

PERSPECTIVES

# Decarbonizing the bond portfolio: a systematic approach to climate-aligned fixed income indices

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STOXX

# Decarbonizing the bond portfolio: a systematic approach to climate-aligned fixed income indices

**Climate investing continues to accelerate, as regulation and low-carbon commitments<sup>1</sup> push investors toward index-based solutions that can meet sustainability goals without compliance or trading practicalities.**

According to Morningstar, assets in Paris-Aligned Benchmark (EU PAB) and EU Climate Transition Benchmark (EU CTB) exchange-traded funds (ETFs), which align investments with the Paris Agreement's long-term global warming goals,<sup>2</sup> rose 28% to USD 139 billion at the end of April this year from the end of 2024.<sup>3</sup>

Interest in this segment is expanding beyond equities into bonds, where institutional investors can influence financing conditions at scale through benchmark-aware investments for strategic asset allocation and risk-management frameworks.

To serve this demand, the STOXX ICE Fixed Income Sustainability indices were introduced in 2025, combining the expertise of STOXX and Intercontinental Exchange (ICE),<sup>4</sup> leading data from ISS Sustainability and an optimizer from Axioma. The launch reflects two converging trends: the growth of sustainable fixed income products and of index-based vehicles such as ETFs. Assets in fixed income PAB and CTB ETFs rose 19% to USD 13.4 billion between the end of 2024 and April 2026, Morningstar data show.<sup>5</sup> That's still only 11% of the capital invested in similar equity ETFs.

The index set was constructed to comply with the PAB and CTB requirements,<sup>6</sup> and covers the investment-grade segment in US dollars, euros, sterling and other currencies, and high-yield bonds in dollars and euros. The PAB and CTB strategies may gain even more prominence in Europe under a new SFDR<sup>7</sup>, which has proposed new sustainability categories that broaden their role.

“Because of its scale, the fixed income market represents a critical lever in climate transition finance,” said Antonio Celeste, Head of Sustainability and Factors, Index Product Management at STOXX. “Advances in data and optimization technologies now make it possible to bring the same indexing rigor to bond allocations that investors have long applied in equities, integrating decarbonization objectives in a practical and transparent way.”

“We timed the launch of these indices to help investors navigate an increasingly complex sustainability landscape, where multiple investment considerations must be addressed together,” Celeste added.

This report aims to explore the performance of the STOXX ICE Fixed Income Sustainability indices from return and sustainability perspectives.

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<sup>1</sup> According to Mercer, in “[The evolving sustainable investment landscape for large asset owners](#)” (October 29, 2025), nearly half of the large asset owners surveyed by the consultancy company between October 2024 and January 2025 said they have climate transition targets, and a further 15% expects to do so within the next two years.

<sup>2</sup> The STOXX ICE Fixed Income Sustainability indices were launched five years after STOXX introduced global PABs and CTBs for equities. For information on the PAB and CTB frameworks, see an [original article here](#) and a [follow-up article](#) from 2026 covering a methodology update.

<sup>3</sup> Source: Morningstar.

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<sup>4</sup> ICE, the owner of the New York Stock Exchange and a leading provider of market technology and data, is responsible for pricing, reference data and index calculation services in the STOXX ICE Fixed Income Sustainability indices. STOXX, which developed the indices, oversees their administration and provides its proprietary data.

<sup>5</sup> According to Morningstar, in “[Global Sustainable Fund Flows: Q1 2026](#),” sustainable equity funds saw net outflows in every quarter of 2025, while sustainable fixed income funds registered net inflows.

<sup>6</sup> Commission Delegated Regulation (EU) 2020/1818.

<sup>7</sup> EU Sustainable Finance Disclosure Regulation.

## Suite scope

The indices are derived from ICE BofA index universes and cover six segments, detailed in Figure 1. The parent ICE BofA indices are among the most widely used fixed income benchmarks in the world, covering trillions of dollars in debt across major currencies. Eligibility criteria—including minimum issuance size thresholds—ensure that constituent bonds meet institutional liquidity standards.

PABs and CTBs, meanwhile, are becoming standard guidelines in Europe and beyond, helping improve transparency and comparability in sustainable investments.

PABs are geared to investors with significant ambition on climate change mitigation as they shift investments away from carbon-intensive activities and toward renewable energy and energy efficiency. CTBs are appropriate for investors seeking to protect their assets against climate-transition risks.

**Figure 1: STOXX ICE Fixed Income Sustainability indices—coverage**

ICE parent universe	Climate Transition Benchmark	Paris-Aligned Benchmark
	Index name	Index name
ICE BofA US Corporate index (COAO)	STOXX ICE US Corporate CTB index	STOXX ICE US Corporate PAB index
ICE BofA US High Yield index (HOAO)	STOXX ICE US High Yield CTB index	STOXX ICE US High Yield PAB index
ICE BofA Euro Corporate index (ER00)	STOXX ICE Euro Corporate CTB index	STOXX ICE Euro Corporate PAB index
ICE BofA Euro High Yield index (HE00)	STOXX ICE Euro High Yield CTB index	STOXX ICE Euro High Yield PAB index
ICE BofA Sterling Corporate index (UR00)	STOXX ICE Sterling Corporate CTB index	STOXX ICE Sterling Corporate PAB index
ICE BofA Global Corporate index (GOBC)	STOXX ICE Global Corporate CTB index	STOXX ICE Global Corporate PAB index

Source: STOXX.

## Index methodology

Index construction follows an optimization process that uses the Axioma Portfolio Optimizer software. It is aimed at meeting the requirements detailed in the Commission Delegated Regulation (EU) 2020/1818—including carbon footprint reduction thresholds relative to the starting universe and a minimum decarbonization pathway—while minimizing turnover. The latter is of particular interest for asset owners and investors in general.

The indices overweight companies that have greenhouse gas (GHG) reduction targets under the Science Based Targets initiative (SBTi)<sup>8</sup> and aim for a minimum ‘green-to-brown’ revenue ratio. They exclude companies

based on global norms, product involvement and controversies. The PABs also remove companies with activities that hinder certain United Nations Sustainable Development Goals (SDGs) (Figure 2).

Exclusionary screens, Scope 1–3 emissions data, ‘green-to-brown’ ratios, SDGs contribution/obstruction data and SBTi disclosures are all provided by ISS Sustainability.

Importantly, there are also constraints in terms of duration times spread, exposure to ICE Industries and countries, yield, and caps at the security and issuer level.

<sup>8</sup> The methodology overweights issuers with SBTi Approved, Committed and Ambitious targets.

Figure 2: STOXX ICE Fixed Income Sustainability indices—methodology

Core Fixed Income Sustainability indices	~90% coverage in ESG data with ISS offers a competitive edge in Investment Grade	Constraints based on EU Climate Benchmarks Regulation, investment objectives
<b>ICE parent universes</b> <ul style="list-style-type: none"> <li>• ICE BofA US Corporate index (COAO)</li> <li>• ICE BofA US High Yield index (H0AO)</li> <li>• ICE BofA Euro Corporate index (ER00)</li> <li>• ICE BofA Euro High Yield index (HE00)</li> <li>• ICE BofA Sterling Corporate index (UR00)</li> <li>• ICE BofA Global Corporate index (GOBC)</li> </ul>	<b>Exclusions</b> <p>For STOXX ICE FI CTB indices, companies are excluded if they</p> <ul style="list-style-type: none"> <li>• violate global norms per ISS Sustainability data</li> <li>• are involved in controversial weapons</li> <li>• are tobacco producers</li> </ul> <p>The STOXX ICE FI PAB indices have the following additional exclusions based on specific thresholds:</p> <ul style="list-style-type: none"> <li>• Revenue generation from fossil fuels</li> <li>• Power generation from fossil fuels or biomass</li> <li>• Significant obstruction to SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water) and SDG 15 (Life on Land)</li> </ul>	<b>Carbon and SDG constraints</b> <ul style="list-style-type: none"> <li>• Minimum Scope 1+2+3 GHG intensity reduction</li> <li>• 30% reduction over parent Index (CTB), 50% reduction over parent Index (PAB)</li> <li>• 7% YoY decarbonization from base date Dec. 2020</li> <li>• Overweight companies with approved, committed and ambitious science-based climate targets</li> <li>• Green-to-brown revenue ratio: PAB indices – at least 4x parent Index, CTB indices – ≥ parent Index</li> </ul>
<b>Risk and diversification constraints</b> <p>Optimization objective: minimize turnover vs. parent index</p>	<b>Constraints</b> <ul style="list-style-type: none"> <li>• Duration times spread +/- 5% of parent in industry, country</li> <li>• Yield ≥ parent index</li> <li>• Maximum issuer weight is 1%</li> <li>• One-way turnover ≤ parent Index +1%</li> <li>• Security is removed if ISS Sustainability data is missing</li> </ul>	

Source: STOXX.

## Performance—minimal tracking error

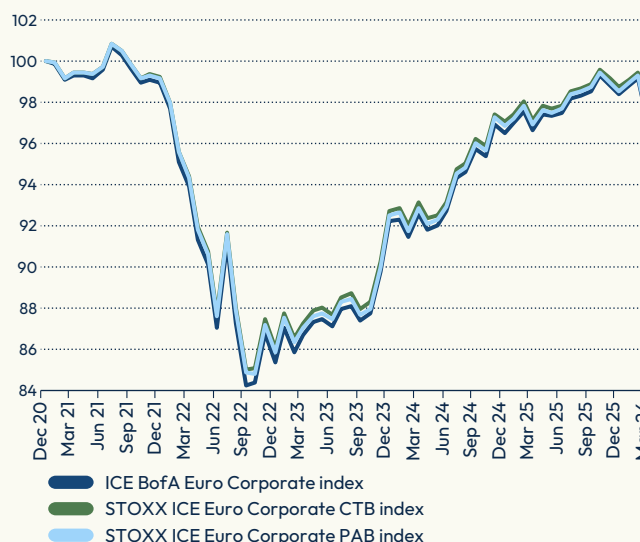
Backtested results show the STOXX ICE Fixed Income indices deliver low tracking error, while offering sustained performance. Figures 3 through 5 show risk, returns and fixed income characteristics of PAB and CTB indices

derived from three universes:

- ICE BofA Euro Corporate
- ICE BofA Euro High Yield
- ICE BofA Sterling Corporate

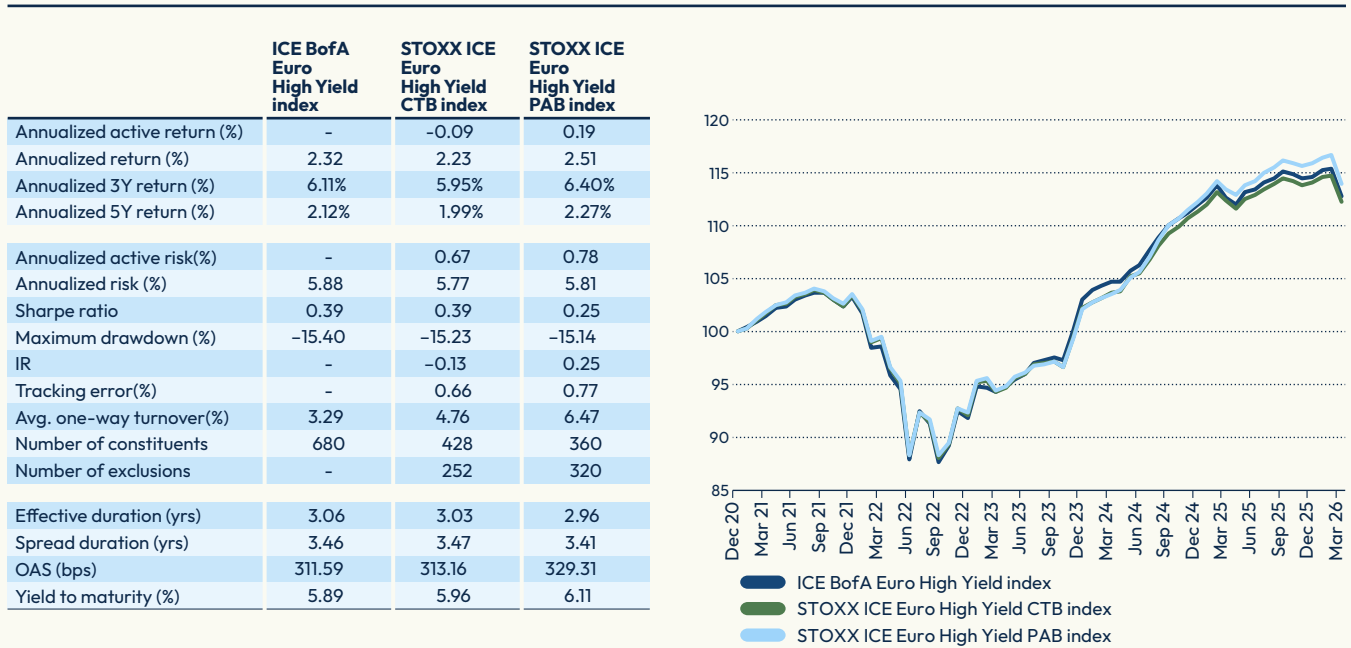
Figure 3: STOXX ICE Euro Corporate indices—performance

	ICE BofA Euro Corporate index	STOXX ICE Euro Corporate CTB index	STOXX ICE Euro Corporate PAB index
Annualized active return (%)	-	0.06	0.02
Annualized return (%)	-0.59	-0.53	-0.57
Annualized 3Y return (%)	3.78%	3.66%	3.69%
Annualized 5Y return (%)	-0.48%	-0.45%	-0.48%
Annualized active risk(%)	-	0.24	0.23
Annualized risk (%)	5.19	5.02	5.09
Sharpe ratio	-0.11	-0.03	-0.11
Maximum drawdown (%)	-16.37	-15.68	-15.88
IR	-	0.25	0.09
Tracking error(%)	-	0.24	0.23
Avg. one-way turnover(%)	1.96	2.39	3.05
Number of constituents	4,593	4,148	3,477
Number of exclusions	-	445	1,116
Effective duration (yrs)	4.68	4.59	4.66
Spread duration (yrs)	4.68	4.65	4.7
OAS (bps)	91.05	92.56	91.35
Yield to maturity (%)	3.67	3.69	3.68



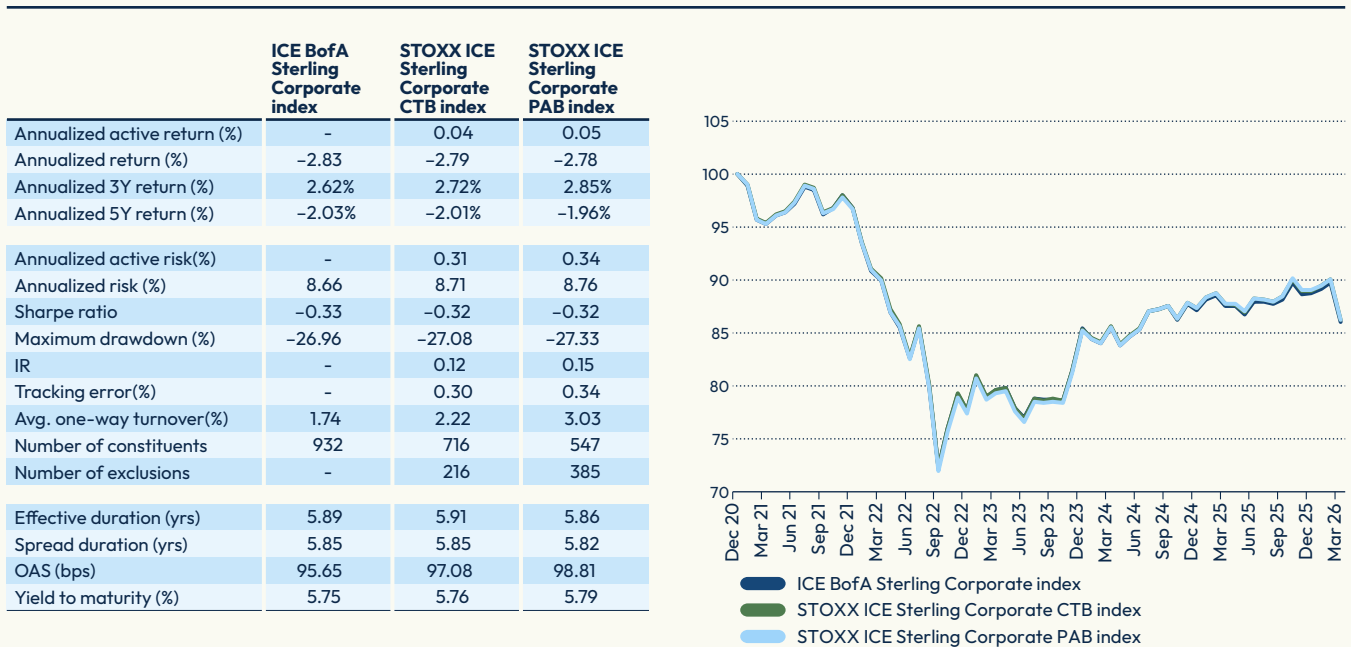
Source: STOXX, ICE as of March 31, 2026. Total return in USD. Unless specified, all risk and return metrics are annualized over the December 2020 to March 2026 period.

Figure 4: STOXX ICE Euro High Yield indices—performance



Source: STOXX, ICE as of March 31, 2026. Total return in USD. Unless specified, all risk and return metrics are annualized over the December 2020 to March 2026 period.

Figure 5: STOXX ICE Sterling Corporate indices—performance



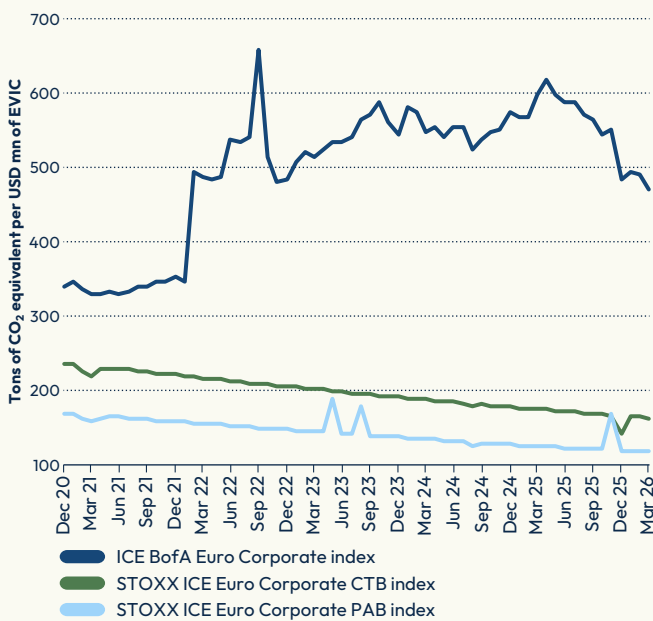
Source: STOXX, ICE as of March 31, 2026. Total return in GBP. Unless specified, all risk and return metrics are annualized over the December 2020 to March 2026 period.

Notably for fixed income investors, the PAB and CTB portfolios also maintain similar characteristics to those of the benchmark in terms of duration, option-adjusted spread (OAS) and yield. The similarities reflect constraints in the index construction methodology.

## Carbon profiles

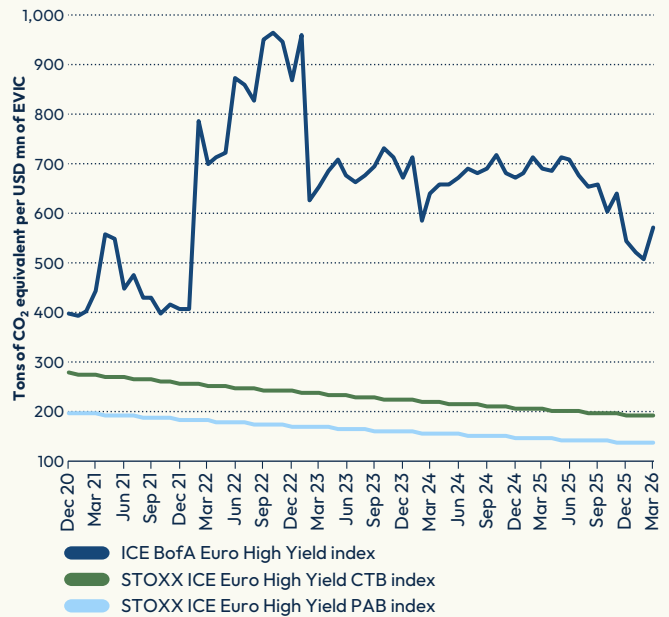
From a climate perspective, an analysis of the portfolios' carbon footprint and issuers' emissions commitments allows investors to assess the pace and potential pathway of decarbonization. Figures 6 through 8 show that the STOXX ICE Fixed Income Sustainability indices have consistently maintained a significantly lower weighted-average carbon intensity than their respective benchmarks—an objective embedded in the PAB and CTB methodology.

**Figure 6: STOXX ICE Euro Corporate indices—weighted-average carbon intensity**



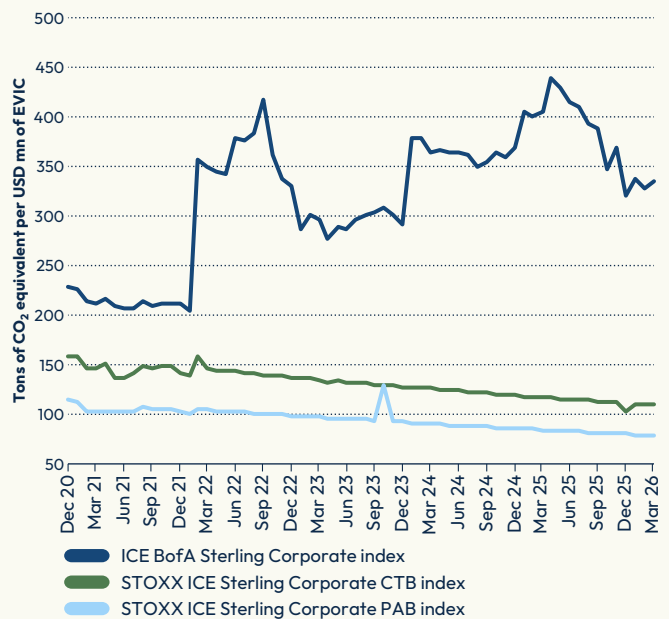
Source: STOXX, ICE as of March 31, 2026.

**Figure 7: STOXX ICE Euro High Yield indices—weighted-average carbon intensity**



Source: STOXX, ICE as of March 31, 2026.

**Figure 8: STOXX ICE Sterling Corporate indices—weighted-average carbon intensity**



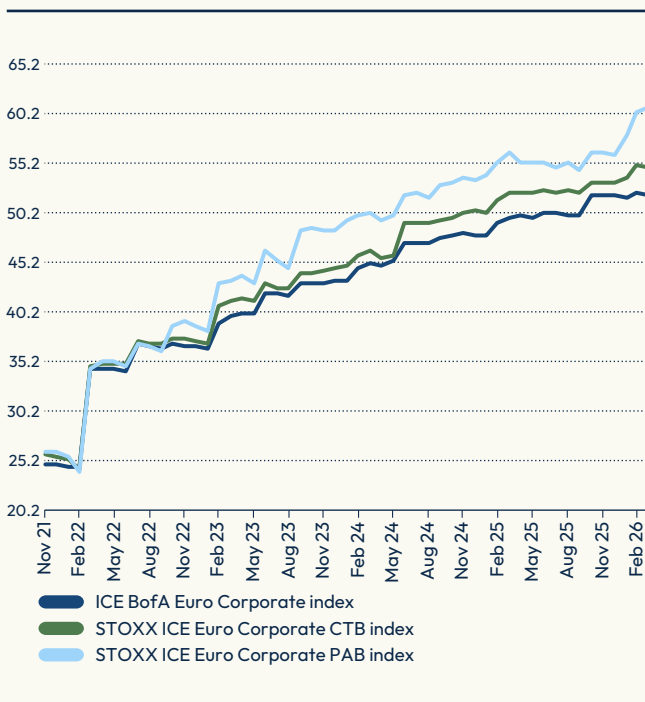
Source: STOXX, ICE as of March 31, 2026.

## Emissions commitments

Over time, the STOXX ICE Fixed Income Sustainability indices have maintained a higher allocation to bonds with SBTi-approved targets than the benchmark (Figures 9 through 11). This higher exposure is consistent with the index methodology and exclusion framework.

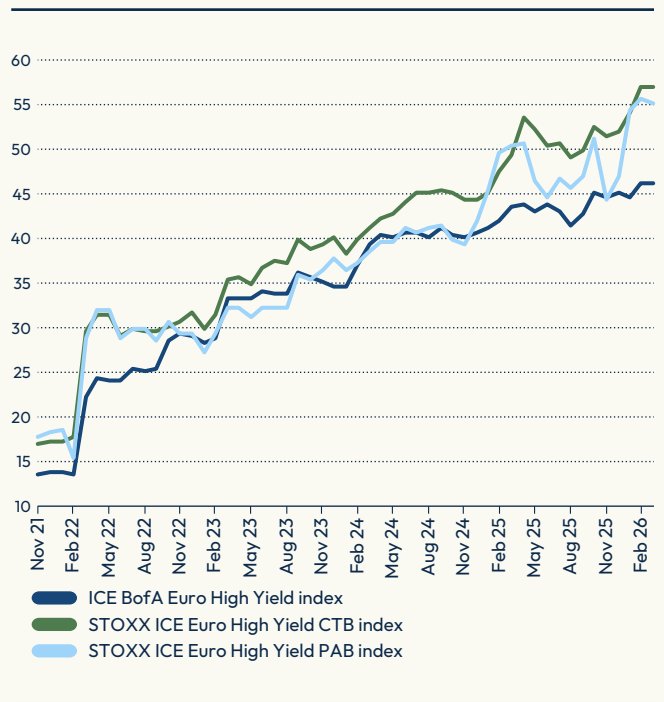
The trend for both PAB and CTB indices, and for the benchmark, is one of increased representation of companies with science-based carbon targets. The number of companies with validated targets rose 40% to 9,764 by end-2025 from a year earlier, according to SBTi,<sup>9</sup> facilitating investment strategies with such criteria in focus.

**Figure 9: STOXX ICE Euro Corporate indices— SBTi approved targets (%)**



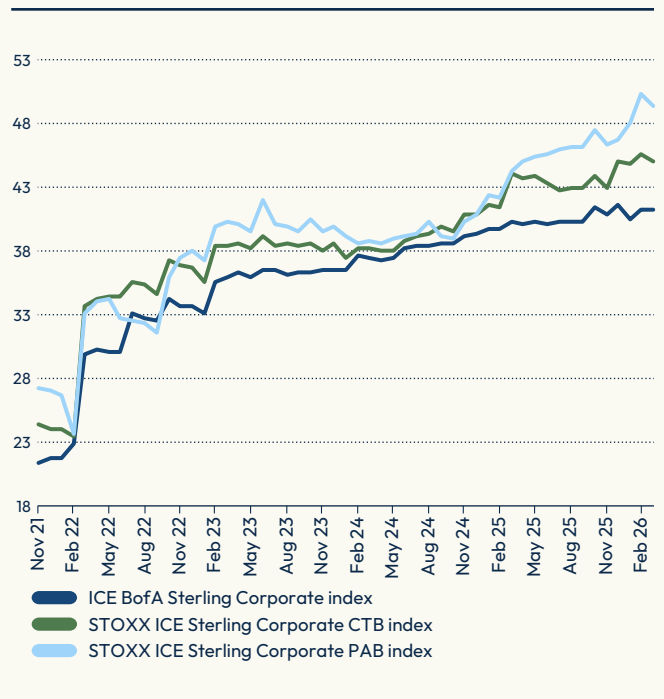
Source: STOXX, ICE as of March 31, 2026.

**Figure 10: STOXX ICE Euro High Yield indices— SBTi approved targets (%)**



Source: STOXX, ICE as of March 31, 2026.

**Figure 11: STOXX ICE Sterling Corporate indices— SBTi approved targets (%)**



Source: STOXX, ICE as of March 31, 2026.

<sup>9</sup> SBTi, "Corporate climate target-setting up 40% in 2025, with Asia emerging as a centre of gravity," April 9, 2026.

## Systematic framework to integrate climate objectives

The market for sustainable fixed income products remains nascent relative to its potential. Only about 3% of assets under management in fixed income ETFs have a sustainable focus, according to ISS Sustainability<sup>10</sup>, and a higher ratio is needed if the world is to meet global warming targets by 2050.

That gap represents both a challenge and an opportunity. The STOXX ICE Fixed Income Sustainability indices are designed to meet growing demand in climate-focused solutions in the bond market, a structural trend set to continue amid ongoing EU disclosure requirements and asset owner net-zero commitments.

The index suite brings together the capabilities and expertise of several partners. By offering a systematic framework that combines close benchmark alignment, rigorous decarbonization and a growing universe of SBTi-validated issuers, the indices are positioned not merely as a compliance tool but as a durable building block for climate-aware fixed income allocation—one whose relevance is likely to rise.



<sup>10</sup> Source: ISS Sustainability, “2025 Sustainable Fund Trends: Appreciation Drives 17% AUM Growth,” March 17, 2026.

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