



• LAZARD GLOBAL EQUITY CLIMATE ADVANTAGE

Climate Investment: Is It Time to Move Beyond Index-Based Approaches?

Executive Summary

Climate change is reshaping global capital markets, influencing asset values, capital flows, and corporate strategies. The challenge for many investors is to align portfolios with credible net zero objectives while seeking competitive risk-adjusted returns.

Index-based climate strategies, including those incorporating Paris-Aligned Benchmarks (PAB), have gained traction with investors. However, their reliance on backward-looking emissions data, rigid exclusion rules, and mechanistic rebalancing can unintentionally constrain opportunities and limit the ability to support real-world decarbonization.

These approaches often underweight hard-to-abate sectors where transition leaders can deliver the most meaningful emissions reductions. At the same time, they have underperformed market cap indices, generated unrewarded tracking error and turnover, and missed engagement opportunities.

Index-based climate approaches also bring an under-appreciated risk: the crystallization of portfolio losses when companies are excluded despite actively reducing their emissions.

We believe the next generation of climate-aware investing must move beyond static index frameworks toward dynamic, forward-looking strategies that integrate climate credibility with investment discipline and a sound approach to active ownership.

In our view, effective solutions should:

- 1. Integrate forward-looking climate metrics into financials**—Supplement traditional carbon metrics with capital expenditure plans, revenues associated with transition technologies, validated science-based targets, and policy-aware analysis. In our view, these should be combined with traditional financial factors to identify credible transition leaders and seek risk-adjusted returns.
- 2. Re-imagine net zero frameworks**—Adopt flexible frameworks and draw on company-level transition assessments to maintain portfolio diversification and pursue opportunities in hard-to-abate sectors, avoiding concentration risk from rigid exclusions.
- 3. Prioritize active ownership over blanket exclusions**—Maintain selective exposure to high-impact companies and embed engagement and voting to accelerate credible transition strategies and potentially capture upside as fundamentals improve.

We believe this approach can help asset owners meet their climate objectives while managing risk and promoting returns—which may offer a more resilient and impactful path to climate investing than mechanistic index-based approaches.

From Niche to Mainstream: The Rise of Index-Based Climate Strategies

Climate-based investment approaches have evolved considerably over recent decades, particularly since the 2015 adoption of the Paris Agreement, the landmark climate deal struck at COP21 that pledged to ideally limit the increase in global temperatures to 1.5°C above pre-industrial levels.

Historically, climate investing in public markets was driven by thematic equity strategies targeting companies whose products and services advanced renewable energy, energy efficiency, and other environmental solutions.

Over the past decade, index-based strategies linked to climate benchmarks have emerged, attracting substantial assets under management. Index-based funds tracking PAB and other climate

benchmarks account for approximately 75% of assets held globally in climate transition funds.¹ Climate transition funds (\$316 billion) represent 47% of assets held in Morningstar's climate funds category (Exhibit 1).

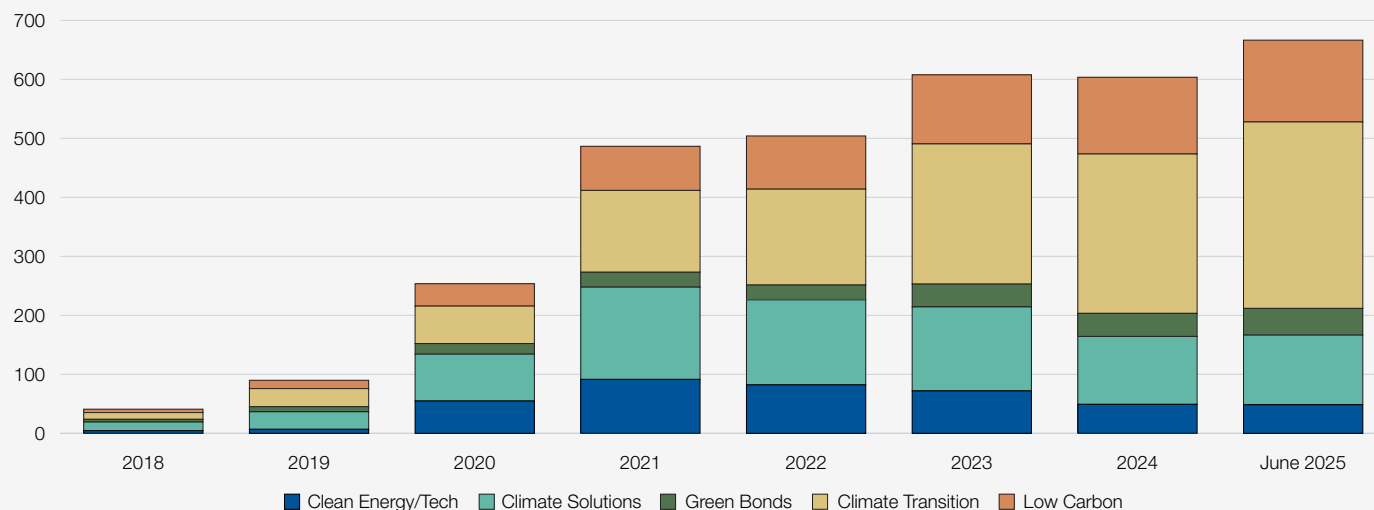
The appeal of index-based approaches lies in:

- **Low fees** relative to traditional equity strategies.
- **Transparent, rules-based construction** that satisfies regulatory and stakeholder expectations.
- **Alignment with net zero goals** through mandated emissions reductions.
- **Ease of implementation** for asset owners and endorsement from investment consultants.

Exhibit 1

The Growth of Climate Transition Funds

(US\$ bn)



As of 30 June 2025. Source: Morningstar

Introduction of Paris-Aligned Benchmarks

In 2019, the European Union introduced the EU Climate Transition Benchmarks Regulation,² implementing two climate-focused benchmarks, the EU Paris-Aligned Benchmark and the EU Climate Transition Benchmark, in 2020. This regulation established minimum technical standards for many climate-related investment strategies (Exhibit 2).

Although PAB is a specific regulatory concept, it exemplifies many index-based climate approaches, particularly those with systematic decarbonization tilts.

- PAB's core components include:
- 1. **Carbon cap:** a maximum portfolio-level carbon intensity based on emissions data requiring at least a 50% reduction in portfolio carbon intensity at launch versus a parent index (e.g., the MSCI World).
 - 2. **Exclusions:** prohibiting investment in specified high-emission sectors.
 - 3. **1.5°C pathway:** a mandated 7% reduction in the carbon cap to align with a 1.5°C pathway.

Exhibit 2

Key Features of EU Paris-Aligned Benchmark and EU Climate Transition Benchmark

Criteria	EU Paris-Aligned Benchmark	EU Climate Transition Benchmark
Exclusions	Controversial Weapons Norms Violators Tobacco Coal (1% Revenue) Oil (10% Revenue) Electricity Production (>100g CO ₂ /kWh & 50% Revenue)	Controversial Weapons Norms Violators Tobacco
Initial Greenhouse Gas (GHG) Intensity Reduction vs. Parent Index (i.e., a Carbon Cap)	50%	30%
Year-on-Year Decarbonization (i.e., the 1.5°C Pathway)	7%	7%
Green/Brown Activity Share ^a	Significantly Larger (4x)	At Least Equivalent

As of 31 May 2025
a. A green-to-brown ratio of at least four is not explicitly mandated as a compulsory criterion by PAB.
Source: [Official Journal of the European Union](#)

The Case against Index-Based Approaches

We recognize index-based climate approaches have played an important role in mainstreaming climate considerations into portfolios. They have helped to foster growth in a nascent asset class that can seek to reduce carbon risk and, in some cases,

support the transition to a low-carbon global economy. However, the rigid, top-down frameworks embedded in climate indices can have significant flaws:

1. Exclusions Limit Investment into Energy Transition

PAB-based and other index-based climate strategies typically impose fixed exclusions on sectors and companies deemed misaligned with climate objectives. These rules are designed to ensure compliance with minimum technical standards, but they force portfolios into structural underweights in carbon-intensive sectors (Exhibit 3)—regardless of whether individual companies within those sectors are credible transition leaders.

This approach has been reinforced by the European Securities and Markets Authority’s (ESMA) naming guidelines for UCITS funds. Under these guidelines, which came into effect in 2024, any fund whose name refers to the environment, climate, or sustainability must incorporate PAB-aligned exclusions. The regulation aims to create a uniform baseline for exclusion criteria across such funds, thereby standardizing investor expectations and market practices.

Exhibit 3

PAB Excludes Hard-to-Abate Sectors Critical to the Climate Transition

MSCI World Index (31 May 2025)	Sector Weight (%)	% of Sector Excluded by PAB
Energy	3.6	99
Utilities	2.8	65
Consumer Staples	6.7	24
Materials	3.4	11
Industrials	11.2	10
Financials	17.2	7
Health Care	10.8	0
Consumer Discretionary	10.2	0
Communication Services	8.0	0
Information Technology	23.9	0
Real Estate	2.2	0

As of 31 May 2025. Source: Lazard, MSCI, Sustainalytics

2. Carbon Caps Promote Paper Decarbonization and Can Hinder Investment in High-Impact Companies

Top-down portfolio carbon caps and linear decarbonization pathways that rely on carbon emissions data often appear to prioritize “paper” decarbonization—achieved through asset reallocation or trading—over genuine reductions in real-world emissions. Such approaches overlook the future ambitions and projected carbon trajectories of companies across the global economy.

This reliance on historical carbon data can penalize companies precisely when they are improving. A firm investing billions in decarbonization technology may still appear “high carbon” in current data, triggering exclusion before its transition plan delivers measurable results. Using PAB as an example, its GHG Scope 1 and 2 intensity is just over one-third that of its parent index. Yet when assessed against a forward-looking metric, such as the Science Based Targets Initiative (SBTi) validated net zero targets, the difference in climate ambition between PAB constituents and those in the MSCI World is minimal (Exhibit 4).

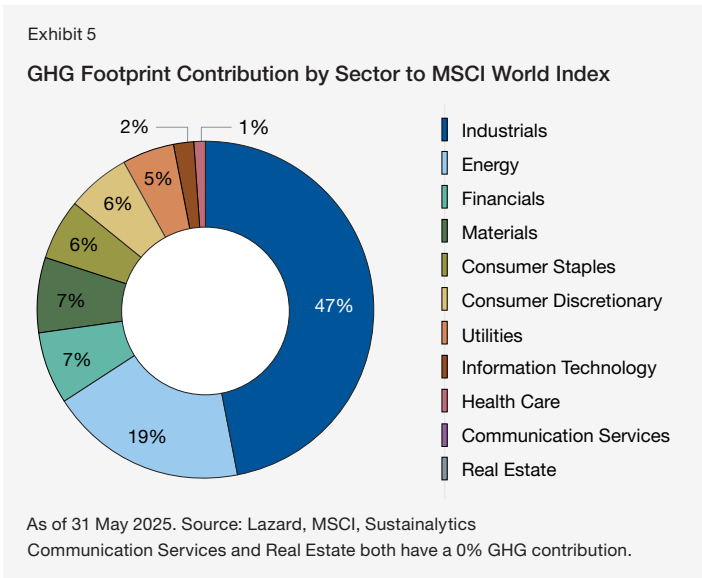
Exhibit 4

PAB Viewed through Backward- and Forward-Looking Metrics

Metric	Nature of Metric	MSCI World Climate Paris Aligned Benchmark	MSCI World Index
SBTi Validated Net Zero Targets Exposure	Forward-looking	17%	16%
GHG Scope 1, 2 Intensity (CO ₂ e Tons/\$Million Revenue)	Backward-looking	38	104

As of 31 May 2025. Source: Lazard, MSCI, SBTi, Sustainalytics

Heavy reliance on backward-looking carbon data also comes with its own challenges. Carbon emissions are unevenly distributed and effectively have their own Pareto rule: approximately 80% of emissions come from about 20% of companies. Therefore, high-impact sectors, namely industrials, energy, and utilities, have a disproportionate contribution to the benchmark's GHG footprint (Exhibit 5). Carbon caps hinder the ability of asset owners to invest in high-impact companies.



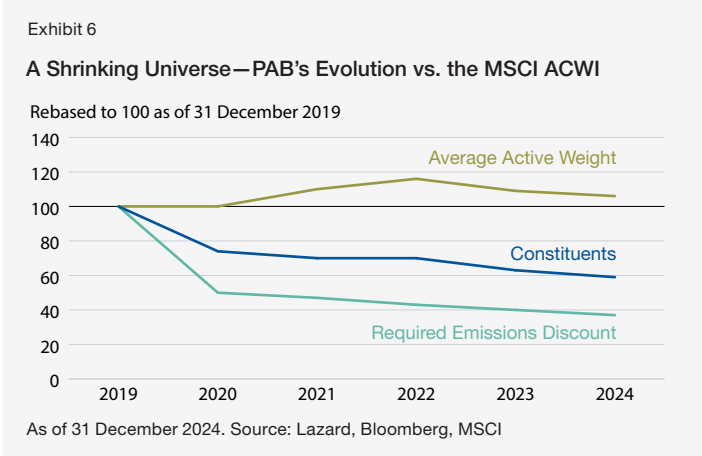
3. An Impractical 1.5°C Temperature Pathway

Many index-based transition strategies commit to aligning portfolios with the Paris Agreement's goal of limiting global warming to well below 2°C above pre-industrial levels by 2050 and preferably to 1.5°C. Yet the World Meteorological Organization reports the 1.5°C threshold was breached in 2024, when the average global surface temperature reached 1.55°C above the 1850–1990 baseline.³ While the Paris Agreement refers to long-term averages rather than a single year, the persistent rise in annual temperatures challenges the feasibility of a 1.5°C pathway. Indeed, modeling from the UN Emissions Gap Report 2025 indicates global temperatures will likely exceed 1.5°C above pre-industrial levels within the next decade.⁴

In [Navigating a Fragmented Climate Transition](#), we shared findings from our research in collaboration with the Inevitable Policy Response (published June 2025). Assumptions in our analysts' industry and company models pointed to a 1.8°C–2.0°C trajectory by 2100, which may still be considered optimistic relative to many external scenarios.

This raises the question of whether strict adherence to 1.5°C targets is practical, particularly as it tightens climate index constraints and narrows the investable universe, excluding companies with transition potential.

This narrowing effect is already visible: the MSCI ACWI Climate Paris Aligned Index's constituent universe has contracted by 41% over the past five years (Exhibit 6). Current criteria could force divestment from up to two-thirds of holdings by 2030, materially shrinking the universe and increasing active risk for index-based investors.



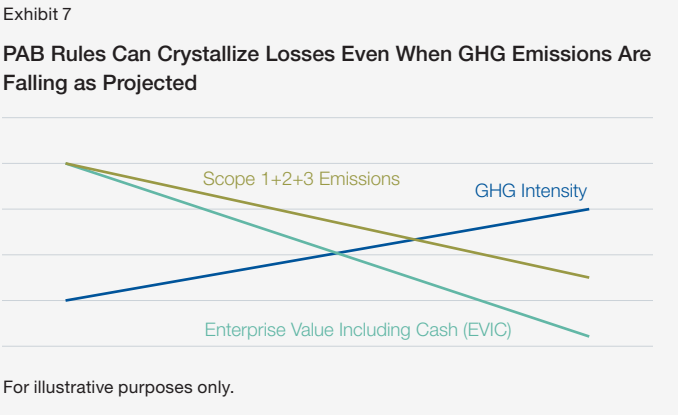
4. Rules-Based Approaches Can Crystallize Losses Even When Emissions Are Decreasing

Mechanistic rebalancing can trigger large-scale portfolio changes when emissions data shift. Even as carbon emissions decline, GHG intensity can still increase if a company's valuation—PAB uses enterprise value including cash as the denominator in the intensity formula—shrinks at a faster rate (Exhibit 7). This dynamic can be seen across other carbon intensity metrics. It can trigger divestments, leading to crystallized investment losses and underperformance thus potentially undermining asset owners' fiduciary duties.

In 2025, several PAB indices dropped companies such as Enphase Energy, Nike, and Yaskawa Electric despite their credible transition plans.

- **Enphase Energy**, a leader in solar microinverters, achieved a 13% reduction in its Scope 1 and 2 emissions during FY2023–2024. It also avoided over one million times its operational footprint through its low-carbon technology.
- **Nike** was removed from indices despite significant investment in sustainable materials and supply chain decarbonization, with its Scope 1 and 2 emissions down 5% over two years.

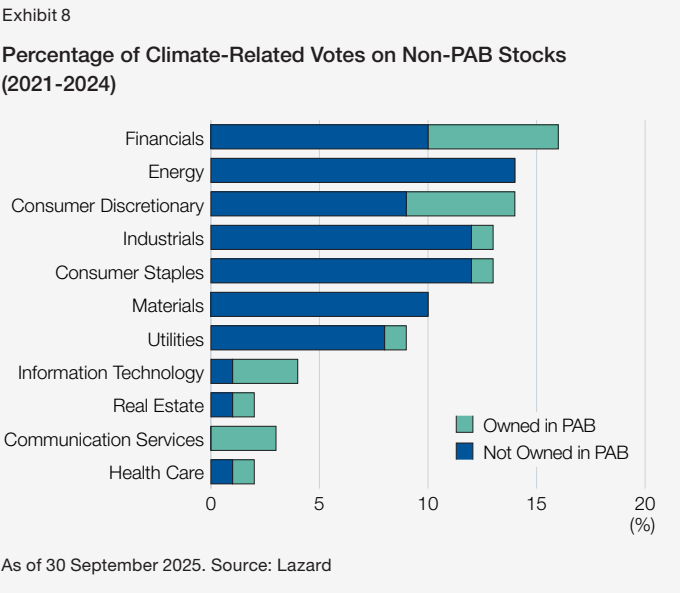
- **Yaskawa Electric**, a robotics manufacturer advancing energy-efficient automation, achieved an impressive 16% reduction across all scopes during the same period.
- These companies were removed from PAB indices just as their fundamentals were improving, crystallizing losses and removing exposure to firms with strong decarbonization trajectories. Turnover rates in some climate indices exceed 40% annually—four times higher than broad benchmarks.



5. Missed Opportunities for Active Ownership

Stewardship is a hallmark of many asset owners' investment beliefs. However, the removal of companies from portfolios, especially those in high-impact sectors, due to mechanical exclusions and carbon caps results in a disproportionate share of climate-related proxy proposals, including "Say on Climate" resolutions, not being voted upon by investors using index-based approaches (see Exhibit 8).

In a less prescriptive, top-down framework supported by active ownership, these companies could remain in a portfolio. This would allow asset managers to maintain their regular interactions with company management as part of the investment process, enabling them to address a wide range of strategic, operational, and governance topics. On the climate side, it would enable investors to support companies executing credible decarbonization plans and ensure progress is sustained. Index rules may remove these firms from portfolios before engagement can yield results.



Implications for Investors

Taken together, the structural features of index-based climate strategies result in portfolios that:

- Exhibit unrewarded tracking error and have underperformed market cap indices. Over the past five years, the MSCI World Climate Paris Aligned Index has lagged the MSCI World Index by more than 10% (Exhibit 9).
- Achieve “paper” decarbonization without contributing to real-world emissions reductions through systematically excluding or underweighting sectors critical to the transition.
- Lose the ability to inform corporate climate strategies through engagement—in our view, a key lever for achieving genuine decarbonization and protecting long-term value.

For asset owners, this may mean achieving top-down portfolio climate goals on paper at the expense of investment returns and the opportunity to more efficiently allocate capital to companies reducing real-world emissions.

Exhibit 9

PAB in Practice

	Highlights: PAB vs. MSCI World	Supporting Data: PAB vs. MSCI World
Performance (5 years cumulative)	-10.20%	77.70% vs. 87.90%
Turnover (last 12 months)	4.8x higher	11.12% vs. 2.34%
Tracking error (last 12 months) vs. MSCI World	1.57%	-
Constituents	62% fewer	498 vs. 1320

As of 31 August 2025. Source: MSCI

Solutions to Move Beyond Index-Based Approaches

Addressing the limitations of index-based climate strategies requires a forward-looking investment approach that blends climate analytics, traditional financial factors, and active ownership to promote both investment and climate goals. In our view, investors should:

1. Integrate forward-looking financial and climate metrics

Move beyond backward-looking emissions data by incorporating a broader set of forward-looking indicators such as capital expenditure plans, technology adoption rates, validated science-based targets, and policy-aware analysis, alongside financial metrics. This can help identify financially strong companies that are credible transition leaders—companies that in our view can deliver measurable operational emissions reductions and capture growth in sustainable revenue streams. Combine climate metrics with financial factors—valuation ratios, earnings growth, balance sheet strength, and cash flow generation—to seek climate alignment that does not compromise portfolio quality or returns.

2. Re-Imagine net zero frameworks

While some jurisdictions require investors to monitor and report 1.5°C alignment by 2050, we believe a flexible, policy-informed approach—anchored in company-level transition assessments—offers a better balance between climate objectives and portfolio resilience. Rather than enforcing strict top-down carbon caps tied to a potentially unachievable 1.5°C trajectory, focus instead on investing in sectors and companies that are positioned for the transition. Avoid concentration risk created by rigid exclusions. Instead, maintain diversification by capturing opportunities in hard-to-abate industries where transition leaders are likely to deliver significant emissions reductions.

3. Choose active ownership over exclusions

Minimal exclusions may be appropriate for the highest emitters, but selective exposure to high-impact companies allows investors to influence change. In our view, active ownership (engagement and voting) should be embedded in the investment process, so climate alignment can help drive value creation. With longer holding periods and targeted dialogue, investors can support companies through the transition, capturing both financial upside and measurable climate progress.

Conclusion

Climate-aware investment has moved from niche thematic strategies to becoming a central pillar of many asset owners' portfolios. PAB and similar index-based approaches have played a critical role in this evolution. However, as our analysis demonstrates, these frameworks are not without material drawbacks. Their backward-looking data reliance, rigid exclusions, and mechanistic rebalancing can unintentionally constrain opportunities, crystallize losses, and limit the ability to reduce real-world emissions.

For asset owners, the implication is clear: achieving headline climate metrics through index alignment does not necessarily equate to delivering optimal investment outcomes or meaningful decarbonization in the global economy. In fact, the structural limitations of these indices can result in unrewarded tracking errors, reduced

diversification, and missed opportunities to allocate capital toward credible transition leaders—particularly in hard-to-abate sectors critical to achieving net zero.

The transition to a low-carbon economy will be uneven, complex, and policy-driven. We believe the next phase of climate investing will require a shift from static, index-based approaches toward dynamic, forward-looking strategies that integrate climate analytics with financial assessment and active ownership. In our view, this approach can help investors identify companies that can potentially deliver both sustainable financial returns and measurable emissions reductions, while maintaining portfolio resilience in an evolving policy and market landscape. For asset owners, we believe this means moving beyond index-based approaches.

Important Information

Notes

1. Source: Clarity AI "Sustainable Finance Regulatory Outlook" – March 2025
2. Source: EU Technical Expert Group on Sustainable Finance. September 2019
3. Source: World Meteorological Organization
4. Source: UNEP Emissions Gap Report 2025

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