NORTHERN TRUST
ASSET MANAGEMENT

RESEARCH INSIGHTS

STEWARDSHIP IN FOCUS: CLIMATE RISK MANAGEMENT

Our approach

We continue to sharpen our focus on climate stewardship by encouraging portfolio companies to demonstrate effective oversight and disclosure of climate related risks and opportunities

Why it matters

Climate change and management of the energy transition can represent material investment risks to company free cash flow through exposure to regulatory, operational, reputational and market-related impacts.

How we're advancing

Through engagement, we seek to identify industry best-practices and work with investee companies on risk management assessment, setting credible transition strategies, allocating capital, and strengthening governance to support long-term resilience and value creation.

WHY IS CLIMATE RESILIENCE A MATERIAL ISSUE FOR INVESTORS?

The global energy transition presents financially material risks and opportunities for investors with long-term horizons. Physical risks such as extreme weather events can severely impair company assets and disrupt supply chains while transition risks stemming from evolving policy, legal, technology, and market dynamics can impact companies' revenues, costs, and overall financial resilience.

Regulatory developments, industry level decarbonization commitments, and investment in low-carbon technologies are accelerating structural economic shifts, further highlighting the need for consideration of climate risks and opportunities in understanding long-term value creation across portfolios.

Climate-related opportunities can also be a source of long-term value creation. Examples include growing demand for low-carbon materials, sustainable fuels, electrification technologies and energy-efficiency solutions that reduce operating costs and improve competitiveness. Understanding how companies position themselves to capture these opportunities is an important component of assessing long-term resilience and enhancing shareholder value.

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CLIMATE COMMITMENTS UNDER CONSTRAINT

Recent stewardship engagements across energy, utilities, banking, insurance, industrials and materials indicate a clear shift in how climate commitments are framed and implemented. Many companies continue to maintain long-term transition ambitions, but delivery is increasingly shaped by energy security, affordability, policy uncertainty, infrastructure readiness, permitting, commercial demand and technology maturity.

In practice, commitments are moving away from unconditional end-states toward more explicitly conditional frameworks. This does not necessarily signal a retreat from ambition. It often reflects a recalibration toward credibility, feasibility and fiduciary discipline.

Against this background, it is important to focus less on headline targets and more on the assumptions, governance and accountability mechanisms that determine whether commitments can be delivered.

Recent disruptions to global oil supply chains once again highlight Europe's exposure to imported fuels, prompting governments to consider demand curtailment measures such as reduced transport usage, fuel rationing, and strategic stock releases to maintain energy security and economic stability. These dynamics reinforce incentives to diversify energy sources, improve efficiency, and accelerate electrification. At the same time, regulatory initiatives such as the European Green Deal and the Green Transformation (GX) Promotion Strategy & GX Act are catalyzing investment in clean technologies like hydrogen, carbon capture, and sustainable fuels.

European oil and gas majors have, over the past two years, recalibrated their strategies in response to evolving market conditions, geopolitical pressures and investor expectations. The clearest trend is a renewed focus on hydrocarbons, capital discipline and shareholder returns, alongside a more pragmatic and selective approach to the energy transition. This reflects adjustments in pace and capital allocation rather than a complete retreat from long-term decarbonisation ambitions.

For investors in Asia-Pacific markets, climate resilience must be assessed alongside energy security and transition feasibility. Australia's continued dependence on imported liquid fuels—combined with inventory levels well below international benchmarks—exposes critical sectors such as mining and agriculture to supply disruption and price volatility, reinforcing the importance of policy measures such as strategic stockholding, domestic refining capacity and supply chain diversification. Regional dynamics further amplify these risks, as large economies including Japan and Singapore are highly reliant on imported gas for power generation. Meanwhile, recent cancellations and scaling back of hydrogen projects by large industry players such as Fortescue Group and Woodside Energy highlight the economic and technical barriers to rapid deployment of low-carbon alternatives, including cost competitiveness, infrastructure constraints and uncertain end-market demand. These factors underscore that transition risk in the region is likely to be non-linear, with implications for capital allocation, asset valuation and long-term earnings resilience.

We are particularly focusing our engagement on the energy, financials, industrials, materials and utilities sectors. The following perspectives reflect how these considerations shape corporate climate commitments in practice and how we calibrate engagement to support credible, economically grounded transition pathways.

Energy and utilities. Investor focus is increasingly on economics, contracted demand, permitting, policy durability and balance-sheet resilience. Transition investment is judged more on feasibility than ambition alone, particularly for hydrogen, green ammonia and carbon capture.

Banking. Climate-related financing policies and transition pathway limits may incorporate energy security considerations. Credibility depends on how exceptions are governed and disclosed, not only on the ambition of headline restrictions or targets.

Insurance. Underwriting and risk policies are becoming more climate-aware, but investors still look for forward intent, board fluency and transparent decision frameworks under plausible energy security and market stress scenarios.

Industrials. Engagement increasingly focuses on execution risk, retrofit economics, customer pass-through, supply chain constraints and scaling electrification or efficiency solutions without undermining margins.

Materials. Investors are scrutinizing abatement cost transparency, project sequencing, policy reliance and balance-sheet impacts in hard-to-abate processes such as steel, cement and chemical manufacture

Taken together, these observations reinforce that credible transition plans should not only articulate disclosure, strategy, metrics, targets and capital allocation, but also show how those elements remain governable and investible under real-world constraints.

WHAT IS NTAM'S APPROACH TO CLIMATE RISKS AND OPPORTUNITIES?

NTAM's engagement philosophy is grounded in fiduciary responsibility and a commitment to acting in clients' best interests. Climate risk is considered alongside other financially material factors that may influence a company's future financial viability and clients' long-term risk-adjusted returns. Over the next decade, we believe three structural themes are the key drivers of risks and returns: rapid technological innovation amid demographic change; increasing geopolitical fragmentation and economic self-reliance; and rising debt and fiscal constraints. All three are expected to influence growth, inflation, capital allocation and market performance.[1]

[1] For more detail on these themes, see Northern Trust Asset Management's Capital Market Assumptions 10-Year Outlook: 2026 Edition. Additionally, the Global Shift to Self Reliance is explored through a sustainable investing lens in our Sustainable Investing Trend for 2026.

Our climate-focused engagements seek to understand how companies oversee and manage climate-related risks and opportunities within their business models. Through our approach we seek to incorporate both global and industry-specific standards and best practices in order to help tailor our approach to each individual company.

HOW DOES NTAM EVALUATE NET-ZERO ALIGNMENT AND CLIMATE RISK?

We encourage boards to be aware of climate risks and opportunities, particularly in industries where management is material to financial results and resilience, in order to guide decision making. Integrating these considerations into governance, strategy, risk management, and supporting decision-useful disclosure enables investors to better assess company resilience and progress over time. We do not seek to direct company strategy or mandate specific transition pathways; responsibility for setting and executing strategy remains with the board and management. However, it is important to understand industry best practices as we engage with company representatives.

Our analysis draws on company disclosure, recognized frameworks such as TCFD, IFRS S1/S2 and NZIF 2.0, and relevant internal and external signals, including the Northern Trust ESG Vector Score™ and third-party data providers. Our approach is built on objectives rather than scores and uses a comply or explain approach consistent with most corporate governance codes. We do not rank companies, but rather assess what strengthens or weakens their overall approach to climate, and how their climate strategy supports a credible, financially grounded transition pathway.

We assess climate credibility across five connected dimensions: disclosure, strategy, metrics, targets and capital allocation. These are not separate silos; together they show whether climate considerations are embedded in how a company is governed, how it manages risk and how it allocates capital.

Disclosure Quality & Transparency. We expect clear, decision-useful disclosure aligned with recognized frameworks. Good disclosure explains governance, risk management, material impacts, assumptions and limitations, rather than relying on broad statements without supporting detail.

Strategy & Transition Plan Credibility. We look for climate strategy integrated into the core business, supported by board oversight and senior management accountability. Credible plans explain dependencies, milestones, scenario assumptions and links to enterprise risk management.

Metrics. Companies should disclose relevant metrics that allow investors to assess exposure and progress, including Scope 1 and 2 emissions and, where material and feasible, Scope 3 emissions. Forward-looking indicators such as green CapEx, low-carbon investment share, energy mix and transition readiness metrics can strengthen analysis.

Targets & Progress. We expect measurable, time-bound targets supported by interim milestones and periodic review. If pathways change, companies should explain what changed, why it changed and how progress will now be assessed.

Capital Allocation. We seek transparency on how capital allocation reflects climate risks and opportunities, including whether investments support emissions reduction, operational resilience, energy efficiency, new low-carbon revenue opportunities or other sources of long-term value creation, and whether the economics remain credible under realistic policy and market assumptions.

EXHIBIT 1: HOW DO WE ESTABLISH CLIMATE KPIs?

Company specific key performance indicators (KPIs) are informed by its overall business, industry, sector, scope of operations and potential exposure to, or mitigation of systemic climate-related financial risks.

Dimension	Example Analysis/Rationale	Example Key Evidence	Example Engagement KPI
Disclosure Quality & Transparency	Disclosures are poorly structured and lack explanations on assumptions drawn; scenario and Scope 3 limitations aren't fully transparent.	TCFD report: high level, no specific details	Refresh TCFD report. Expand on assumptions drawn that inform company's climate transition plan.
Strategy & Transition Plan Credibility	No integrated transition plan document. Commitments are fragmented across reports; no clear roadmap, dependencies, or implementation milestones.	Sustainability report: high level net zero aspiration, no full plan Engagement notes: company "developing" plan for next year	No integrated transition plan document. Commitments are fragmented across reports; no clear roadmap, dependencies, or implementation milestones.
Metrics	Scopes 1 and 2 disclosed with methodology; Scope 3 not disclosed. No product-level metrics.	Sustainability report: SASB Appendix CDP Report	Disclose Scope 1, 2, and 3 emissions where not disclosed for past 3 years.
Targets & Progress	Absolute targets exist for Scopes 1 and 2 (time-bound) and interim milestones, but Scope 3 target is "under review." Progress reporting is present, but variance explanations are thin.	Targets table: 2030 and 2050 references Progress chart: YoY, limited narrative for missed targets	Set a credible Scope 1, 2, and 3 emissions target or clearly explain rationale why specific target may not be appropriate; strengthen progress narrative for variances.
Capital Allocation	CapEx disclosures are aggregated and do not show alignment to transition plan. No explicit "transition CapEx" or evidence of reallocation away from high-emitting assets.	Annual report: CapEx total only Investor materials: no breakdown aligned to transition actions	Provide CapEx taxonomy/breakdown aligned to transition actions (e.g., "maintenance vs transition vs growth") and disclose capital reallocation logic.
Scenario Analysis & Strategic Assumptions	Transition plan relies on demand, policy, carbon price or technology assumptions that are not disclosed or tested against alternative scenarios.	IFRS S2 Climate report disclosures Transition plan assumptions Investor presentation sensitivity analysis	Seek independent limited assurance on disclosed scenario assumptions and outcomes

Recognizing that there is no single pathway to net zero alignment with climate goals, NTAM utilizes flexible approaches across sectors and industries, reflecting differences in operating environments, data availability, and economic structures. This includes adapting expectations to local market. Metrics, such as share of investment directed toward low-carbon or transition activities or proportion of revenues derived from climate solutions or high-/low-carbon activities, support consistent assessment of transition risk despite data limitations. For example, how to measure Scope 3 emissions, determine their material impacts, and bridge disclosure discrepancies between emerging and developed markets.[2] However, the application of these expectations must reflect real-world constraints.

EXHIBIT 2: STEWARDSHIP FOCUS IN A CONSTRAINED TRANSITION

This exhibit distils the key stewardship priorities we assess when evaluating climate strategies under real world constraints. It focuses on the factors that determine whether transition plans are investible, governed with discipline, and supported by credible assumptions and disclosure.

Factor	What we look for in practice	Why it matters
Board capability and oversight	Relevant expertise in energy systems, transition technologies, capital allocation and policy context; clear oversight of strategy and risk.	Supports robust challenge of assumptions, dependencies and capital allocation choices.
Investible pathways	Candor on permitting, incentives, market design, grid readiness, contracting structures and commercial demand.	Shows whether transition projects are supported by economics and enabling conditions.
Capital discipline	Return hurdles, staged investment gates, proof points before scaling, downside protections and balance-sheet resilience.	Reduces the risk of value-destructive spend and protects long-term shareholder value.
Decision-useful disclosure	Linkage between strategy, financial impacts, scenario assumptions, governance, risk appetite and accountability.	Allows investors to assess whether timelines and investments are credible.
Energy security and affordability	Explanation of how energy security interacts with climate commitments, including triggers, decision rights and review cycles.	Avoids headline rules that unravel under stress and improves predictability for investors.

COMPANY, PORTFOLIO AND INDUSTRY-LEVEL IMPLICATIONS

Our primary stewardship lens is company-level accountability: how individual companies govern climate-related risks, set credible strategies, allocate capital and disclose progress. Portfolio-level implications are assessed separately through exposure, mandate, risk-adjusted return and index construction considerations. This distinction matters in passive strategies, where divestment or underweighting

[2] To explore further, see our white papers: Dinershteyn, V., Rumynin, I., and M. Vidojevic. Making Scope 3 Work: How Investors Can Navigate Complexity and Manage Climate Risk. Northern Trust Asset Management Sustainable Insights. March 2025; Rumynin, I. and V. Dinershteyn. Emerging Markets — Data for Decarbonization. Northern Trust Asset Management Sustainable Insights. February 2025.

may not be an effective or proportionate response to sector-wide transition challenges.

Some high-emitting sectors, including cement, steel and shipping, have articulated industry-wide net-zero pathways through trade associations or collaborative initiatives. These frameworks can provide useful context, but they are not a substitute for company-level accountability. Where industry progress lags public commitments, stewardship focuses on the company's own governance, assumptions, capital discipline, lobbying alignment, disclosure and measurable progress.

HOW OUR STEWARDSHIP APPROACH SUPPORTS CLIMATE RESILIENCE AND LONG-TERM VALUE CREATION

Climate stewardship is ultimately about understanding how companies manage financially material risks and opportunities that may affect long-term shareholder value. Our role is not to direct business strategy, but to assess whether boards and management teams are providing investors with sufficient evidence that climate-related considerations are being appropriately governed, evaluated and incorporated into decision-making.

We prioritize engagement with companies where climate-related factors have the greatest potential to influence long-term financial outcomes, whether through regulatory change, physical climate impacts, evolving customer demand, technological disruption, capital investment requirements or changes in energy markets.

Importantly, climate considerations can present both risks and opportunities. While physical and transition risks may affect asset values, operating costs or future earnings, companies may also benefit from growing demand for low-carbon products and services, energy-efficiency solutions, electrification technologies, grid infrastructure, sustainable fuels and other activities positioned to support evolving customer and market needs. Effective stewardship therefore requires understanding both potential downside risks and sources of long-term value creation.

As transition pathways become increasingly shaped by energy security, affordability, infrastructure readiness and geopolitical considerations, our engagement approach places growing emphasis on the assumptions underpinning company strategies. Understanding how these assumptions are tested and governed can provide important insight into the credibility and resilience of corporate transition plans.

Through engagement, voting and ongoing monitoring, we seek greater transparency around these issues so investors can better assess whether climate-related commitments are supported by realistic assumptions, disciplined capital allocation and effective governance. Ultimately, our stewardship focus remains on engaging companies to promote resilience, improve disclosure and support sustainable long-term value creation.

CONCLUSION

Climate stewardship is most effective when it combines ambition with realism. As transition pathways become more constrained by policy, technology, affordability, infrastructure and energy security, the credibility of climate commitments depends increasingly on governance, capital allocation and decision-useful disclosure. NTAM's role is to encourage companies to improve transparency, strengthen oversight and develop transition strategies that are economically grounded and operationally feasible. In a constrained transition, the key test is not whether companies can make ambitious claims, but whether those claims are supported by investible pathways and accountable execution.

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