstacles to ensure that directors and managers respond to the climate crisis in a timely and appropriate fashion.

3.2 Measuring effective climate governance

The ultimate measure of effective climate governance will be the extent to which companies manage their climate-related risks and opportunities. For many companies, this process will occur over years or decades, but investors today require near- and mid-term measures of climate governance to assess effectiveness, identify leaders and laggards, and prioritize engagement activities.

For boards that are new to the concepts underlying climate governance, an important engagement objective may be to establish a baseline consensus that the board is accountable for the company's climate performance and that effective climate governance is a fundamental investor expectation. Once directors have met this baseline, a key resource for directors may be the World Economic Forum's (WEF) Climate Governance Principles and Guiding Questions.

The WEF principles may be summarized as:

1. **Accountability**: the board is ultimately accountable to shareholders for the long-term stewardship of the company through the climate crisis.

2. **Subject command**: the board should collectively possess the skills and expertise necessary to oversee climate-related risks and opportunities.
3. **Board structure**: the board should determine the most effective way to integrate climate oversight into its structure and committees.
4. **Materiality assessment**: the board should oversee materiality assessments of and proportionate responses to climate-related risks and opportunities.
5. **Strategic integration**: the board should systemically integrate climate into the company's strategic investment planning and decision-making processes.
6. **Incentivization**: the board should ensure that incentive pay is aligned with climate-related goals and indicators, where appropriate.
7. **Reporting and disclosure**: the board should consistently and transparently disclose important climate-related information to all stakeholders.
8. **Exchange**: the board should maintain regular dialogues on climate-related activities with peers, policy-makers, investors and other stakeholders.

In addition to benefiting boards, these WEF principles can serve as high-level metrics for investors to consider when assessing the effectiveness of climate governance practices.

Ceres (2022), a U.S. sustainability-focused investor network, has published guidance for investors to consider when engaging with companies on climate change. Many of these measurements synthesize climate governance factors with non-climate-specific corporate governance factors, including:

- Are the board's climate oversight bodies (e.g., the board; board committees with responsibility for climate oversight) independent of management?
- How does each individual director's skills and experience contribute to the board's overall climate competency?
- What is the attendance record of directors at meetings of the board and board committees with climate oversight responsibilities?
- How has the board responded to shareholder engagement on climate change (e.g., climate-related shareholder proposals, votes against directors related to climate concerns)?

By combining assessments of climate governance with climate performance measures such those set out in section 2, investors can identify climate leaders and laggards within their portfolios and prioritize engagements accordingly.

4 Understanding investor engagement

An investor who is dissatisfied with a company's performance, including its net-zero alignment, has three choices:

a. Sell their position.

b. Hold their position and engage with the company.

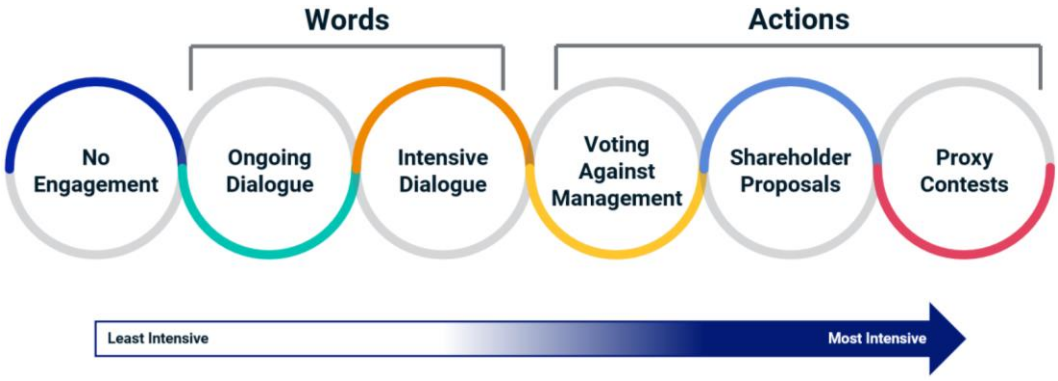
c. Hold their position and not engage with the company.

Hirschman (1971) summarized these choices as "exit, voice, and loyalty". Engagement is the investor's voice, and it can be defined as **the continuum of responses to company performance available to investors** (Gillan and Starks 1998).

The terms "engagement" and "activism" have been used interchangeably in literature to refer to the ways in which investors interact with companies, with "activism" being more closely associated with intensive and confrontational engagement mechanisms such as proxy contests. In this paper, we use the term "engagement" throughout to refer broadly to interactions between companies and investors beyond the purchase or sale of securities and within the framework of a company's governance structure.

Investors have several mechanisms through which to engage with companies, any of which can potentially be applied to a company's climate performance. These range from emailing a company's investor relations team to winning control of a board in a proxy contest. Engagement will usually begin with less intensive mechanisms and then escalate as necessary to more intensive — and usually more confrontational — mechanisms (Gillan and Starks 1998; OECD 2022).

Exhibit 16: Investor engagement mechanisms



Source: MSCI ESG Research

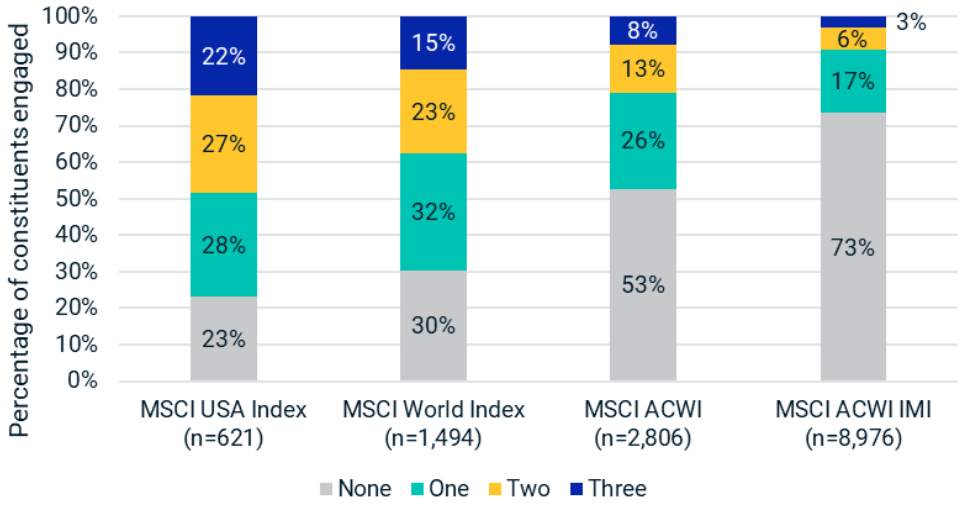
Engagement tools can be classified into those that involve only dialogue and those that rely on formal governance mechanisms to encourage or compel change. In general, the latter are only available to shareholders.[8]

4.1 Dialogue

The most fundamental form of climate engagement is **communicating expectations** on GHG emissions reporting, carbon transition strategy, and other elements of net-zero alignment as part of normal-course communications with companies. Regularly exchanging views helps to ensure that a company's board and management understand investor expectations around issues like GHG reduction targets and climate risk management (Kakhbod *et al*. 2022). As investors identify potential concerns or opportunities in a company's climate strategy, ongoing dialogue may allow those issues to be raised **before they reach a crisis point**.

Exhibit 17 below indicates the scale of engagement globally, with larger companies in developed markets being more likely to be targeted for engagement by three large asset managers.

Exhibit 17: Companies by engagements with number of large asset managers, MSCI ESG Ratings coverage, 2021



This chart groups companies in our ESG Ratings coverage by the number of select asset managers with which they engaged in 2021. Includes only the three largest asset managers, by assets under

[8] Or holders of other equity instruments that provide formal participation rights in the company's governance (e.g., trust units in an investment trust). Formal engagement mechanisms available to a debtholder – if any – will depend on the contractually-negotiated terms of the debt offering and could include, e.g., the right to convene debtholder meetings or receive information (PRI 2018b).

management, that disclosed individual engagements in 2021: Blackrock, State Street Global Advisors (SSGA), and Vanguard. Multiple engagements by the same asset manager were counted only once. Engagements by these asset managers at companies not in our ESG Ratings coverage are not represented above. As of Aug. 31, 2022, using each asset manager's 2021 engagement report. Source: Blackrock 2022b, SSGA, Vanguard 2022, MSCI ESG Research

Where a misalignment between company practice and investor expectation is identified and remains unresolved, however, investors may consider **escalating to more focused conversations** outside the normal cadence of engagement communications. These conversations can set expectations around net-zero alignment, including with respect to both what the investor expects of the company and what the company may expect from the investor. For example, an investor can use dialogue to communicate:

a. the expectation that the company will publish a net-zero target within a certain time period; and

b. a commitment to vote against the board member(s) deemed most responsible for overseeing climate strategy if the company fails to do so.

In cases of prolonged or severe dissatisfaction, investors may also raise the possibility of divestment to encourage stronger performance.

Impactful dialogue on climate action can require substantial research. By understanding the specific circumstances, challenges, and priorities of a given company, investors may be able to better tailor their arguments to reflect points of commonality and mutual concern between themselves and the company's managers and directors, resulting in superior outcomes (Logsdon and Van Buren 2009). Resources such as Climate Action 100+ Global Sector Strategies may help investors to conduct this research more efficiently. Over time, continuous engagement can help to build stronger consensus on critical issues such as climate change (Ferraro and Beunza 2018).

Dialogue-based engagement can be further escalated by **bringing private conversations into the public forum**, including by publishing an open letter to the company or addressing the board at the company's AGM (Ferraro and Beunza 2018). Roundtables with multiple investor and/or company participants can also be used to discuss issues that have been raised by multiple parties and facilitate collaborative engagement (see section 5.1).

Companies can also initiate intensive dialogues, often in an attempt to de-escalate investors that have leveraged more intensive engagement mechanisms. For example, if a significant proportion of a company's shareholders vote against an important resolution at the AGM, the board may respond by scheduling meetings with investors to discuss their concerns (Mason, Medinets and Palmon 2016). In

some markets, doing so may be a regulatory expectation. The U.K. Corporate Governance Code, for example, states that companies should engage with shareholders where **more than 20% of votes are opposed** to a management resolution. Ideally, companies will use the feedback obtained through these meetings to implement changes and address these concerns.

Dialogue-based engagement may help to realign the expectations of investors, management, and directors around climate strategy. Where the company's response falls short, however, or where the company refuses to engage in dialogue, investors may be forced to consider more intensive mechanisms, such as voting against management or for shareholding proposals.

4.2 Voting against management

At most companies, shareholders have the right to vote on the **election of directors**, and they may be able to vote on a wide range of other resolutions depending on the rules applicable to the company.

Most management-sponsored proposals receive overwhelming shareholder support. Proposals that receive significant opposition are, therefore, notable events that can push companies to (re)engage with shareholders (Fairfax 2019). Where investors consider a company's climate strategy or disclosures to be insufficient, and where dialogue-based engagement has failed to yield the desired results, **voting against management resolutions represents one way to signal concern**.

Where shareholders are able to vote on directors individually, a dissatisfied shareholder may "target" the director(s) they consider to be most responsible for the aspects of the board's performance with which they are dissatisfied. For example, a shareholder who is dissatisfied with a company's climate performance might **vote against the directors most responsible for overseeing climate strategy** (e.g., the chair or other members of a committee with dedicated climate-related oversight responsibilities).

Some companies hold dedicated votes on executive pay practices ("say-on-pay" votes). Since 2021, a small number of companies have also experimented with **"say-on-climate" votes**, which give shareholders a chance to vote directly on a company's climate-related disclosures and practices (Sommer and Tufford 2022).[9] Both of these votes can provide additional opportunities for shareholders to signal discontent with specific aspects of a company's climate governance practices.

As with dialogue-based engagements, investors can further escalate this mechanism by making it public and holding a "**vote-no campaign**" — i.e., a coordinated effort by

[9] See the MSCI Insights Gallery for an overview of companies putting forward say-on-climate votes.

one or more investors to encourage a company's broader shareholder base to oppose one or more management resolutions (Grundfest 1993). Short of this, shareholders can **publicly disclose how they intend to vote** to other investors in an effort to share concerns and build consensus around a particular issue.

4.3 Shareholder proposals

Voting against a management proposal is an inherently confrontational act. A more intensive — but potentially more collaborative — engagement mechanism is to **put forward a shareholder proposal**. Shareholder proposals are formal resolutions drafted by investors and presented at shareholder meetings. In the U.S., the SEC has clarified that shareholder proposals calling for companies to adopt timeframes or targets to address climate change are permitted, provided that they give the company discretion as to how to achieve those goals (SEC 2021).

Unlike voting against management proposals, putting forward a shareholder proposal can lead to **compromise without significant public confrontation** between a company and its investors. Many companies will attempt to engage in dialogue with a shareholder proposal proponent before the proposal reaches a vote. Where the company and the shareholder proponent find common ground, the shareholder may withdraw the proposal (Ferraro and Beunza 2018).

Exhibit 18: Disclosed Shareholder proposals, MSCI USA IMI, 2017-2021

Universe comprises constituents of the MSCI USA IMI since Jan. 1, 2017. Includes withdrawn proposals identified in proxy circulars and in public disclosures by select institutions. Average support considers only proposals submitted to a vote. Excludes proposals submitted from the floor. As of Aug. 31, 2022. Source: As You Sow, Ceres, ICCR, Trillium Asset Management, MSCI ESG Research

We are aware of **more than 600 instances between 2017 and 2022** among constituents of the MSCI USA IMI when a shareholder proposal was withdrawn by the proponent after it was submitted to the company but before it went to a vote.[10]

Other conciliatory outcomes for a shareholder proposal could include the company supporting the proposal or the company putting forward its own resolution on the same topic as a compromise.

4.4 Proxy contests

Proxy contests, also known as "proxy fights" or "dissident proxy solicitations," are the **most intensive engagement mechanism** available to investors. Although without equal in terms of potential impact, they are costly, unpredictable and rare (Bebchuk 2007; Gow, Shin and Srinivasan 2014).

At a contested director election, investors nominate candidates for election to the board who are not part of the management- and board-backed slate of director nominees. By changing the board, investors hope to **change the company's behavior from the top down**. A shareholder may attempt to win one, several, or all of the board seats, and success relies on the investor's nominee(s) receiving more votes than at least one of the company's nominees. When successful, any shareholder nominees who received more votes than management nominees will be elected instead of the management nominees. Proxy contests may also end in compromise before the vote, with the board agreeing, e.g., to appoint one or more investor-nominated directors (Bebchuk *et al*. 2019).

Proxy contests can also occur over strategic issues such as an M&A transaction. These are similar to vote-no campaigns and involve efforts to convince shareholders to support a shareholder-backed resolution or oppose a management resolution (Grundfest 1993).

The most significant use of a proxy contest as a climate-related engagement mechanism to date was the 2021 Exxon Mobil Corp. annual meeting, at which activist shareholder Engine No. 1 saw three of its four nominees elected to the board

[10] U.S. companies are generally not required to disclose shareholder proposals that are submitted to the company but subsequently withdrawn by the shareholder proponent. As such, investors will only be aware of a withdrawn shareholder proposal when a) the company chooses to disclose it in the proxy circular (often as part of a settlement agreement with the proponent); b) the proposal is withdrawn after the proxy circular is published; or c) the withdrawal is communicated by the proponent to other investors. The withdrawn shareholder proposals discussed in this paper were identified through two bodies of sources: a) proxy circular disclosures; and b) public online databases of shareholder proposals (including withdrawn proposals) maintained by As You Sow, Ceres, ICCR, and Trillium Asset Management and populated by investors' self-reported data. The actual number of withdrawn proposals during this period and among these companies may be higher than the number of which we are aware.

after arguing, *inter alia*, that Exxon's climate transition strategy was insufficiently ambitious and that the board lacked the necessary expertise to navigate the company through the carbon transition (Tufford and Marshall 2021).

4.5 Lawsuits

Investors may have the right to seek legal remedies with respect to a company's climate-related (in)actions. Between May 2020 and May 2021, for example, at least 18 climate change-related lawsuits were filed globally by investors against companies (OECD 2022). Potential legal liability for companies — and personal liability for their directors — can be a powerful incentive for boards to prioritize climate action (CCLI 2021).

While an investor-initiated lawsuit against a company may be considered an extension of the engagement spectrum, it differs from the mechanisms set out above in that it invokes the authority of an external party (e.g., a court; a securities regulator) to impose a course of action upon a company, rather than relying on the governance mechanisms internal to the company and its investors. In effect, initiating a lawsuit means that the investor's primary **engagement target has shifted from the company itself to the judicial body adjudicating the lawsuit**.

This distinction is sufficient to place investor-initiated lawsuits beyond the scope of the engagement mechanism continuum (and, therefore, this paper).

5 Engagement at scale

Section 4 generally describes investor engagement mechanisms in the context of "**alpha engagement**" — i.e., engagement intended to improve a specific company's performance.

An alternative context is "**beta engagement**" — i.e., engagement intended to improve overall market performance (Lee *et al*. 2016). This is arguably the more important context for securing a convergent net-zero scenario by 2050 (Giese, Nagy and Cote 2021).

Investors have two principal avenues through which to pursue beta engagement:

- **Collaboration**: coordinated engagement efforts by multiple investors targeting multiple companies simultaneously.
- **Policy engagement**: engagement efforts targeting the civil society framework in which investors, companies, regulators, and other stakeholders interact.

Both of these approaches have implications for the engagement mechanisms described above.

5.1 Collaborative engagement

Engagement imposes costs on both companies and investors. **Collaboration has the potential to increase engagement efficiency** by allowing groups of investors to coordinate their priorities, strategies and targets across portfolios. By more efficiently distributing investor resources, collaboration can benefit both investors and companies: more companies will be engaged, while a given company will receive fewer distinct engagement requests (Barnett and Peura 2022). Collaboration can also **increase an engagement's impact by framing requests as reflections of widespread investor consensus** rather than the idiosyncratic preferences of a single investor (Gond and Piani 2012).

Put simply, collaborative engagement is a scaled-up version of bilateral engagement between investors and companies.

Collaborative engagement initiatives can be tailored by aligning the desired engagement outcomes with the methodology for selecting companies to target for engagement.

Exhibit 19: Climate Action 100+ engagement workstreams

Workstream	Engagement goals for companies	Target company criteria
Focus companies	Implement effective climate governance Commit to Paris Agreement net-zero alignment goals Produce enhanced climate disclosures	GHG emissions Global significance to carbon transition
Global sector strategies	Adopt specific decarbonization strategies and initiatives Set specific net-zero targets Business-specific engagement priorities	Sector classification Value chain role

Source: Climate Action 100+, MSCI ESG Research

One approach is to identify targets based on **criteria that cut across sectors**, such as GHG emissions, company size and geographic region. This approach is best suited for high-level engagement priorities with universal applicability. It is reflected in the Climate Action 100+ focus list: 166 companies identified as representing globally significant emitters of GHG emissions and/or companies that can play a strategically important role in the transition to net-zero emissions by 2050 or before.

Another approach is to pick targets based on a **common sector, value chain or business classification**. By aggregating companies based on business similarity,

investors can develop engagement goals and strategies that are cognizant of the key economic factors likely to impact decarbonization efforts (Barnett and Peura 2022). For example, Climate Action 100+ has produced global engagement strategies for companies in the steel, food and beverage, aviation, and electric utilities sectors. Because the companies targeted by this approach will generally have more in common, investors can efficiently pursue more specific engagement goals.

Most of the engagement mechanisms discussed in section 4 can be applied under — and potentially enhanced by — a collaborative engagement initiative. Dialogue-based engagements can deliver a clear and consistent message to all target companies, shareholder proposals can reflect the initiative's stated engagement objectives, and votes against management can be triggered when companies fail to meet thresholds agreed to in advance by participating shareholders.

When more intensive engagement mechanisms are employed against companies, some of the efficiencies of collaborative engagement may be diminished as greater coordination becomes necessary to marshal shareholder support. However, intensive mechanisms can continue to be used as a form of escalation against select companies identified as laggards relative to the goals of the engagement initiative.

Where collaborative engagement reaches an international scale, it can alleviate some of the challenges raised by differences in law regarding corporate governance and investor engagement (see section 4.6). For example, Climate Action 100+ operates through five regional organizations, which may allow investors within those regions to better leverage engagement mechanisms and strategies appropriate to their respective market.

5.2 Policy engagement

Policy engagement involves **changing the proverbial "rules of the game" in which companies operate**. With respect to climate change, key policy engagement objectives include stronger climate disclosure rules to facilitate investor decision making around companies' climate risks and lawmaking that encourages companies to set and meet appropriate net-zero ambitions (Barnett and Peura 2022).

Many potential targets of policy engagement are civil society actors other than companies. These include, *inter alia*, regulators, legislators, industry associations and NGOs. As such, much of policy engagement falls beyond the scope of this paper.

One element of policy engagement that is squarely within this paper's gamut, however, is **investor engagement on companies' lobbying activities and political spending** (e.g., election campaign donations). Since 2017, shareholder proposals

requesting enhanced disclosure on lobbying and political spending have been among the most common proposals at constituents of the MSCI USA IMI, with 352 proposals submitted to a vote and at least 68 withdrawn prior to a vote. Many of these proposals explicitly requested details on the **link between these activities and the company's net-zero ambitions**. On average, these proposals have received 31% support, with 6% having been approved, as of Aug. 31, 2022.

By compelling companies to disclose their lobbying activities and how those activities align with stated net-zero commitments, investors will be better able to assess the degree to which companies are "walking the talk" in their own policy engagement efforts. This may encourage lobbying activities that are better-aligned with net-zero pathways.

6 Engagement and corporate governance

Climate Action 100+ has set out three universal engagement priorities (the "three asks") for investors to raise with companies, including that companies should:

- Implement a strong governance framework that clearly articulates the board's accountability and oversight of climate change risk.
- Take actions consistent with the Paris Agreement to reduce GHG emissions across the value chain.
- Publish enhanced disclosure in line with the TCFD's final recommendations and applicable sector-specific climate disclosure guidance.

Efforts to engage on these and other climate-related priorities, including those discussed earlier in sections 2 and 3 of this paper, will benefit from an understanding of a target company's corporate governance framework. Certain mechanisms may be more effective than others due to a company's specific governance characteristics. This section sets out some of the most important corporate governance factors for investors to consider when planning an engagement.

6.1 Rules of engagement

Much of corporate governance is a product of law, and the rules set by local actors — including, *inter alia*, legislators, regulators, exchanges, and courts — can significantly impact how engagement mechanisms function (OECD 2015).

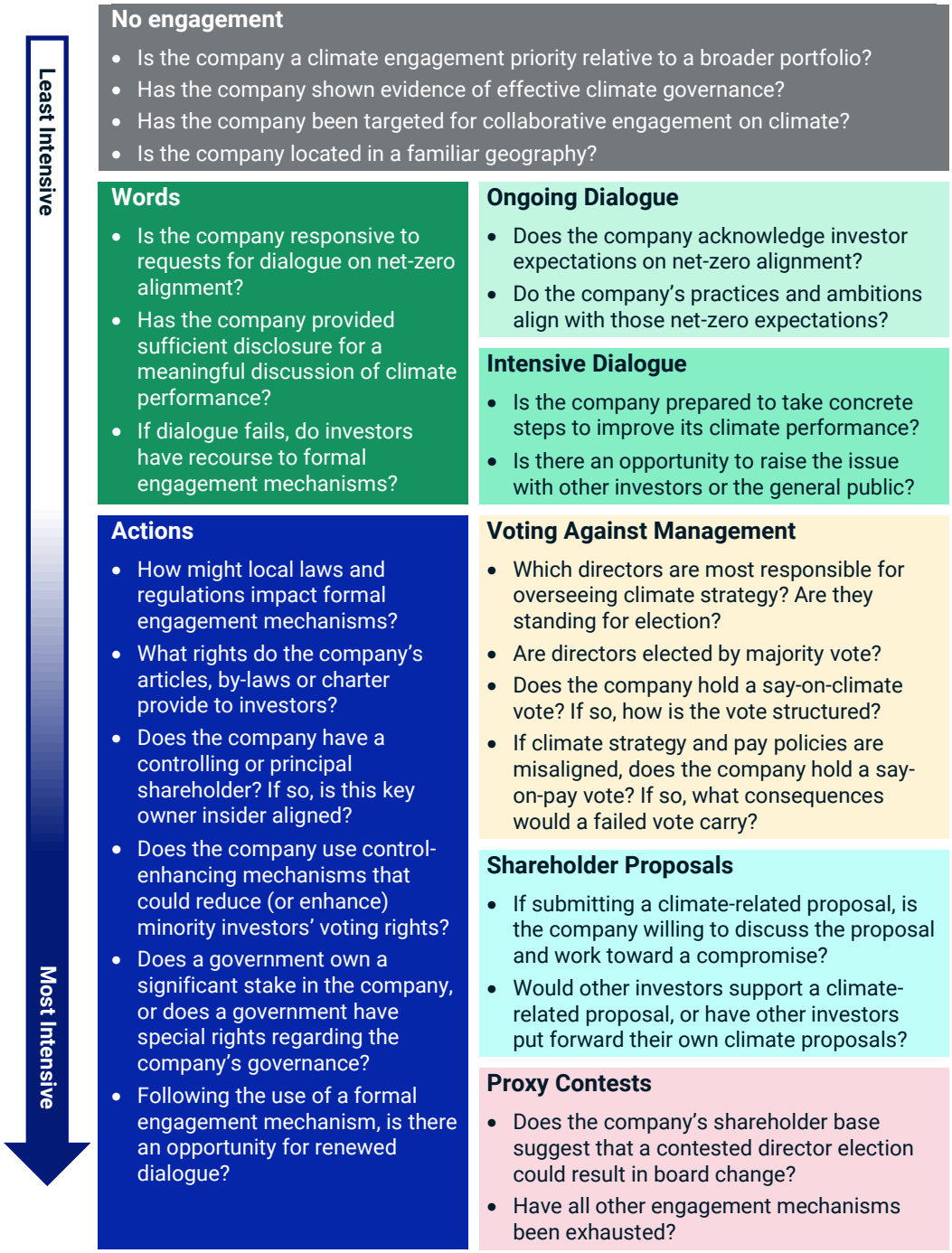
Legal frameworks also impact how boards will approach climate change and climate-related engagement. In 2021, the Commonwealth Climate and Law Initiative (CCLI) reviewed directors' legal duties in the context of climate change across 11 jurisdictions globally. The CCLI found that **directors in these jurisdictions are obligated to integrate climate risks and opportunities into their governance**

processes, but that the practical implications of this obligation for directors and the degree to which it was clearly articulated in local law varied significantly between markets.

Similarly, **investors may be empowered or constrained** in the degree to which they may pursue goals that are not focused exclusively on maximizing investment returns. These rules are complex and disparate, and different rules may apply to different investors or investment strategies (Freshfields Bruckhaus Deringer 2021).

All of this means that investors considering engagement — and, in particular, the use of formal engagement mechanisms — may benefit from **carefully considering the relevant laws in the jurisdictions in which they operate**.

Exhibit 20: Key climate engagement questions for investors



Source: MSCI ESG Research

6.2 Ownership and control

Understanding a company's ownership structure is foundational to understanding its broader corporate governance framework (Brett 2019). We assess ownership and control using a three-dimensional analysis model.

Exhibit 21: MSCI's three-dimensional ownership and control model

Level of Control	**What proportion of voting rights does the largest shareholder or shareholder bloc control?**	
	Controlled: 30% or more	**Principal**: between 10% and 30%
	Widely held: No more than 10%	
Key Owner Type	**What is the background/motivation of the largest owner(s)?**	
	Founder: a founding owner continues to play an active role in managing the company	**Family**: a family holds at least 10% of voting rights and at least one seat on the board of directors
	SOE: a sovereign or sub-sovereign entity directly or indirectly controls at least 10% of voting rights	**Other ownership frameworks**, including subsidiaries, externally managed companies, etc.
Control Skew	**What control-enhancing mechanisms create a misalignment between voting power and capital investment (if any)?**	
	Multiple Equity Classes with Unequal Voting Rights (e.g., dual-class shares)	**Single Equity Class with Unequal Voting Rights** (e.g., loyalty shares)
	Control via Cross Shareholdings: control is exercised via counterparty board(s) and/or voting control	**Control via Stock Pyramid**: control is exercised via a chain of other controlled companies
	Voting Rights Limits: limits on how many shares an individual can own and/or votes an individual can cast	**Residency Limits**: ownership or voting limits based on shareholder residency and/or citizenship

Source: Brett 2019, MSCI ESG Research

Each dimension presents important considerations for investor engagement.

6.2.1 Level of control

For **controlled companies**, formal engagement mechanisms are unlikely to receive majority support unless endorsed by the controlling shareholder. This means that dialogue-based engagement mechanisms may be more effective for net-zero engagement. That said, formal engagement mechanisms can still play an important role by providing investors with a way to publicize their concerns and impose

additional reputational costs on companies that fall short on net-zero performance (Kastiel 2016).

When assessing the performance of formal engagement mechanisms employed at controlled companies, investors may wish to consider the "minority shareholder vote result" — i.e., an adjusted vote result that excludes votes attributable to the controlling owner — to assess the level of support for (or opposition to) a given resolution among the company's minority shareholders. Strong minority support for a shareholder proposal (or against a management proposal) related to climate change can strengthen investor arguments during dialogue-based engagements — particularly where a majority of minority shareholders supported (opposed) the resolution.

Shareholders pursing formal engagement mechanisms at **companies with a principal shareholder** (principal companies) may face engagement challenges that are similar — though less severe — to those of controlled companies. Where the largest insider-aligned key owner exercises only principal-level control (e.g., a founder who no longer holds a controlling stake), formal engagement mechanisms initiated by minority shareholders may be more likely to receive majority support than at controlled companies, but much will depend on the composition and behavior of the company's broader shareholder base, including through factors such as voter turnout rates and the presence of any other key owners (Balp 2018). For example, principal shareholders that are not insider-aligned (e.g., large asset managers) may serve as a catalyst for more widespread support of formal engagement mechanisms among minority shareholders (Appel, Gormley and Keim 2018).

At **widely-held companies**, formal engagement mechanisms have a higher likelihood of success due to the absence of large, insider-aligned shareholder blocs. However, when ownership is significantly dispersed among many institutional and/or retail investors, shareholders may struggle to overcome inertia and harness sufficient voting power to counteract the board- and management-maintained status quo. While coordinated engagement efforts from multiple investors (see section 5.1) can overcome this hurdle (Grundfest 1993), these campaigns can be costly due to the time, effort and (particularly in the U.S.) regulatory considerations involved (Gillan and Starks 1998).

6.2.2 Key owner type

For companies where a **founder** or **family** is a key owner, the preferences of this individual or group may have significant influence over the company's response to investor engagement efforts — particularly where they are still managing the company. A study of shareholder proposals found a negative correlation between insider ownership in the company and the likelihood that a shareholder proposal

would be withdrawn following dialogue-based engagement. This relationship was stronger when the insider ownership was concentrated in the CEO (Bauer, Moers and Viehs 2015).

For companies with significant **government ownership** (either directly or through sovereign wealth funds, etc.), or where a government has the right to exercise significant control over a company's governance practices (e.g., through a "golden share"), company-level net-zero engagement efforts may overlap with an investor's government-oriented policy-engagement efforts (see section 5.2).

Many **large asset managers** have acquired significant stakes in public companies. In some cases, these positions rise to the level of principal ownership, either individually or in aggregate among all large asset manager owners (Marshall and Ponder 2022). Reviewing the public voting policies and engagement priorities of these institutions and comparing them to the practices at a given company can help investors to assess the existing engagement pressures that the company may be facing and the degree to which these investors may support a given engagement approach (Appel, Gormley and Keim 2018).

For portfolio companies that are **subsidiaries** of other companies, engaging with the parent company may be the more efficient engagement strategy. In many cases, a subsidiary company's key strategic, capital allocation and disclosure decisions may be made by or require approval from the ultimate parent company board (Deloitte 2013).

6.2.3 Control-enhancing mechanisms

Many companies employ control-enhancing mechanisms, such as a dual-class share structure, that benefit key owners at the expense of other shareholders by moving the company away from a "one share, one vote" framework (Brett 2019).[11] When formal governance mechanisms are employed at these companies as part of an engagement, shareholders may wish to consider the minority vote result — i.e., a vote result that accounts for and excludes the impact of the key owner's control-enhanced voting power — when assessing investor support for the engagement.[12] As with controlled companies generally, a strong minority shareholder vote result can

[11] E.g., a dual-class share structure, with Class A shares that are publicly traded and carry 1 vote per share; and Class B shares that are held entirely by a single owner and carry 100 votes per share. Depending on the ratio of Class B to Class A shares, this structure could provide the Class B shareholder with voting power sufficient to decide the outcome of any resolution where both share classes vote together, despite the fact that most of the company's economic value would be represented by the Class A shares.

[12] Assuming that the company provides sufficiently detailed vote result disclosure for investors to complete this calculation. This disclosure in itself has been a subject of investor engagement.

provide additional support to investor arguments on climate action during dialogue-based engagements.

Other control-enhancing mechanisms may not be designed to benefit key owners, but may impact the relative voting power of the company's broader shareholder base. This can impact – positively or negatively – investors' ability to deploy formal governance mechanisms as part of an engagement. For example, foreign investors in companies with residency-based voting limits may have diminished influence relative to domestic shareholders, while long-tenured investors at companies that employ a loyalty share structure may find their voices amplified over time.

6.3 Director election regime

Opposing a director's election is among the most powerful signals that investors can send to a company (Gow, Shin and Srinivasan 2014). A growing number of shareholders have used this tool to express concern with companies' climate strategies (Holger 2022). When contemplating this approach, investors may wish to consider their vote's potential impact (or lack thereof).

We classify director election regimes into one of three categories:

- **Plurality voting**: the director nominees who receive the highest number of votes in an election will be elected. In an uncontested election, this means that all nominees are guaranteed to be elected and votes opposing a director's election have no formal effect.
- **Plurality voting with resignation policy**: a plurality election, but directors must submit their resignation to the board for consideration if they receive more votes opposed to their election than for their election. Depending on the market, the board may have the option to reject the resignation and retain the director in certain circumstances or at its discretion.
- **Majority voting**: director nominees are only elected to the board if the number of votes cast for their election is greater than the number of votes opposed to their election. Directors who do not receive at least majority support automatically leave the board.

Votes against a director are most impactful at companies subject to a **majority voting** regime because, in sufficient numbers, these votes carry the promise of **removal from the board**. Significant shareholder opposition to directors elected by majority voting (or the threat thereof) can be a powerful incentive for directors to meet investor expectations on climate strategy.

However, **the loss of key directors can also cause significant disruption**. Reduced board capacity and the need to quickly identify suitable replacement directors may

risk distracting boards from their normal-course duties and reducing overall board effectiveness with respect to climate strategy and other key areas of board responsibility. This may cause shareholders to hesitate before voting against directors elected by majority votes.

For companies with **plurality voting regimes**, the risk of significant disruption is less severe, but so too is the potential impact of a vote against a director. In the U.S., for example, the vast majority of companies are subject to plurality voting regimes (with or without resignation policies). Because of this, U.S. boards have seen a growing number of "zombie directors" — i.e., directors who continue to serve despite having received a majority of votes opposed to their reelection at least once (Marshall 2020).

Zombie directors are, however, the exception rather than the rule. Even when a failed director election has no formal consequences, low director vote results can diminish the perceived effectiveness of the board, the desirability of serving as a director of the company, and the opportunities for incumbent directors to serve on other boards. These **non-pecuniary costs** provide an incentive for boards to address shareholder concerns before they manifest on the proxy ballot, even if the company is subject to a plurality voting regime (Grundfest 1993). This is reflected in findings that directors who receive low shareholder support are more likely to leave the board in the months following the election, including for directors elected under plurality regimes (Aggarwala, Dahiyaa, and Prabhalab 2019).

Investors may also wish to consider the **frequency of director elections** and the length of director terms when contemplating voting against directors. In some markets, directors generally serve for one-year terms, with all directors standing for election annually. In others, directors serve multi-year terms, and individual directors only stand for reelection at certain shareholder meetings (usually every three or four years). This can present challenges for investors who only wish to target the director(s) they consider most responsible for the board's climate strategy — e.g., the members of a committee responsible for climate oversight, or the board chair — as these directors may not stand for election until a later year.

6.4 Shareholder proposal considerations and outcomes

Rules around shareholder proposals also differ from jurisdiction to jurisdiction. Important questions include:

- Who may submit a proposal?
- What may proposals request of a company?
- Are proposals binding or non-binding (i.e., precatory)?

- When and why may a company or regulator disallow a proposal?

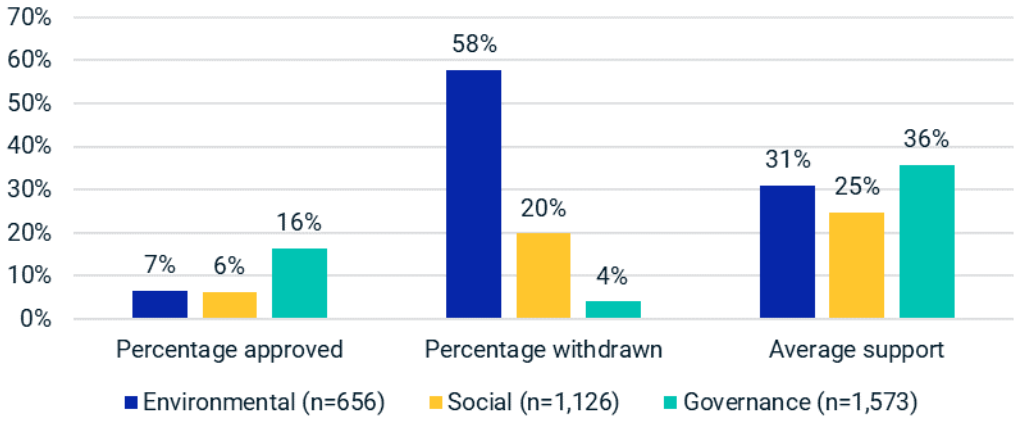
When approved, **binding shareholder proposals on climate issues are inherently impactful**. Even when a shareholder proposal is non-binding, however, or when a potentially binding proposal does not receive majority support, it can still advance investor goals by escalating engagement activities, publicly announcing concerns regarding climate performance, and allowing other shareholders to indicate that they share those concerns (Fairfax 2019).

When a non-binding shareholder proposal receives majority support, many boards have an incentive to implement it. In doing so, directors will hope to prevent further escalation from shareholders in future, such as votes against directors that could lead to binding change (Levit and Malenko 2011). This incentive framework is dependent, however, upon a shareholder rights regime that provides minority shareholders with binding engagement mechanisms and an ownership and control framework that provides a reasonable possibility of those mechanisms earning majority support in the face of management opposition.

Shareholder proposals differ from other engagement mechanisms in their ability to **build consensus** between companies and investors without significant confrontation and before a vote occurs (Chidambaran and Tracie 2000; Bauer, Moers and Viehs 2015). In the U.S., proposals on environmental and climate issues appear particularly effective in this respect. Between 2017 and 2021 among constituents of the MSCI USA IMI, more environment- and climate-focused shareholder proposals were withdrawn than were put to a vote.[13]

[13] See footnote 10 above.

Exhibit 22: Shareholder proposals by ESG Pillar, MSCI USA IMI, 2017-2021



Universe comprises constituents of the MSCI USA IMI since Jan. 1, 2017. Each shareholder proposal was assigned to a single ESG pillar based on the proposal's dominant characteristics. Average support considers only proposals submitted to a vote. Excludes proposals submitted from the floor. As of Aug. 31, 2022. Source: As You Sow, Ceres, ICCR, Trillium Asset Management, MSCI ESG Research

This withdrawal rate is nearly three times that of shareholder proposals focused on social issues and more than 14 times that of governance-focused proposals. It suggests that **boards and managers of U.S. companies are more willing to discuss shareholder concerns** — and, in some cases, commit to addressing those concerns — where they relate to the company's environmental and climate performance.

When environmental and climate proposals do go to a vote at U.S. companies, however, they perform about as well as social proposals, scoring slightly higher on average but being no more likely to receive majority support. This apparent discrepancy suggests that many of the environment- and climate-related proposals that fail to result in investor-management dialogue and which ultimately go to a vote at a shareholder meeting are more proscriptive than investors consider appropriate (Blackrock 2022a) or are otherwise unacceptable to both company insiders and most other investors.

6.5 Say-on-pay votes

Executive pay should incentivize managers to act in the long-term interests of the company (WEF 2019). With respect to climate, this may include actions that are aligned (or at least not misaligned) with net-zero pathways and that encourage executives to appropriately manage climate-related risks and opportunities. Integrating measures that directly consider climate performance into incentive pay

plans may improve the effectiveness of climate governance (Haque and Ntim 2020), but such metrics may also have unintended effects — particularly where they conflict with other incentive metrics or prove difficult to measure (Edmans 2021; Bebchuk and Tallarita 2022).

When — for any of these reasons — shareholders are dissatisfied with directors' approach to setting incentive pay for executives (or for themselves, where applicable), **opposing a say-on-pay resolution is one way to signal concern**.

As with director election regimes and shareholder proposals, say-on-pay regimes differ from market to market. Some are binding, others are advisory, and some combine elements of both regime types. Illustrative examples from select developed markets[14] include:

- **Australia**: companies must hold annual advisory votes. If two consecutive votes receive less than 75% support, all directors must stand for re-election within 90 days.[15]
- **Canada**: companies are not required to hold votes, but many have voluntarily adopted annual advisory votes.[16]
- **France**: companies must hold multiple binding votes annually, including votes on past pay decisions and votes on forward-looking pay policies. Depending on the vote, shareholder opposition can lead to a claw back of prior pay or disallowing pay going forward.
- **United Kingdom**: companies must hold annual advisory votes on past pay decisions and triennial binding votes on future pay policies. Companies may not make payments beyond the scope of the last shareholder-approved pay policy.
- **United States**: companies must hold advisory votes. The frequency of votes is subject to a separate vote, with most companies adopting annual or triennial votes.

For companies that do not hold regular say-on-pay votes — or for companies that have ignored the results of advisory votes — investors who wish to escalate their engagement activities over concerns about the company's pay may be forced to

[14] These examples set out the prevailing standard in each market. Rules may vary based on specific company characteristics, including, *inter alia*, size, ownership structure, jurisdiction of incorporation, and exchange listing.

[15] Most directors of Australian companies serve three-year terms and stand for election once every three years.

[16] A law requiring federally-incorporated companies to hold annual advisory votes was approved by the Parliament of Canada in June 2019 but has not yet been enacted.

consider voting against other management resolutions, such as the re-election of the board's pay committee chair or other pay committee members.

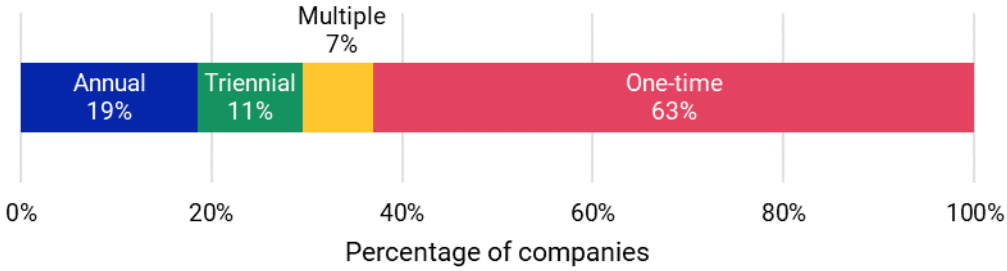
6.6 Say-on-climate votes

Say-on-climate votes allow shareholders to approve or reject a company's climate strategy and/or disclosures, almost always on an advisory basis. Among companies in our ESG Ratings coverage as of Aug. 31, 2022, 54 companies have held or scheduled say-on-climate. Most votes to date have received strong shareholder approval, with an average of 88% support. None have failed, and only two have fallen below 60% support.

If a company has put forward a say-on-climate vote, this fact alone may warrant engagement. Some prominent investor organizations have criticized say-on-climate votes for their potential to facilitate greenwashing, shield directors from accountability, and distract companies and investors from pushing for more substantive change. Others have supported them as a way to enhance climate disclosure and create a formal mechanism for investor engagement on climate action (Sommer and Tufford 2022).

Sections 2 and 3 above set out some factors that investors can consider when assessing a company's climate performance and determining their vote on a say-on-climate resolution, but the nature and structure of the vote itself may be another important consideration.

Exhibit 23: Companies by say-on-climate vote frequency, MSCI ESG Ratings coverage



Includes companies in our ESG Ratings coverage that have held or scheduled one or more say-on-climate votes (n=54). Companies that have held or scheduled only one say-on-climate vote and have not disclosed a future schedule of votes have been classified as one-time. Companies that have held consecutive votes in both 2021 and 2022 without disclosing a future schedule of votes have been

classified as multiple, as have companies that have committed to hold only one future vote. As of Aug. 31, 2022. Source: MSCI ESG Research

Recurring say-on-climate votes may provide an opportunity for companies to receive regular and valuable feedback from shareholders. **One-time votes**, however, have a greater risk of facilitating greenwashing. For example, a one-off vote that received majority support in a prior year could be leveraged by directors and managers in subsequent years as evidence that a company's climate strategy has the endorsement of shareholders and is therefore appropriate, even when that strategy is not sufficient to align the company with net-zero pathways (PRI 2022).

To date, most say-on-climate votes held by companies in our ESG Ratings coverage appear to have been held on a one-time basis.

When voting on shareholder proposals requesting a say-on-climate vote, the PRI has suggested that shareholders:

- Encourage companies to develop and disclose their strategy/actions on how they intend to transition to net-zero GHG emissions by 2050 or sooner.
- Prioritize proven stewardship mechanisms to steer company ambition and execution over company-led transition plan votes, which may have unintended consequences.

The PRI has also recommended against investors putting forward these proposals themselves (PRI 2022).

7 Engagement in practice

To better understand the challenges and opportunities involved in using engagement mechanisms to advance net-zero alignment goals, we reviewed the corporate governance characteristics of the 216 hypothetical engagement focus group companies identified in section 1.2.[17] We used our latest available data and research as of Sep. 8, 2022. All references to percentage of the hypothetical focus group refer to percentages of the number of companies in the group.

[17] Excluding one hypothetical focus group company not in our ESG Ratings coverage.

Exhibit 24: Hypothetical focus group governance characteristics by region

These charts group focus group companies by market classification and geographic region. As of Sep. 8, 2022. Source: MSCI ESG Research

A: What is the company's ownership classification, as defined by MSCI ESG Research?
B: Do directors automatically leave the board when they receive less than majority support?
C: Do all directors serve for one-year terms and stand for election annually?
D: Does the company hold a regular say-on-pay vote at least every three years?
E: Does the company's capital structure provide that all shares always carry equal voting rights?

Key findings include:

- Widely-held companies made up 43% of hypothetical focus group companies. This proportion was significantly higher than among the overall MSCI ACWI Index, where widely-held companies made up just 23% of constituents (Marshall and Ponder 2022). Formal engagement mechanisms are more likely to succeed at widely-held companies due to the absence of a large, insider-aligned voting bloc. However, a significant dispersal of voting power among many retail and/or institutional investors could pose other challenges.
- Controlled companies represented the smallest ownership group at 24% of the hypothetical focus group, which was less than their 46% of the MSCI ACWI Index (*Ibid*.). Principal shareholder companies represented 33% of focus companies, which is comparable to their proportion of the index (31%). For controlled companies — and principal companies, where a key owner is insider-aligned — formal engagement mechanisms may be less effective and shareholders may have to rely more on dialogue-based engagement mechanisms.
- Hypothetical focus group companies were incorporated in 31 different countries and, among U.S. and Canadian companies, 23 different subnational jurisdictions. Because shareholder rights may differ significantly from one jurisdiction to another, this diversity of company law and securities regulation poses challenges for investors seeking to employ formal engagement mechanisms at a wide range of focus group companies.
- Half (49%) of the hypothetical focus group companies had binding majority voting in director elections, and most (63%) provided for the annual election of all directors. However, only a fifth (20%) provided for both together. At focus group companies that do not provide for annual director elections, dissatisfied shareholders considering voting against one or more directors would have to carefully consider the most appropriate directors to hold accountable for the company's actions — particularly for those few companies where the election is also subject to binding majority voting. Where director elections are not conducted via majority voting, investors may find their ability to effect change by voting against directors diminished.
- Some hypothetical focus group companies (15%) had a government as a key owner or a governance structure that provided a government with the ability to directly influence the company's governance practices. The most significant government owner among the hypothetical focus group was China (seven focus companies) followed by India (five) and Norway (three).

For all of these companies, integrating company-level engagement with government-focused policy engagement may enhance the effectiveness of both strategies.

- Two-thirds of hypothetical focus group companies (73%) held a say-on-pay vote at least every three years, giving shareholders an ongoing opportunity to consider the degree to which a company's pay practices appeared well-aligned with the goal of incentivizing net-zero alignment. At the remaining companies, dissatisfied shareholders would have to consider targeting the board's pay committee chair or the other pay committee members to escalate concerns over climate-sensitive incentives.
- Say-on-climate votes had been held by just 19 hypothetical focus group companies (9%). Few companies have held these votes, however, and these focus companies represent a third (35%) of all companies in our ESG Ratings coverage that had held say-on-climate votes to date. All of the say-on-climate votes held by focus group companies so far have passed, and only four received less than 80% support.
- The vast majority of hypothetical focus group company directors received strong support from shareholders in 2022. Only a third (34%) saw a director receive less than 90% support, and none saw a director receive less than majority support. Some companies (15%) did not disclose detailed director voting results.

Together, these findings show that the governance practices of companies targeted for engagement can have significant implications for the effectiveness of engagement mechanisms.

Because corporate governance practices are primarily a function of local laws and regulations, many of the most significant differences among the focus group companies are apparent when they are grouped by market classification. This analysis — which is set out in Exhibit 22 above — provides further support for the value of collaborative engagement: by allocating engagements to investors based on their local market knowledge and expertise, collaborative engagement initiatives can alleviate a key challenge of global climate engagement.

Even within a given market or region, certain governance practices will differ from company to company. Investors engaging only with companies in a certain geographic remit may nevertheless want to consider how corporate governance practices might impact the effectiveness of different engagement mechanisms. In doing so, investors can develop more effective strategies for engaging companies on their net-zero alignment ambitions.

Conclusion

Engagement with portfolio companies is a key lever for investors to align their portfolios with a net-zero pathway, and one they may wish to prioritize to drive change in their portfolio and in the real economy, along with risk and return considerations. In section 1 of this paper we examine how engagement fits in the broader context of net-zero investing, along with setting strategic objectives, constructing the portfolio and managing risk. We also show how financed emissions are one way to identify potential engagement targets from a portfolio. For the purposes of our analysis, we use a hypothetical portfolio invested in an investment strategy replicating the MSCI ACWI IMI. When including operational and value-chain emissions (Scopes 1, 2, and 3) 216 companies made up 65% of the hypothetical portfolio's financed emissions. Depending on an investor's resources allocated for engagement, this list may be a starting point and could require further winnowing. For illustrative purposes, we used these 216 companies as a hypothetical engagement focus list for further analysis in sections 2 and 7.

In section 2 we look at ways an investor might evaluate a company's net-zero alignment. Potential criteria include disclosures on emissions and governance, emissions performance assessed against sector peers and decarbonization pathways, and the comprehensiveness, ambition and credibility of emission reduction targets. Net-zero alignment is foremost about reducing emissions, but some companies may have a larger overall impact by providing climate solutions; investors may wish to set separate engagement targets for these companies, or take metrics such as green capex or the amount and quality of their low-carbon-relevant patents into account. Key performance indicators such as these are critical to the engagement target identification, evaluation and monitoring process. They are also intuitive and transparent, which may be helpful in investor-company dialogue. Other more complex metrics, such as Implied Temperature Rise, are necessary to calculate alignment over time, given the complexity of allocating carbon budgets among companies and projecting emissions into the future.

In section 3, we describe how investors can assess effective climate governance. Once directors have recognized that they are accountable for companies' climate performance, investors can evaluate the ways in which corporate governance mechanisms at the board and executive level are likely to strengthen or hinder appropriate decision making around net-zero alignment and climate strategy.

Together, sections 1, 2 and 3 provide investors with an overview of how to evaluate companies' net-zero performance and prioritize companies for engagement.

Section 4 describes the engagement mechanisms available to investors, including dialogue, voting against management, shareholder proposals, and proxy contests.

We show how these mechanisms work, and how investors can escalate their engagements by leveraging more intensive and more confrontational mechanisms when company performance continues to lag. We also discuss investor lawsuits, which we describe as beyond the company-investor engagement context.

We use section 5 to consider how investors can scale-up their engagement activities. One way is by collaborating with other investors to decrease the costs of engagement for both investors and companies. This can include engagements coordinated by investor alliances such as Climate Action 100+. Another way is through policy engagement, including efforts to compel companies to disclose details about their lobbying and political spending activities and how those activities align with their stated net-zero ambitions.

Section 6 discusses how companies' corporate governance practices can influence the effectiveness of engagement mechanisms. Key factors include companies' ownership and control framework, director election regime and shareholder proposal framework, as well as whether the company holds say-on-pay or say-on-climate votes. We also discuss how local rules and regulations can impact engagement activities.

Finally, in section 7, we combine our prior findings and revisit the hypothetical engagement focus group developed in section 1. We explore the diverse corporate governance practices within this group, and the engagement challenges and opportunities investors would be likely to face if they engaged with the companies in this hypothetical engagement focus group. We find, for example, that more companies within the focus group are widely held, few have both binding majority voting and annual director elections, and most provide investors with a regular say-on-pay vote.

This analysis supports the inclusion of corporate governance analyses as part of an investor's overall net-zero engagement strategy. It also supports the use of collaborative engagement strategies that allocate engagement responsibility based on investors' regional knowledge and expertise.

In sum, this paper is intended to provide investors with a practical and comprehensive overview of how to integrate engagement into a net-zero investment strategy.

***Correction**: Exhibits 11 and 12 were updated in February 2023 to correct a data manipulation error that occurred in a previous version of this paper from November 2022.*

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Data used in this paper

Factor name in ESG Manager (client access only)	Short name	Exhibits
Carbon Emissions - Scope 1+2 Intensity (t/USD million EVIC)	CARBON_EMISSIONS_EVIC_SCOPE_12_INTEN	1, 2, 3
Carbon Emissions Timeseries - Scope 1+2 (metric tons) FY2020	CARBON_EMISSIONS_SCOPE_12_FY20	
Enterprise Value Including Cash (USD million)	EVIC_USD_RECENT	1, 2, 3
Scope 3 - Total Emissions Estimated	CARBON_EMISSIONS_SCOPE_3_TOTAL	1, 2, 3, 6, 7, 8
Carbon Emissions - Scope 1+2/Intensity FY[*YEAR*] KEY Value	CARBON_EMISSIONS_SCOPE_12_KEY_FY[18,19,20]	5
Carbon Emissions Timeseries - Scope 3 (metric tons) FY[*YEAR*]	CARBON_EMISSIONS_SCOPE_3_FY[18,19,20]	6, 7
Carbon Emissions Timeseries - Scope 1+2 Intensity (t/USD million sales) FY2020	CARBON_EMISSIONS_SCOPE_12_INTEN_FY20	8
Company has committed to adopt science-based target (SBTI)	HAS_COMMITTED_TO_SBTI_TARGET	9, 10
Company has science-based approved emission target (SBTI)	HAS_SBTI_APPROVED_TARGET	9, 10
Estimated proportion of company's total emissions covered by targets (%)	TARGET_SUMMARY_EFFECTIVE_COVERAGE	9, 10
Target year	CBN_TARGET_YEAR	11, 12
Implied Temperature Rise [°C]	ITR	13

Factor name in ESG Manager (client access only)	Short name	Exhibits
Alternative Energy - Maximum Percentage of Revenue	CT_ALT_ENERGY_MAX_REV	14
Low Carbon Patents Score	GREEN_PAT_VAL	14
Board Member	BOARD_MEMBER	15
Director Profile	DIRECTOR_PROFILE	15
Votes For as a % of Votes Cast	GM_PROP_FOR_PCT_VOTESCAST	18, 22
Proposal Proxy Year	GM_PROP_PROXYYEAR	18, 22
Proposal Type	GM_PROP_PROPOSALTYPE	18, 22
Sh Proposal Category	GM_PROP_SHPROPOSAL_CATEGORY	18, 22
Annual Director Elections	CLASSIFIED_BOARD	24
Home Market	GM_HOME_MARKET	24
Majority Voting	MAJORITY_VOTING	24
Multiple Equity Classes with Different Voting Rights	ONE_SHARE_ONE_VOTE	24
Ownership Category	OWNERSHIP_CATEGORY	24
Say on Pay Policy	SAY_ON_PAY_POLICY	24
Single Equity Class with Different Voting Rights	VOTING_RIGHTS_LIMITS_DURATION	24
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