Investing in Times of Climate Change

Headwinds Hit Flows into Global Climate Funds

Morningstar Sustainalytics

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Key Takeaways

Global Climate Fund Assets Rise to USD 572 billion

- Global assets in mutual funds and ETFs with a climate-related mandate rose by 6% in the first nine months of 2024 to USD572 billion, supported by market price appreciation.
- Europe accounted for 85% of these assets, while China and the United States ranked far behind, with market shares of 6% and 5%, respectively.

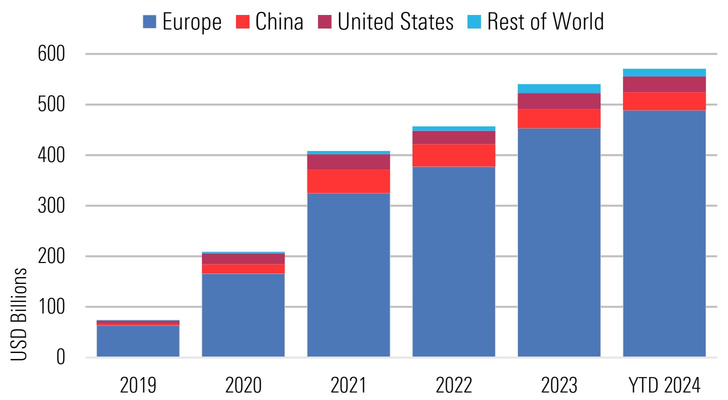
Steady Growth of Climate Transition Funds, but Clean Energy/Tech Fund Assets Shrink

- Climate Transition funds, which tilt toward companies that are better prepared for the transition to a low-carbon economy, have grown by 14% so far this year to nearly USD238 billion, globally.
- By contrast, assets in Clean Energy/Tech funds have shrunk by 17%. Renewable energy stocks have continued to face headwinds, such as high costs and project delays.

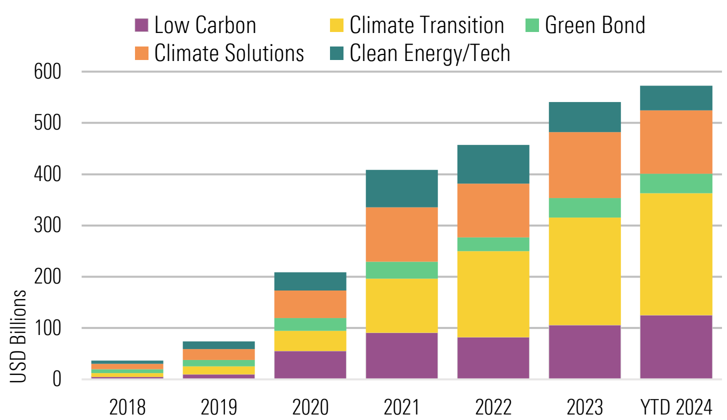
Global Climate Funds in Outflows For The First Time

- Global climate funds are likely to experience their first year of outflows, as redemptions reached almost USD 24 billion in the first nine months of 2024.
- Investors pulled the most money from Climate Solutions and Clean Energy/Tech funds, while Climate Transition funds registered redemptions too.
- In addition to the poor performance of green energy stocks, factors likely affecting investor appetite for climate funds include greenwashing concerns, regulatory uncertainties, and anti-ESG sentiment.

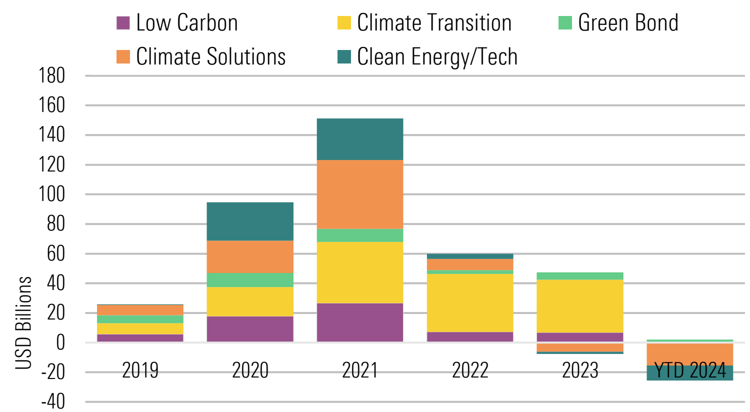
Climate Funds by Region



Climate Funds by Category



Global Flows Into Climate Funds



Key Takeaways

PAB-Tracking Funds in Outflows, Despite Outperformance

- Funds tracking Paris-aligned benchmarks (PAB) experienced outflows of USD 6.8 billion from January to September, despite their positive performance in the past few years, on average, relative to peers.
- Meanwhile, funds tracking climate transition benchmarks (CTB) registered net inflows of USD 3.6 billion.

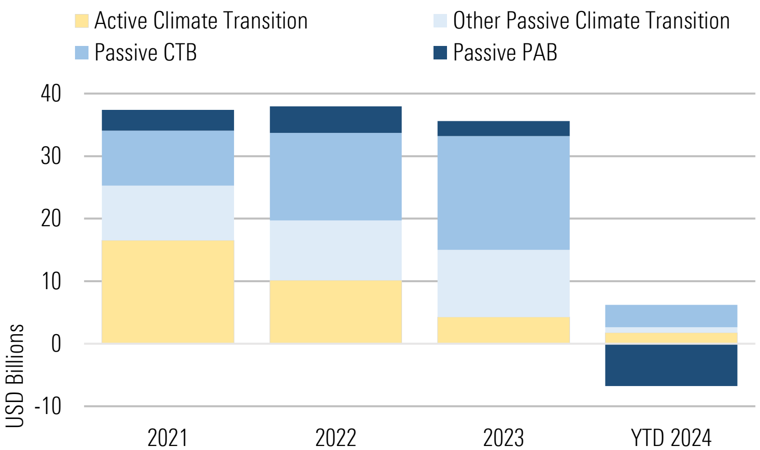
Electric Vehicles/Smart Mobility Funds Among the Climate Solutions Funds Bleeding the Most Money

- Mixed Climate Solutions funds have bled the most money so far this year, with USD 6.7 billion in redemptions, almost double the outflows in 2023. This is followed by Electric Vehicles/Smart Mobility funds, with redemptions of USD 3.3 billion.
- All other Climate Solutions fund subcategories, except Infrastructure and Transition Materials, have also experienced outflows.

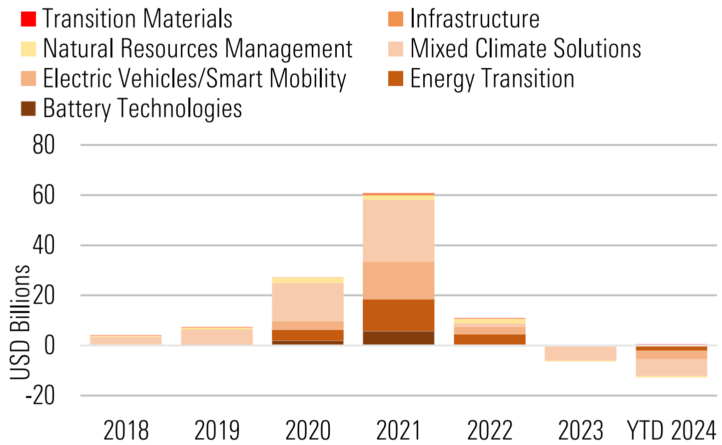
Green Bond and Climate Transition Funds Tilt Toward Companies With Stronger Emissions Management

- Green Bond funds and Climate Transition funds invest in, or tilt toward, companies that tend to manage their emissions better than those held by Climate Solutions and Clean Energy/Tech funds. This is reflected in their higher average emissions management score of 58 and 56, respectively, while Clean Energy/Tech funds have the lowest, at 48.

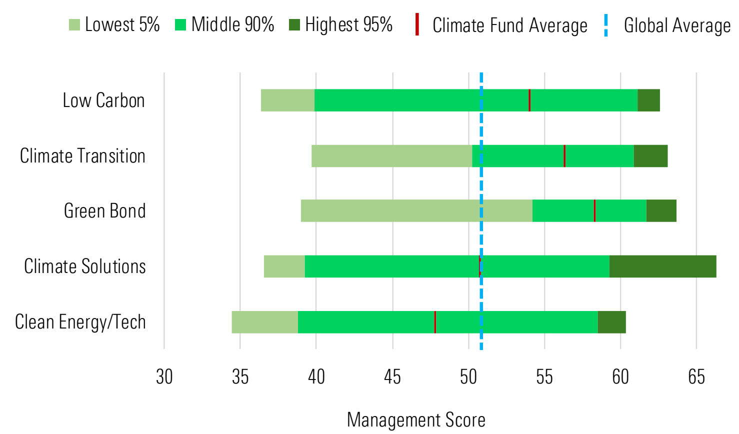
Flows Into Climate Transition Fund Subcategories



Flows Into Climate Solutions Funds Subcategories



Management Scores Across Climate Fund Types



The Global Climate Funds Landscape

Introduction

In this new edition of **Investing in Times of Climate Change**, we provide an update on the rapidly evolving global landscape of climate-related open-end funds and ETFs as of September 2024*.

Climate change is among the top systemic risks for investment portfolios. Some investments will be disadvantaged in the transition to a low-carbon economy because of changes in regulation, technology, and consumer behavior, among other factors. If mitigation efforts do not accelerate as temperatures keep rising and extreme weather events, such as flooding or hurricanes, become more frequent, investments will face higher physical risks.

At the same time, more investors are seeking to capitalize on opportunities and invest in companies that develop innovative solutions to mitigate climate change or adapt to it, such as clean energy, electric vehicles, carbon capture and storage, and flood defenses. Getting the world on track for net zero emissions by 2050 requires clean energy transition-related investment to accelerate from USD1.8 trillion in 2023 to around USD4.5 trillion annually by 2030, according to the 2023 International Energy Agency's Net Zero Roadmap.

The menu of options for climate-focused investors across the globe has ballooned in the past five years. We identified nearly 1,600 mutual funds and ETFs with a climate-related mandate globally as of September 2024, compared with fewer than 200 in 2018.

Global assets in climate funds continued climbing too, clocking in at USD572 billion at the end of September, supported mainly by market price appreciation.

But flows in this segment of the market are like to experience their first annual outflows on record, with redemptions reaching almost USD 24 billion in the first nine months of 2024. These outflows are in stark contrast to the USD 345 billion in combined inflows during the previous four years.

A few factors are at play, including the poor performance of renewable energy stocks, which have faced persistent headwinds over the past four years, including high interest rates, materials inflation, supply chain disruptions, and project delays. Factors affecting the broader universe of ESG funds have also likely reduced investor appetite for climate products, including greenwashing concerns, regulatory uncertainties around product classification and standards, and anti-ESG sentiment.

That said, climate-related funds continue to account for about 20% of the global ESG funds market, and represent a wide range of strategies, from decarbonizing portfolios to investing in climate-related solutions.

In this report, we discuss the wide range of climate funds available, which we subdivide into five mutually exclusive categories: Low Carbon, Climate Transition, Green Bond, Climate Solutions, and Clean Energy/Tech. We examine the continued asset growth, flows, and products in each grouping. We assess their level of alignment to a 1.5°C world using Sustainalytics' Low Carbon Transition Rating metrics. We examine their emissions management score and Value at Risk. Finally, we discuss how each type of climate strategy, given its unique risk/reward characteristics, can fit into an investor's portfolio.

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* The previous edition of Investing in Times of Climate Change – April 2024 – can be found here: [Investing in Times of Climate Change: 2023 in Review]

Global Climate Fund Assets up by Almost 6% Year to Date, with Continued European Dominance

- As of September 2024, we identified close to 1,600 climate-related funds globally.

How we define the climate funds universe:*

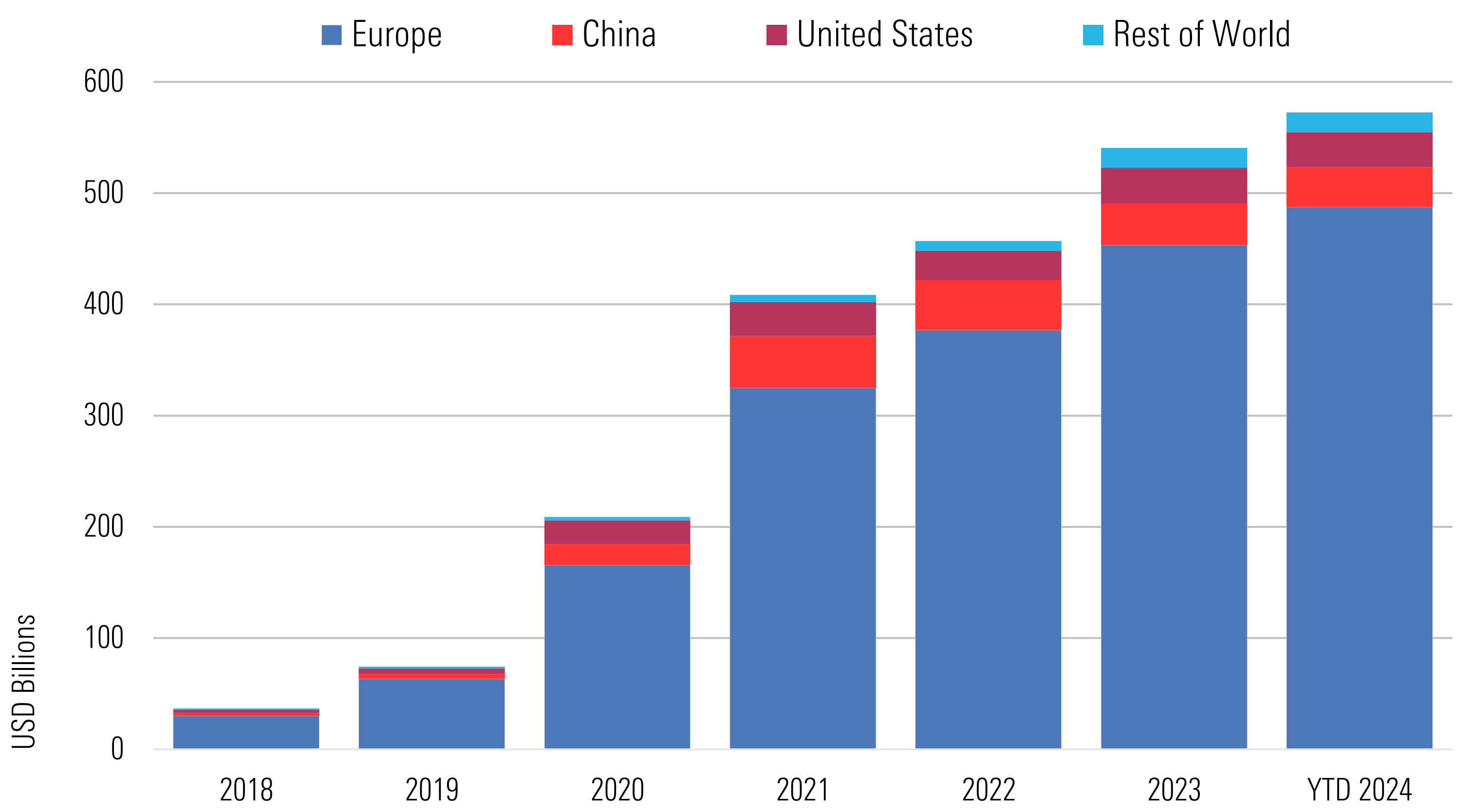
- The climate funds universe encompasses open-end funds and exchange-traded funds that have investment strategies related to the climate-change theme.

- To identify these funds, we used a range of key terms in their names (or index names in the case of passive funds). Key terms include obvious words such as "climate," "carbon," "transition," and "green," but also words related to themes and sectors linked to climate change solutions, such as "renewable energy," "electric vehicles," and "batteries."

- Total assets in climate funds grew by almost 6% in the first nine months of the year to USD 572 billion, driven primarily by market appreciation.

- Unsurprisingly given its greater and continued commitment to a climate agenda, Europe remains the main contributor, accounting for 85% of the global universe in terms of assets. China and the United States rank far behind at second and third, with market shares of 6% and 5%, respectively, in terms of assets.

Global Assets in Climate Funds (By Region)

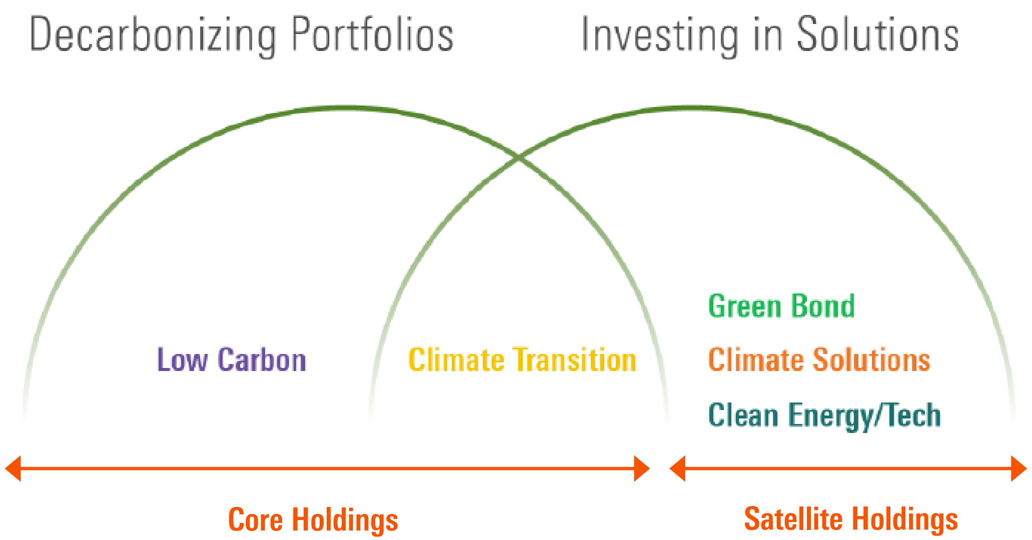


Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

* See Appendix for more details.

The Universe of Climate Funds: From Decarbonizing Portfolios to Investing in Climate Solutions*

Mutual funds with a climate-related mandate represent **a wide and growing range of strategies*** that aim to meet varying investor objectives and preferences, from decarbonizing portfolios to investing in climate solutions.



Low Carbon
Invest in companies with low-carbon footprints

Climate Transition
Invest in or tilt toward companies that will transition better to a low-carbon economy

Green Bond
Invest in bonds that finance projects facilitating the transition

Climate Solutions
Invest in companies whose products and services contribute to the transition

Clean Energy/Tech
Invest in companies whose products contribute to or facilitate the energy transition

* See Appendix for more details.

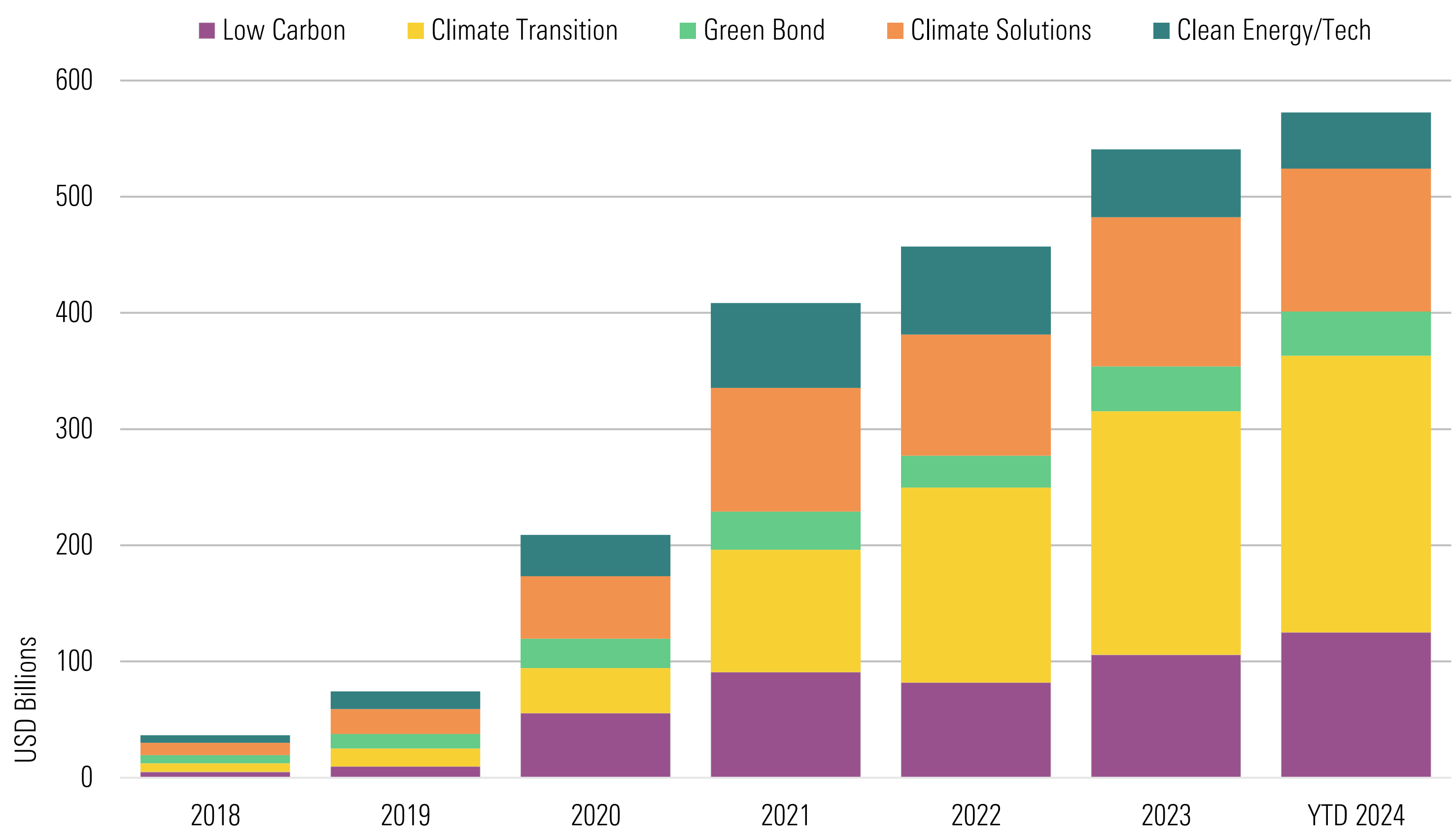
Steady Growth of Climate Transition and Low Carbon Strategies, While Clean Energy/Tech Fund Assets Shrink

- Climate Transition funds have grown in the past four years to become the largest climate fund category, with USD 238 billion in assets at the end of September, up by 14% so far in 2024. Climate Transition funds invest in or tilt towards companies that are better prepared to transition to a low-carbon economy.

- Assets of Low Carbon strategies rose by 18% to reach USD 125 billion. Both strategy types, which provide broad and diversified exposure to the market, have benefited from market price appreciation and higher tech stock valuations, in particular. For context, the year-to-date return of the Morningstar Global Target Market Exposure is almost 21%.

- By contrast, assets in Climate Solutions funds declined by 4.2% to USD 123 billion. Assets in Clean Energy/Tech and Green Bond funds also fell 17% and 1.3% to USD 48 billion and USD 38 billion, respectively. Renewable energy stocks have continued to face headwinds, such as high financing costs, materials inflation, and project delays. For context, the Morningstar Global Energy Transition index and Global Markets Renewable Energy index saw gains of only 5.8% and 1.9%, respectively. Both themes feature prominently in Climate Solutions and Clean Energy/Tech categories.

Global Assets in Climate Funds (By Category)



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Regional Breakdown Shows Different Investor Preferences

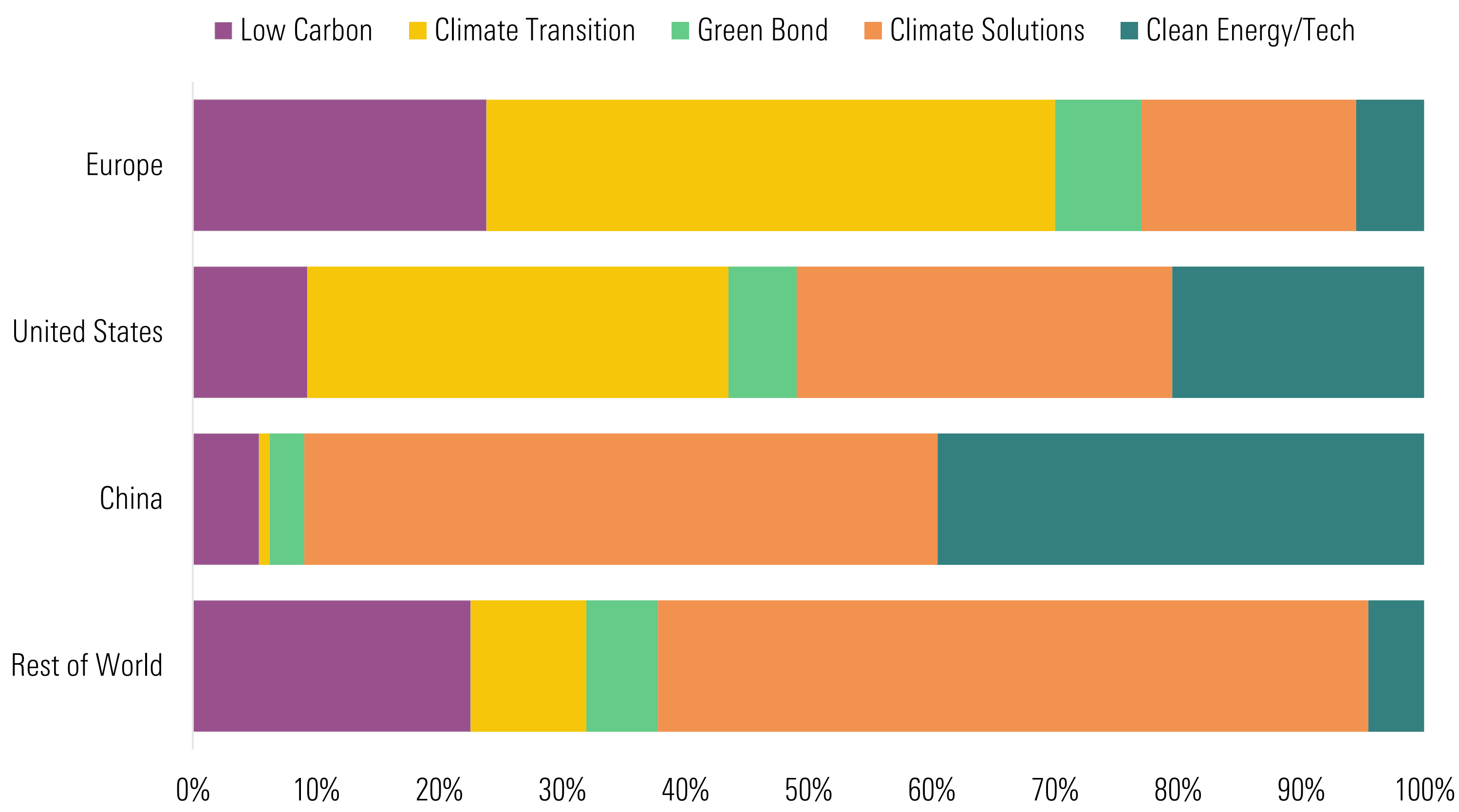
- In relative terms, European investors tend to favor decarbonization strategies (Low Carbon) and funds focused on both risks and opportunities (Climate Transition). The latter accounts for 46% of European climate fund assets compared with 17% and 5% for Climate Solutions and Clean Energy/Tech funds, respectively.

- While interest among US investors in Climate Transition funds is gradually increasing – this year becoming the largest climate fund category – the bulk of the assets remain in Clean Energy and Climate Solutions strategies, in aggregate.

- The rise of Climate Transition strategies in recent years highlights a growing desire among investors to decarbonize their portfolios but also achieve real world decarbonization by investing in transitioning companies. Investors are replacing traditional core holdings with funds designed to perform well in a world shifting towards a low-carbon economy.

- Meanwhile, Chinese investors remain almost solely interested in Clean Energy/Tech or Climate Solution funds, two groupings accounting for 90% of the country's total climate fund assets.

Regional Breakdown of Climate Funds by Climate Category

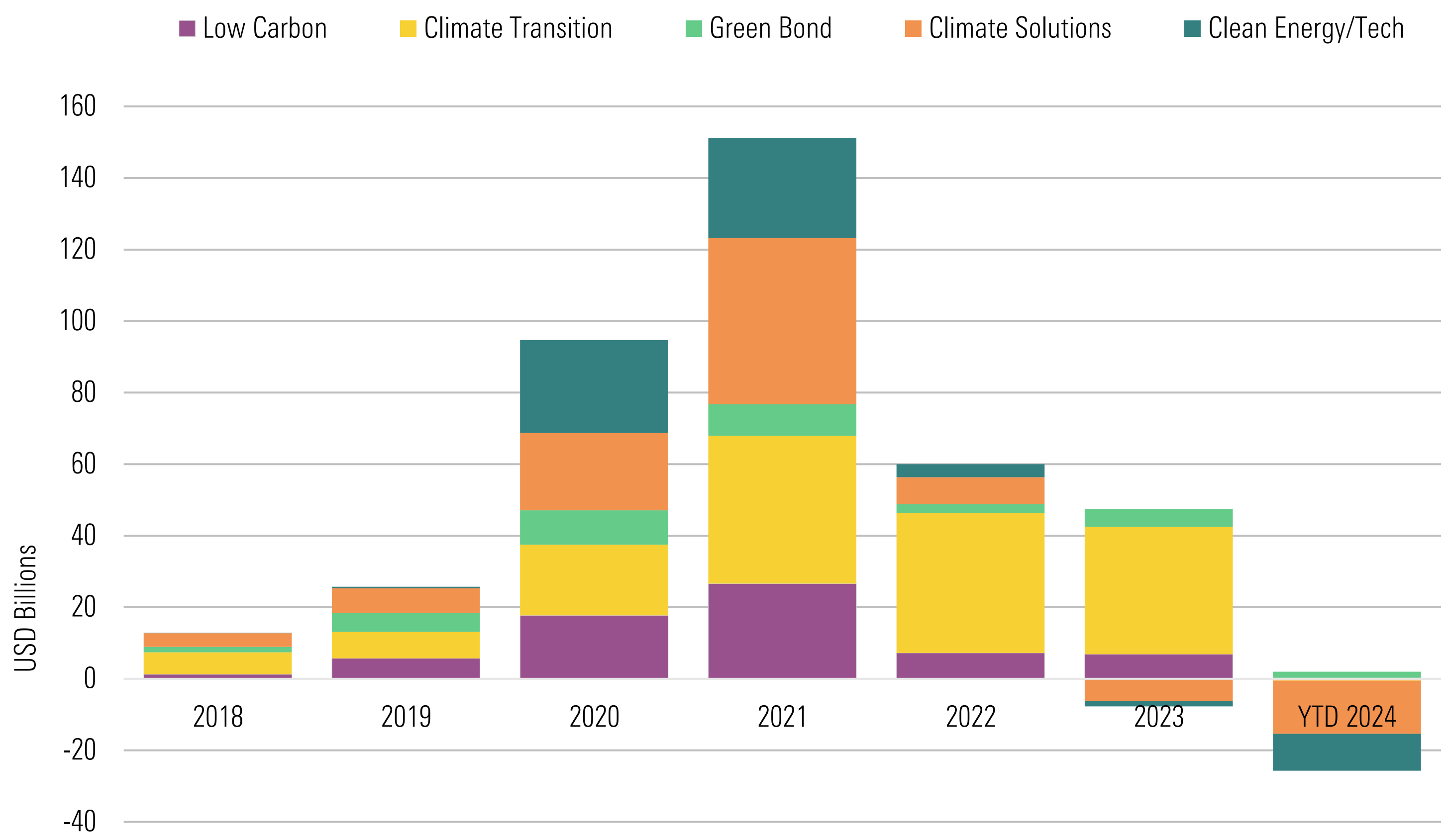


Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Global Flows Are Negative Year to Date; Climate Solutions and Clean Energy/Tech Funds Suffer the Most

- Global climate funds are likely to see their first annual outflows on record. Total redemptions amounted to almost USD 24 billion from January to September 2024. This is in stark contrast with the USD 345 billion of combined inflows registered during the previous four years.
- Investors have pulled the most money from Climate Solutions and Clean Energy/Tech funds globally, which have registered withdrawals of USD 15 billion and USD 10.3 billion, respectively. Renewable energy stocks are still facing headwinds, such as high financing costs, materials inflation, and project delays.
- Meanwhile, Climate Transition, a popular climate strategy grouping in the past, has experienced small outflows of USD 530 million.
- Green Bond funds (USD 1.7 billion) and Low Carbon funds (USD 260 million) are the only two categories registering inflows.

Annual Flows Into Global Climate Funds

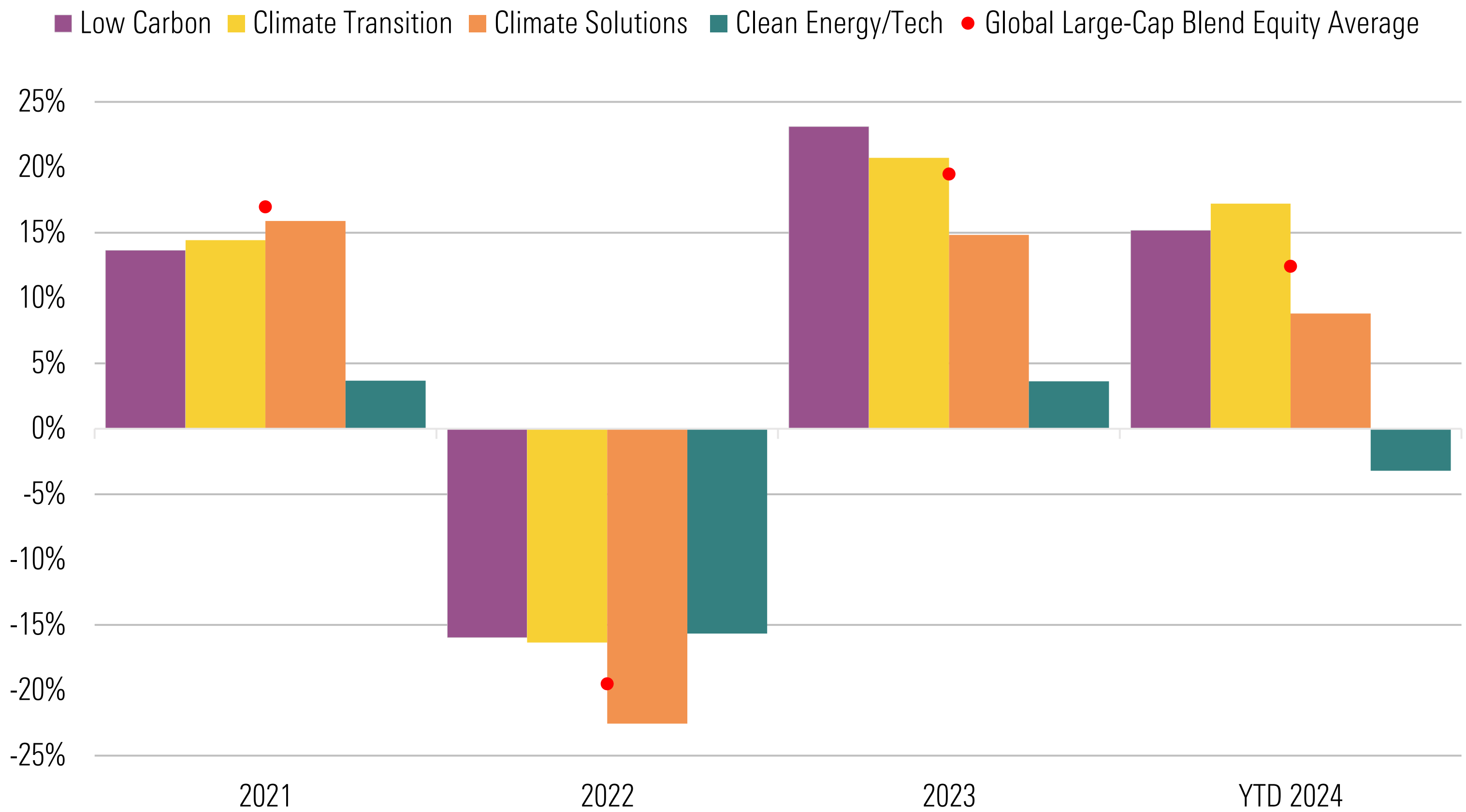


Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Diverging Performance – Climate Solutions and Clean Energy/Tech Greatly Underperform

- Climate Transition funds with global large-cap exposure have outperformed all climate strategies so far this year, with an average return of 17.2%, compared with a return of 12.4% for the average peer in the Global Large-Cap Blend Equity category.
- With similarly diversified sector exposure, Low Carbon funds returned 15.2% year-to-date. 2023 saw Low Carbon strategies regain ground with an annualized return of 23%, a strong recovery of the -16% registered one year earlier.
- By contrast, Clean Energy/Tech funds have consistently lagged other climate fund peers since early 2021. In the first nine months of 2024, they registered a negative return of 3.2%, highlighting the persistent challenges in this sector. Headwinds in the past four years include high interest rates, materials inflation, supply chain disruptions, and project delays.
- Climate Solutions funds have also underperformed, although to a lesser extent.

Performance of Climate Funds with Exposure to Global Large Cap Equities



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Focus on Climate Solutions Funds Subcategories*

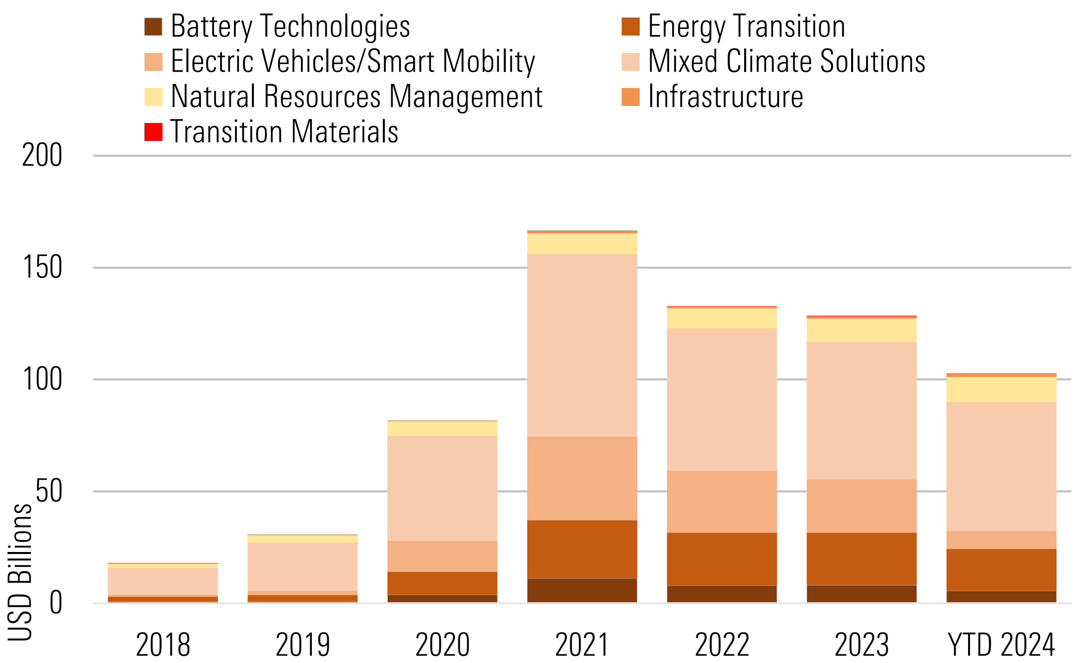
- Among all the Climate Solutions funds subcategories, Mixed Climate Solutions and Energy Transition remain the most prominent themes, with USD 57 billion and USD 18 billion of assets, respectively, as of September 2024.

- Mixed Climate Solutions funds have bled the most money so far this year, with USD 6.7 billion of redemptions, almost double the outflows of 2023. This is followed by Electric Vehicles/Smart Mobility funds, with redemptions of USD 3.3 billion.

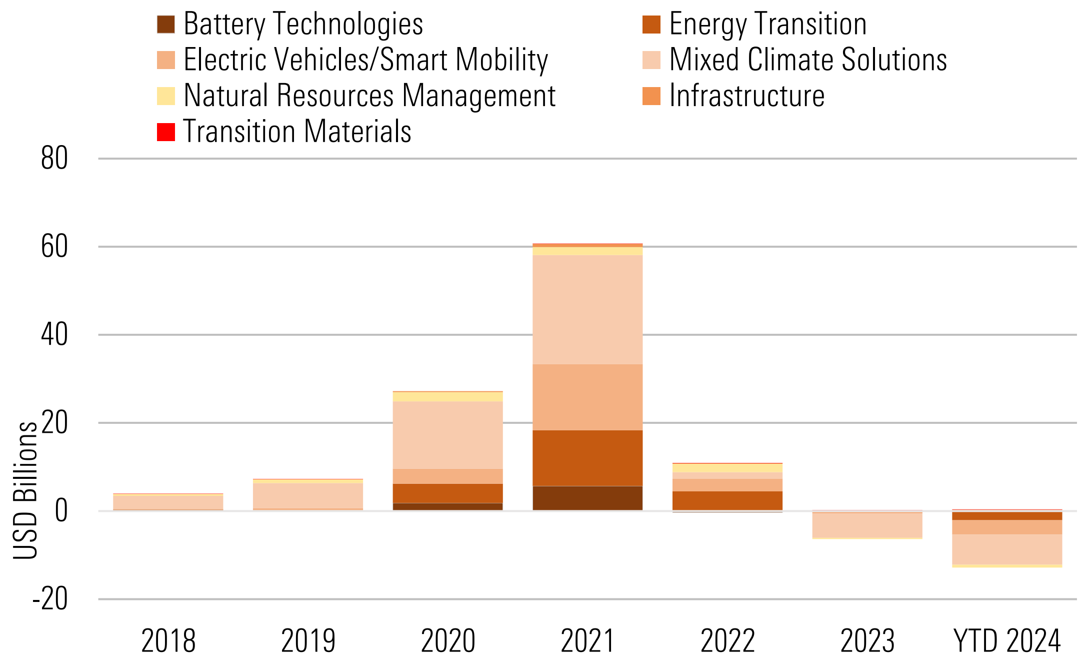
- Performance in these segments of the market has not been good. For example, in the first nine months, the Morningstar Global Battery Technology Consensus and Morningstar Global Electric & Autonomous Vehicles Select indexes have slid by 29.8% and 4.7%, respectively.

- All other Climate Solutions fund sub-categories, except Infrastructure and Transition Materials, have also experienced outflows.

Assets in Climate Solutions Funds Sub-Categories



Flows into Climate Solutions Funds Sub-Categories



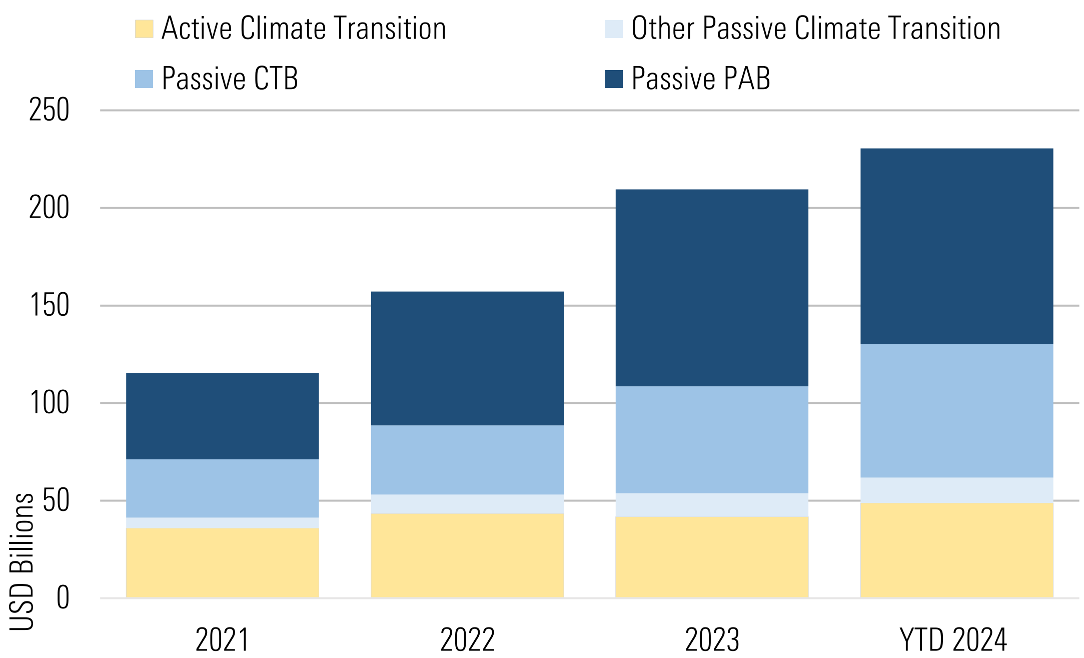
* See Appendix for a detailed definition of Climate Solutions funds subcategories

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

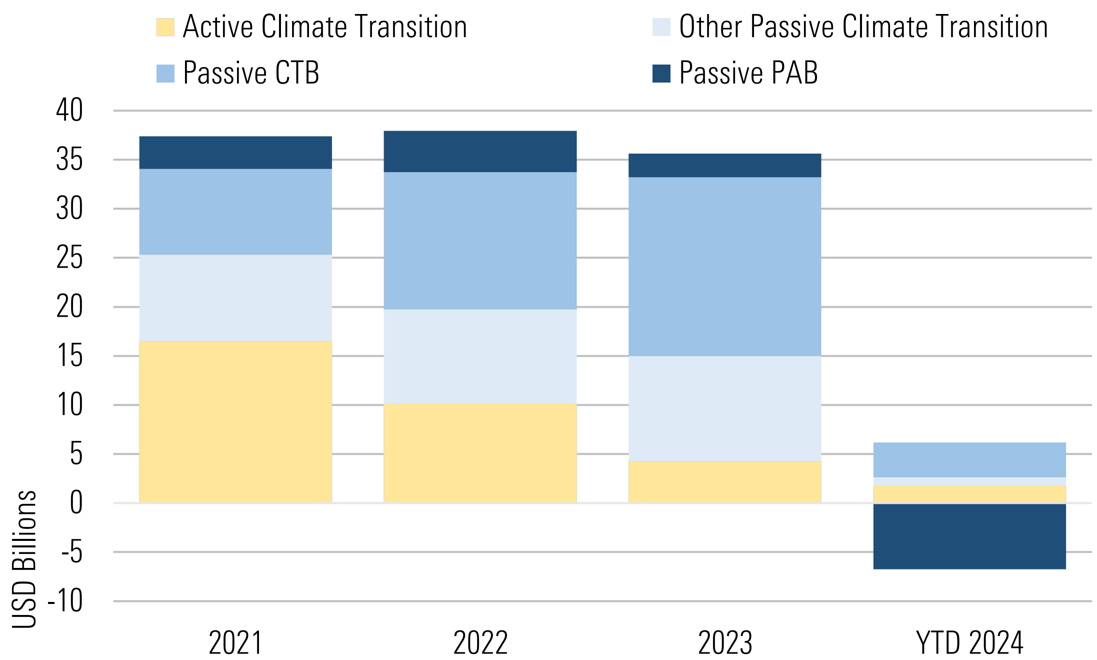
Unpacking Climate Transition Funds – Paris-Aligned Benchmark-Tracking Funds in Outflows for the First Time

- Passive funds tracking Paris-aligned benchmarks (PABs) and climate transition benchmarks (CTBs) dominate the Climate Transition funds category, reaching USD 168 billion in assets at the end of September 2024, up almost 9% from December 2023.
- Many of these are repurposed funds. They used to track a plain-vanilla or an ESG index and they switched to a PAB or CTB index at some point in recent years.
- PAB-tracking funds experienced outflows of USD 6.8 billion in the first nine months of 2024. This is despite their positive performance, on average (see next slide). Structural factors, including tracking error, fossil fuels exclusions, turnover, as well as competition from other transition strategies, have contributed to a reduced appetite for PAB-tracking products.
- Meanwhile, CTB-tracking funds and actively managed transition funds continued to register net inflows, though smaller than in the past (USD 3.6 billion and USD 1.8 billion, respectively).

Assets in Climate Transition Funds Sub-Categories*



Flows into Climate Transition Funds Sub-Categories



* **Passive CTB**: Funds that track an EU climate-transition benchmark; **Passive PAB**: Funds that track an EU Paris-aligned benchmark. **Other Passive Climate Transition**: Funds that track a climate index that is neither a PAB nor a CTB. **Active Climate Transition**: Actively managed funds that invest in companies that contribute to the global decarbonization (by being aligned/aligning with the Paris Agreement or providing solutions).

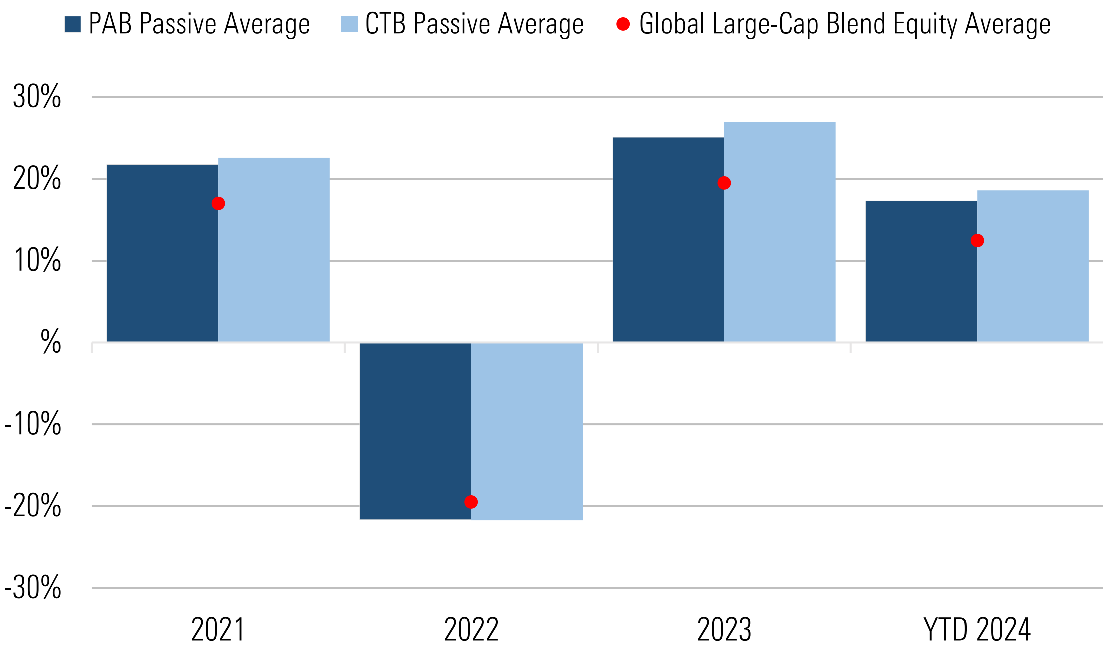
Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

PAB- and CTB-Tracking Strategies Have Outperformed

- Funds tracking Paris-aligned and climate transition benchmarks with global large-cap exposure have outperformed their peers this year, as well as in 2023 and 2021, but slightly underperformed in 2022.
- Passive CTB funds recorded superior returns of 27% and 19% in 2023 and 2024, respectively, relative to passive PAB funds, which returned 25% and 17% in 2023 and 2024, respectively, and 20% and 12% for category peers.

- Morningstar PAB and CTB indexes have generally outperformed their parent indexes year-to-date and on a three-year and five-year annualized basis.
- While PAB and CTB indexes with exposure to Developed Europe equities have underperformed, other popular exposures, including Global, US, and Emerging Markets, have outperformed so far this year and on a three- and five-year annualized basis.

Performance of PAB and CTB-Tracking Funds with Exposure to Global Large Cap Equities



Returns and Excess Returns For a Selection of Morningstar PAB and CTB indexes

	2024 YTD		3-Year Annualized		5-Year Annualized	
Name	**Return**	**Excess Return**	**Return**	**Excess Return**	**Return**	**Excess Return**
Morningstar DM Europe PAB	5.40	-1.47	1.51	-1.49	7.09	-0.33
Morningstar DM Europe CTB	5.07	-1.79	2.02	-0.97	7.20	-0.21
Morningstar US Large TME PAB	23.99	3.77	10.07	0.98	17.79	2.52
Morningstar EM PAB	13.42	1.81	0.57	0.39	5.84	0.56
Morningstar EM CTB	13.03	1.42	0.56	0.38	5.75	0.48
Morningstar Global CTB	16.98	0.95	6.22	0.46	12.15	0.80
Morningstar Global PAB	17.62	1.59	5.86	0.10	12.15	0.81

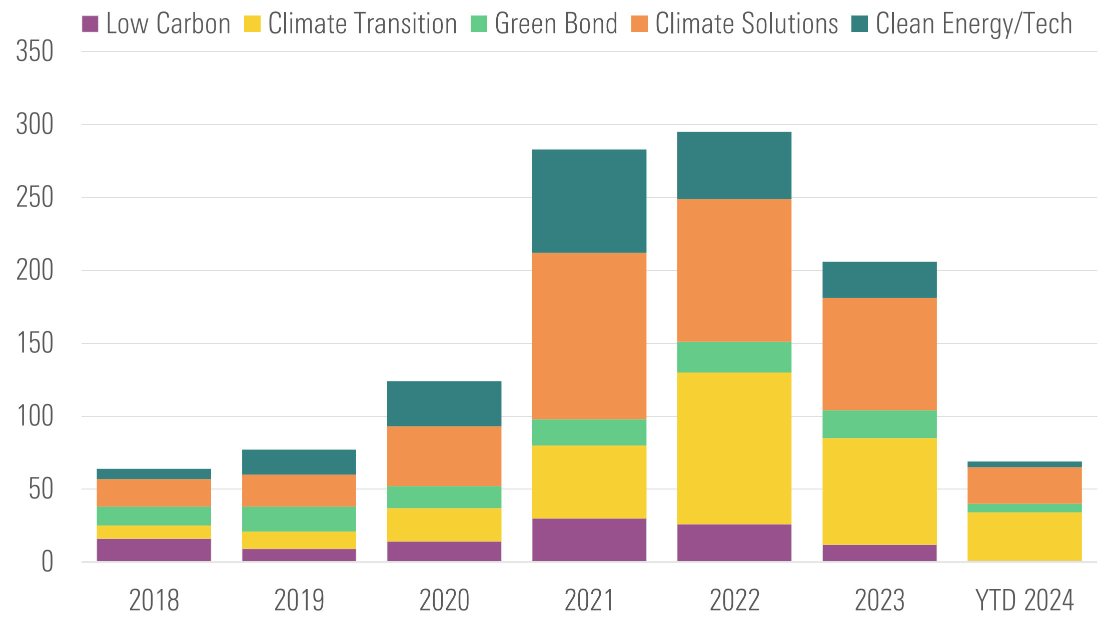
Passive CTB: Funds that track an EU climate-transition benchmark; **Passive PAB**: Funds that track an EU Paris-aligned benchmark. DM: Developed Markets, EM: Emerging Markets

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of October 2024.

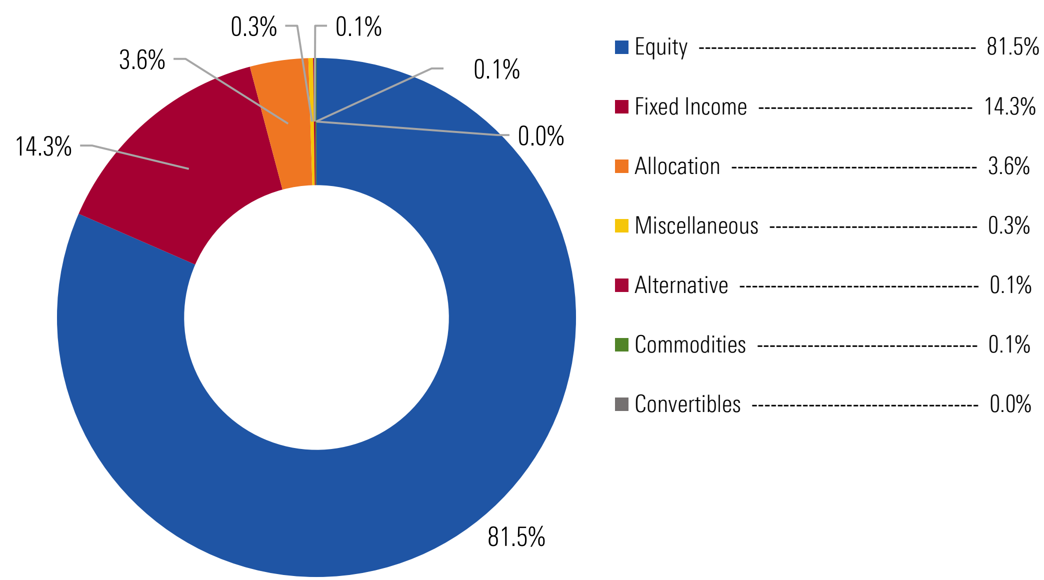
Product Development Faces New Trough, While Equities Remain Overwhelmingly Represented

- New climate strategies of all types continued hitting the shelves in 2024, driven by investor demand and asset managers' net zero commitments.
- However, the number of launches fell significantly to just 69 during the first nine months of the year. While this number is likely to be revised upward as additional launches are identified, it reflects a normalization of the climate-related product development activity after three years of high growth.
- The new offerings so this year remain concentrated in Climate Transition and Climate Solutions strategies.
- As is customary with sustainable funds, equity strategies dominate the climate funds universe, representing 81% of climate-offering assets as of September 2024. Fixed income products account for just over 14% of total offerings.

Global Launches of Climate Funds by Climate Category



Asset Class Breakdown of Global Climate Funds



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

The European Climate Funds Landscape

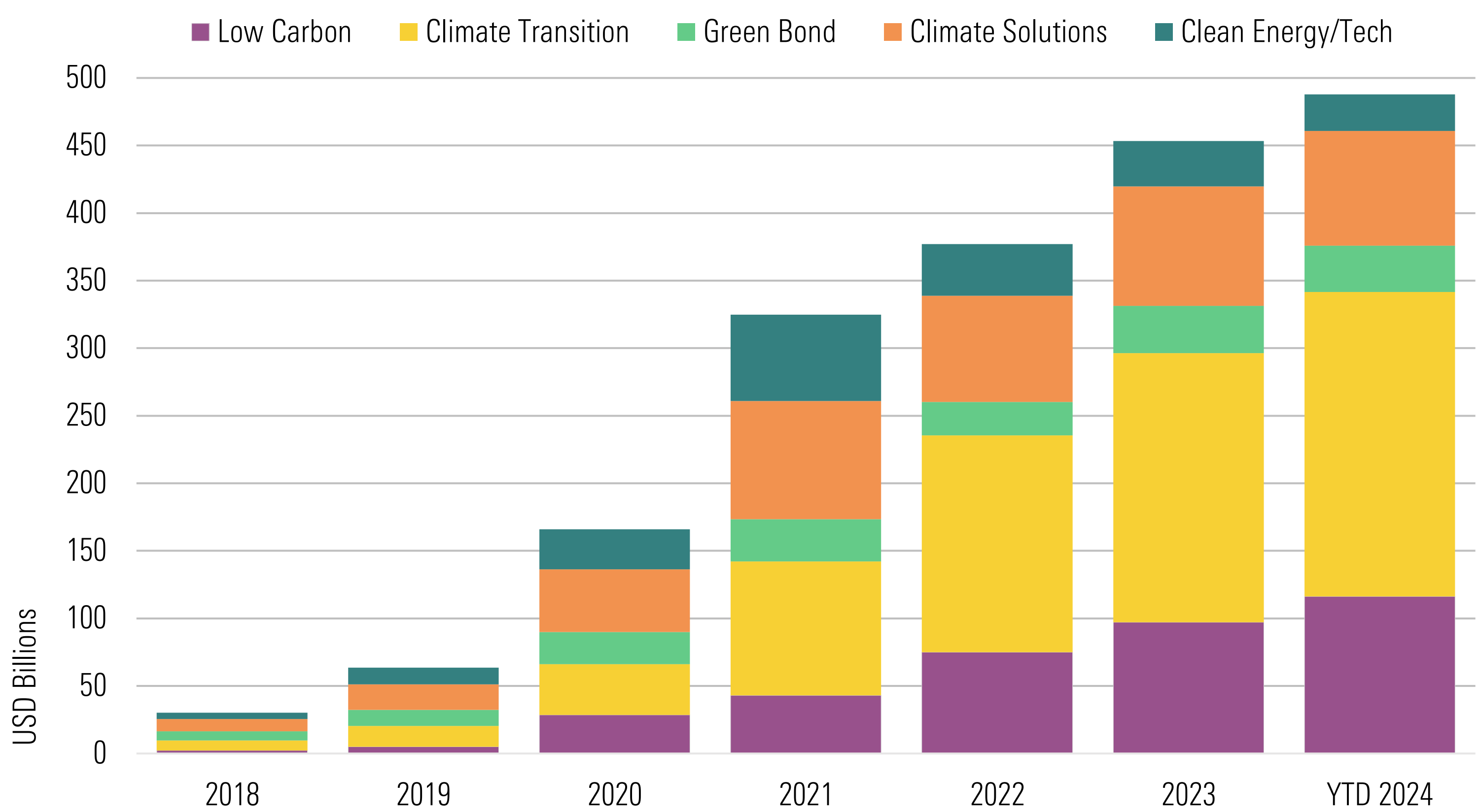
Assets in European Climate Funds Climb to New Highs, Supported by Market Price Appreciation

- Assets of Europe-domiciled climate funds have expanded by almost 8% so far in 2024 to a new peak at USD 488 billion, representing 967 out of the 1,595 climate funds identified globally.

- The most significant asset growth was observed among Low Carbon strategies, which collectively expanded by 21% to USD 117 billion. Meanwhile, Climate Transition strategies also experienced growth of 13%. Both strategy types, which provide broad and diversified exposure to the market, have benefited from market price appreciation.

- By contrast, assets in Clean Energy/Tech strategies took a hit, with a decline of 20% from December 2023, penalized by continuously high interest rates, elevated inflation, and project delays. Assets in Green Bond and Climate Solutions funds experienced a milder decline of 2% and 3.5%, respectively.

Assets in European Climate Funds

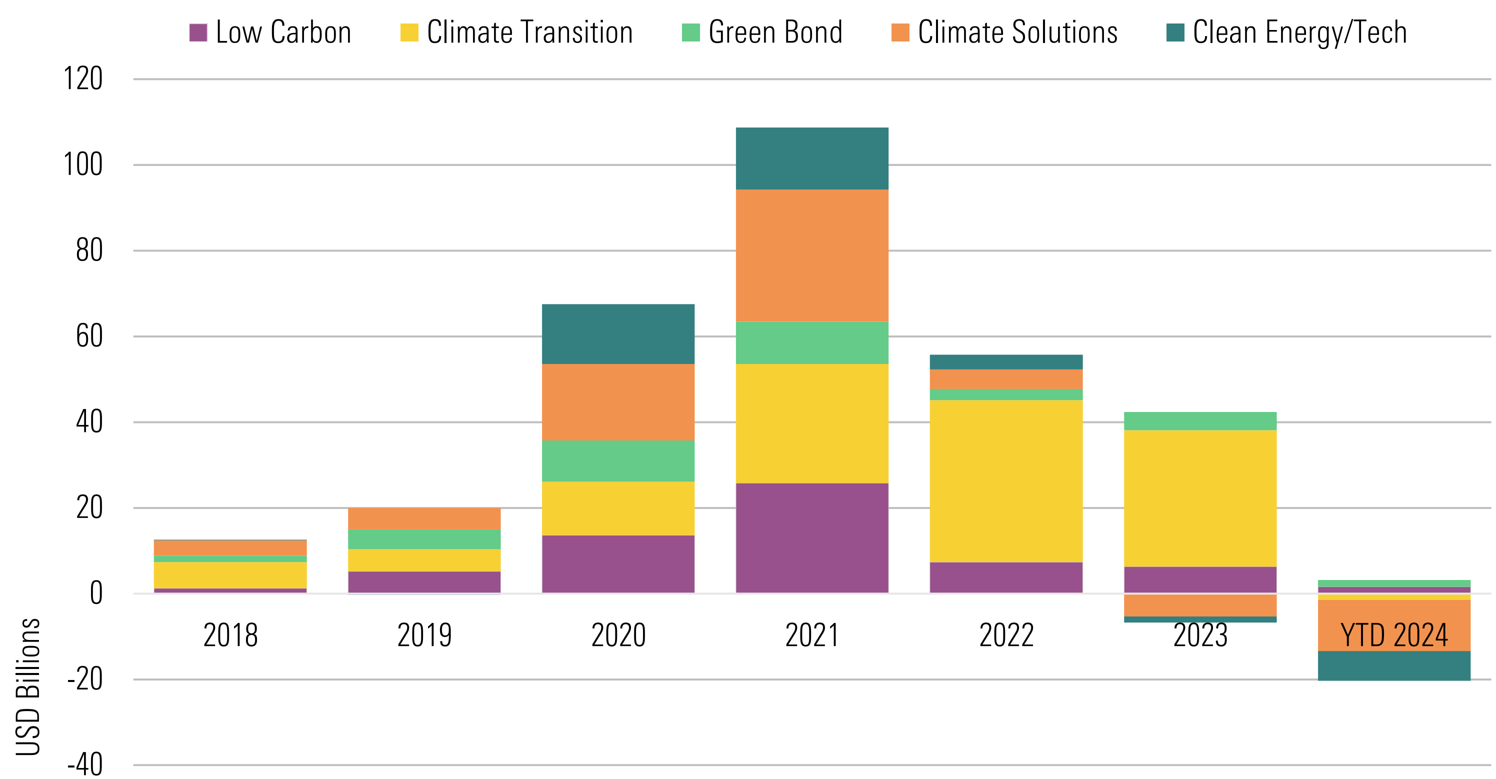


Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Redemptions from Climate Solutions and Clean Energy/Tech Funds Worsen

- So far in 2024, climate funds in the European universe have registered net outflows for the first time, amounting to USD 20 billion.
- Redemptions from Climate Solutions and Clean Energy/Tech funds slumped further compared with last year. Climate Solutions funds have bled around USD 12 billion so far in 2024. Meanwhile, Climate Transition funds have registered outflows of USD 1.5 billion, contrasting with the large inflows of USD 32 billion over the whole of 2023.
- Renewable energy stocks continue to face challenges such as high interest rates, materials inflation, supply chain disruptions and continuous competition from other energy sources, including oil, gas, and coal.
- Only Low Carbon and Green Bond strategies showed mild inflows of USD 3 billion combined.

Annual Flows of European Climate Funds



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Climate Transition Funds Top the Flow Leader Table

YTD 2024 Flow Leaders & Laggards – European Climate Funds

Name	Climate Category	AUM (USD bn)	Net Flows (USD mn)
Amundi MSCI USA ESG Climate Net Zero Ambition CTB ETF	Climate Transition	4.95	2,434
Mercer Passive Sustainable Global Equity	Climate Transition	5.69	1,663
Amundi S&P 500 Climate Net Zero Ambition PAB ETF	Climate Transition	5.07	1,539
UBS Global Equity Climate Transition Fund	Climate Transition	3.85	1,283
Handelsbanken Global Index Criteria	Climate Transition	12.70	1,219
Amundi MSCI USA SRI Climate Net Zero Ambition PAB ETF	Climate Transition	2.36	-4,069
BNP Paribas Easy MSCI USA SRI S-Series PAB 5% Capped	Climate Transition	1.34	-2,084
L&G US ESG Exclusions Paris Aligned ETF	Climate Transition	0.34	-1,979
Nordea 1 - Global Climate and Environment Fund	Climate Solutions	9.39	-1,582
BlackRock Global Funds - Sustainable Energy Fund	Clean Energy/Tech	5.31	-1,533

- The five best-selling climate funds in 2024 continue to be Climate Transition strategies (as they were in 2023), leading in inflows.

- With net inflows of over USD 2.4 billion, we find **Amundi MSCI USA ESG Climate Net Zero Ambition CTB UCITS ETF**. The fund has implemented an ESG investment strategy that aligns with the Climate Transition Benchmark (CTB) framework, targeting a significant reduction in carbon intensity while fostering investments in companies committed to achieving net zero emissions.

- Among the major flow laggards, we find another Amundi fund: **Amundi MSCI USA SRI Climate Net Zero Ambition PAB UCITS ETF**, with outflows of USD 4 billion. The fund follows a socially responsible investment strategy that aligns with the Paris-aligned benchmark framework, while excluding companies involved in activities deemed incompatible with a sustainable future, such as fossil fuels, weapons, and other high-carbon industries.

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

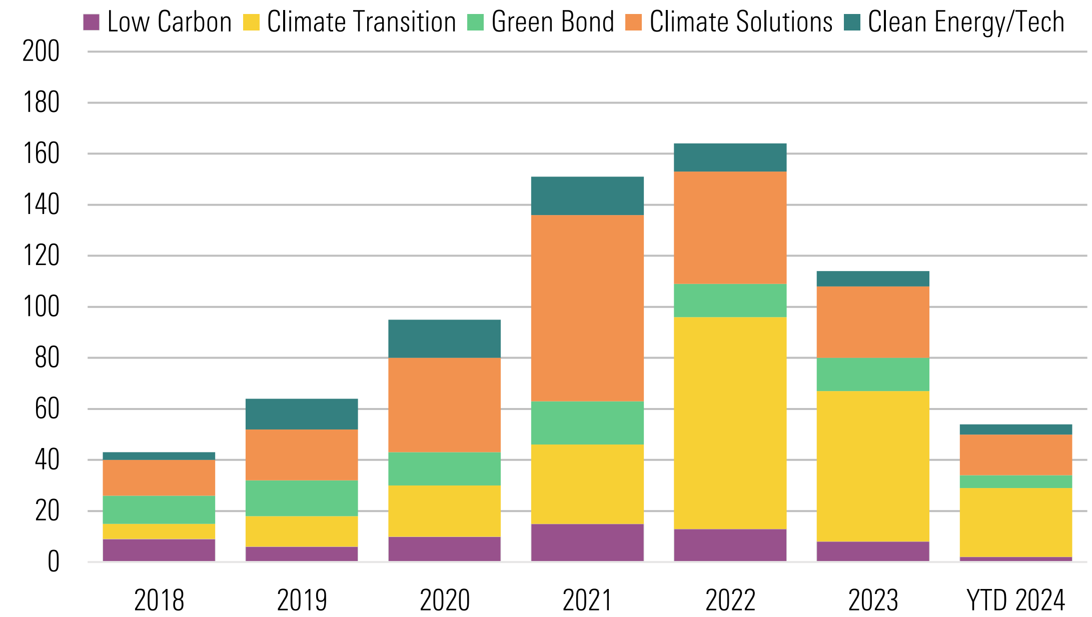
Significant Decline in Fund Launches and Minimal Rebranding Activity

- Product development of European climate funds experienced a slowdown, with the number of new launches reaching a historical low of 54 over the first nine months of 2024, compared to 115 over the whole of 2023. The highest number of launches were registered in the Climate Transition category.

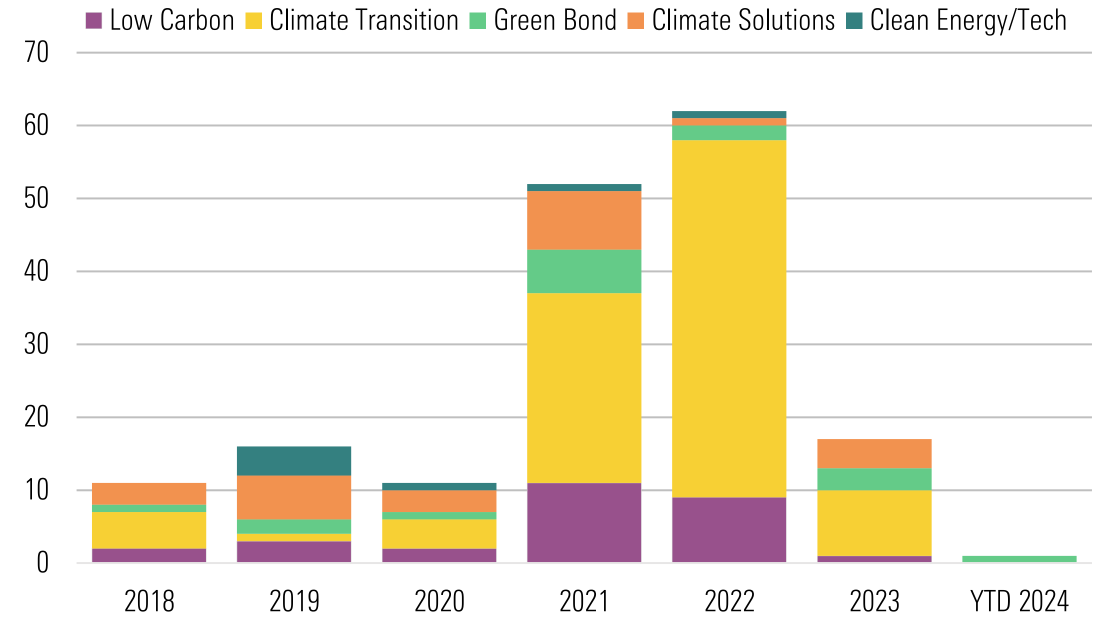
- Rebranding and repurposing activity has also been subdued so far this year, after recording a high of 66 in 2022.

- Since January 2024, we have identified only one repurposed fund, namely **FOS Performance und Sicherheit,** which transitioned to **FOS Focus Green Bonds**. The fund prioritizes bonds that finance projects with a direct positive impact on the environment, such as renewable energy, sustainable infrastructure, energy efficiency, and pollution reduction.

Number of European Climate Fund Launches



Number of European Rebranded/Repurposed Climate Funds



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Passive Strategies Represent 60% of Total Climate Fund Assets

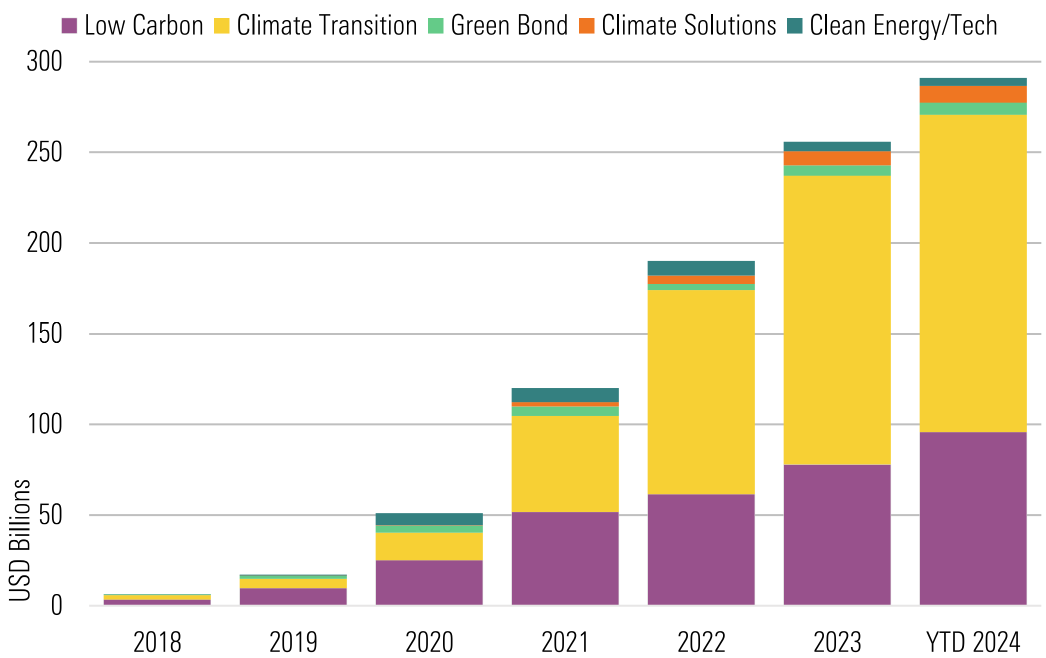
- In Europe, passive strategies comprise close to 60% of total assets in climate funds. Their proliferation can be explained by the continued innovation in indexing and improved ESG data quality.

- Passive funds with a climate theme totaled USD 291 billion at the end of September 2024, expanding by 13% from 2023.

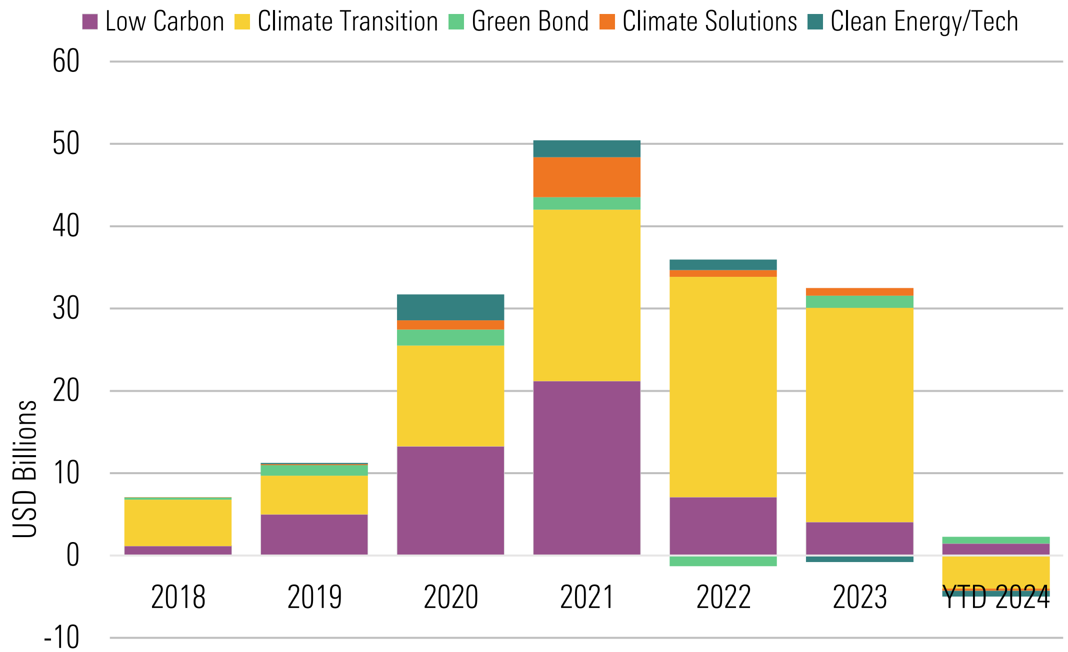
- Index funds and ETFs with a climate theme have registered USD 2.7 billion of outflows so far this year. Only two categories have attracted net new money: passive Low Carbon funds, which pocketed USD 1.5 billion, and passive Green Bond funds, with inflows of USD 820 million.

- The Climate Transition grouping boasts the highest share (60%) of passive climate strategies, driven by the Regulation on the EU Climate Transition Benchmarks in 2019. But that category experienced outflows in the first nine months of 2024.

Assets in European Passive Climate Funds



Flows in European Passive Climate Funds

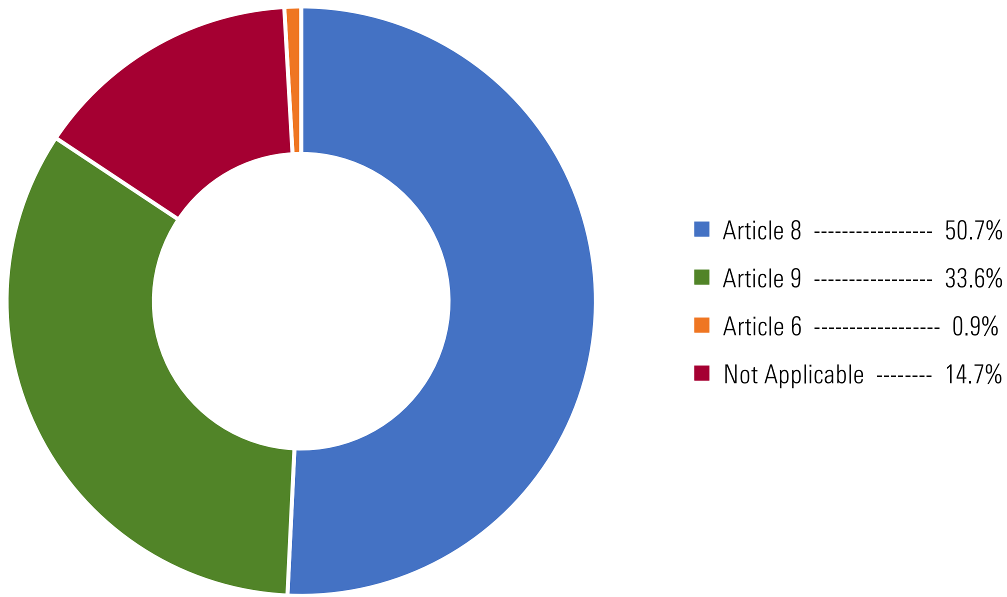


Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

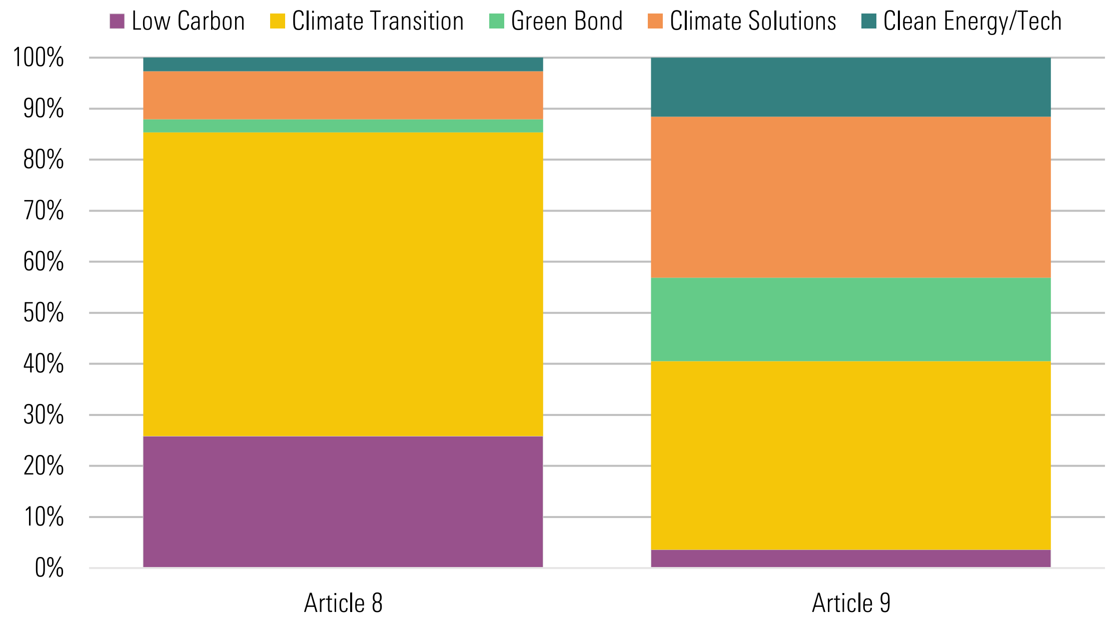
SFDR: One-Third of Climate Funds Classified as Article 9

- Article 8 funds accounted for half of the European climate fund universe (USD 248 billion).
- Price underperformance of renewable energy stocks, coupled with redemptions in Climate Solutions and Clean Energy/Tech funds, reduced the market share of Article 9 climate funds slightly to 33.6% as of September 2024, or USD 164 billion, compared to 35% at the end of December 2023.
- In a turn from 2023, Climate Transition funds emerge as the dominant grouping in both Article 8 and Article 9 categories. Climate Solutions used to be the dominant Article 9 fund group.

European Climate Funds Broken Down by SFDR Fund Type



European Climate Funds by SFDR Type



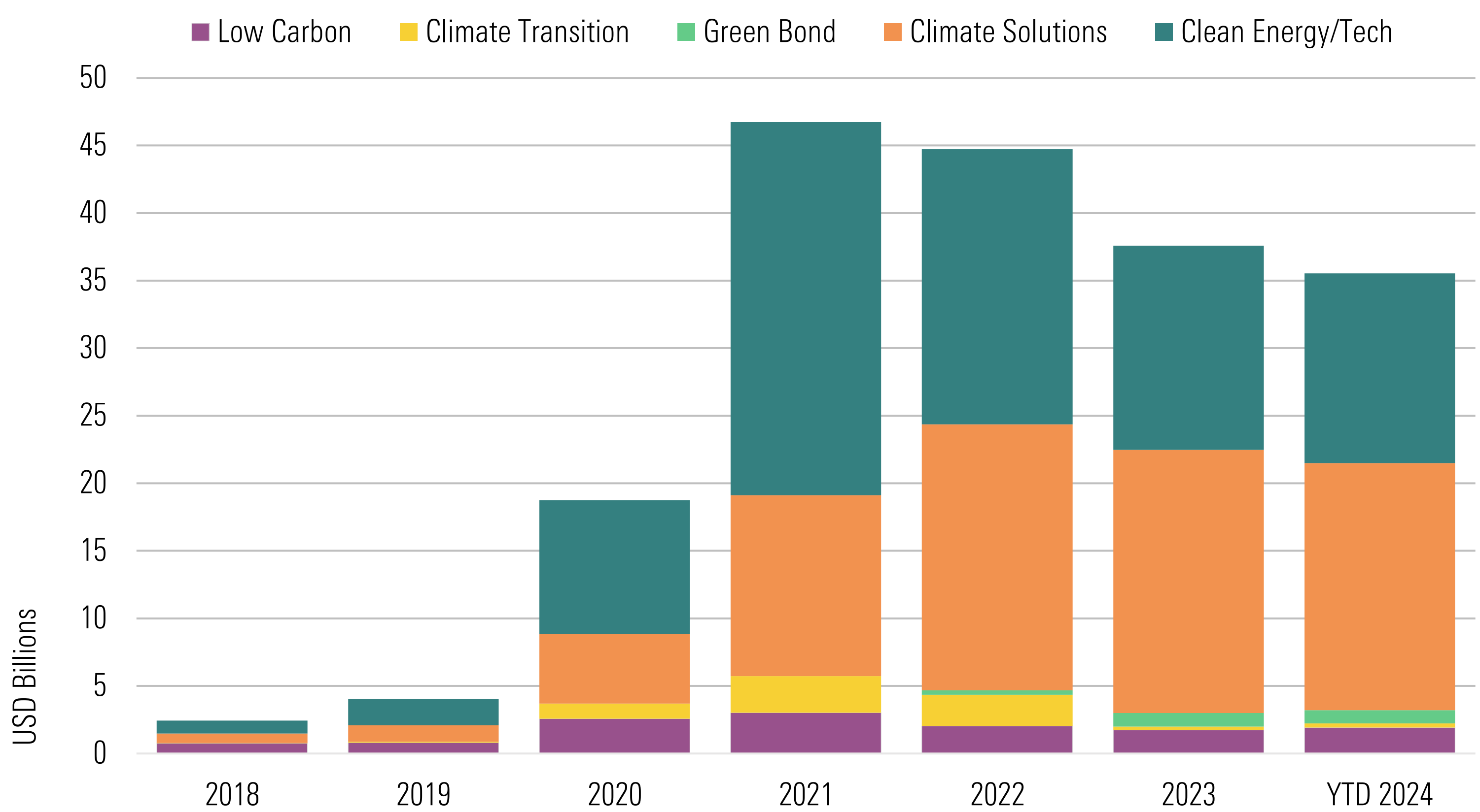
Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

The Chinese Climate Funds Landscape

Economic Challenges Weigh on Chinese Climate Funds Amidst Market Rationalization

- Assets of China-domiciled climate funds shrank by 6% to USD 36 billion as of September 2024, despite a recent stock market rally sparked by the government stimulus package.
- As in the past, Climate Solutions and Clean Energy/Tech funds towered over other climate strategies, taking up over 90% of assets in the Chinese universe. Low Carbon and Climate Transition strategies remained less favored.
- The winding up of various fiscal subsidies and other forms of incentives, coupled with overcapacity issues, weighed on the companies favored by Climate Solutions and Clean Energy/Tech strategies, particularly those involved in the renewable energy and electric vehicle sectors.
- After exponential growth in the early days, the crowded renewable energy and electric vehicle sectors are bracing for a consolidation, or rationalization, wave that may lead to cancellations or delays of local projects and the exit of smaller players. The Chinese market is sharply divided between bigger players, such as **CATL** and **BYD**, which dominate the global market for electric vehicle batteries, and numerous smaller players that are left to compete with less financial power and cost competitiveness.

Assets in Chinese Climate Funds



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

First Time Redemptions All Categories Where Climate Solutions and Clean Energy/Tech Bled Most

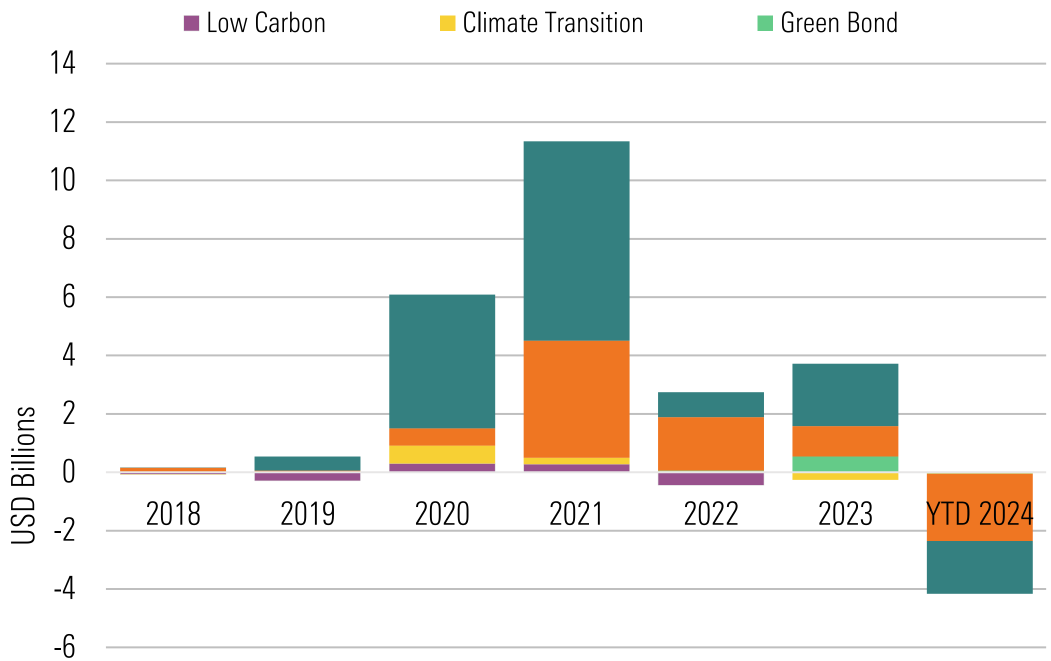
- For the first time, Chinese climate funds recorded redemptions across almost all climate fund categories. As of September 2024, outflows of Chinese climate funds totaled over USD4 billion, wiping out last year's inflows of USD 3.5 billion.

- Flows into Chinese climate funds continue to exhibit greater volatility, as new subscriptions are often driven by the speculative behavior of local retail investors. Clean Energy/Tech and Climate Solutions took up almost the entirety of the outflows.

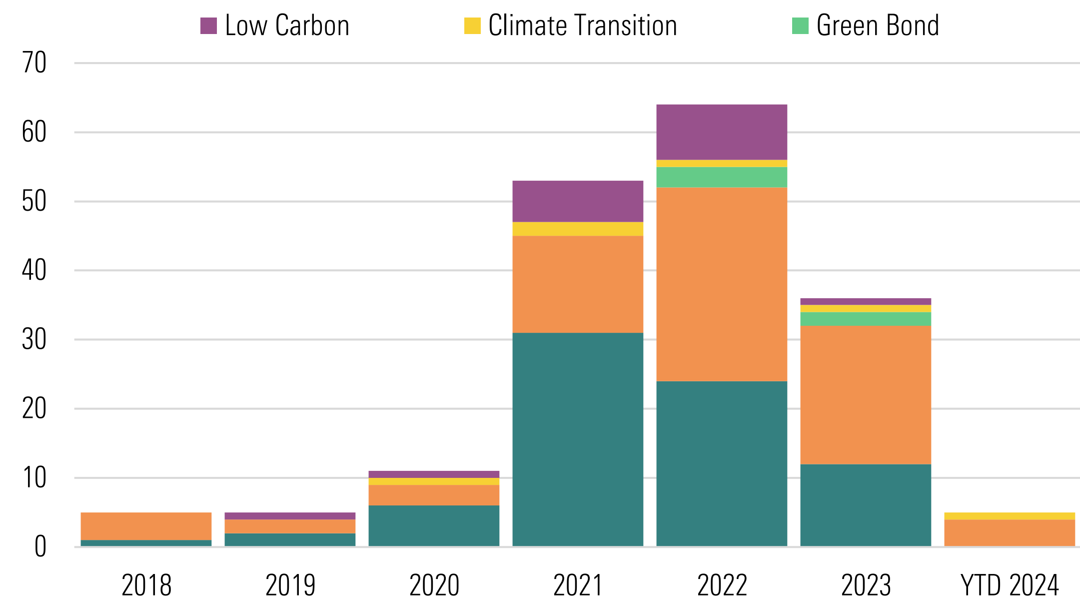
- With a struggling stock market, beleaguered by weak economic indictors, the development of new Chinese climate strategies plunged to a new low. There have been only five new launches so far this year, all of which are under the Climate Solutions category.

- Renewable energy and carbon neutrality remain the dominant themes. The **GF Carbon Neutral Thematic Mixed International Fund** stands out as the only allocation strategy focused on companies involved in the supply chains of renewable energy generation, decarbonization and other pollution reduction technologies, clean transport, and green construction materials.

Annual Flows Into Chinese Climate Funds



Launches of Chinese Climate Funds



Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Divergent Flow Attraction Amidst Climate Solutions and Clean Energy/Tech Dominance

2024 YTD Flow Leaders and Laggards, Chinese Climate Funds

Name	Climate Category	AUM (USD bn)	Net Flows (USD mn)
CMF CFETS Interbank Green Bond Index	Green Bond	0.73	143
Sun Life AM Global Low Carbon Index Fund	Low Carbon	0.26	67
CSOP CGS-CIMB FTSE Asia-Pacific Low-Carbon Selected ETF	Low Carbon	0.05	45
Maxwealth Low-Carbon Envir Pro Srt Mix	Low Carbon	0.05	40
Penghua Carbon Neutralization Mixed Securities Invest, Fund	Climate Solutions	0.04	22
ChinaAMC CSI New En Car Ind ETF	Climate Solutions	0.83	-343
Huatai-PB CSI Photovoltaic Industry ETF	Clean Energy/Tech	1.31	-217
ChinaAMC New Energy Fund	Clean Energy/Tech	1.64	-152
Orient Secs Green Energy Car Alloc	Climate Solutions	1.36	-151
ABC-CA New Energy Theme Hybrid Fund	Clean Energy/Tech	1.39	-146

Largest Chinese Climate Funds

Name	Climate Category	AUM (USD, Mil)
ChinaAMC New Energy Fund	Clean Energy/Tech	1,636
ABC-CA New Energy Theme Hybrid Fund	Clean Energy/Tech	1,390
Orient Secs Green Energy Car Alloc	Climate Solutions	1,355
China Universal New Eneg Car Ind Index LOF	Climate Solutions	1,343
Huatai-PB CSI Photovoltaic Industry ETF	Clean Energy/Tech	1,313
TianHong CSI Photovoltaic Industry Idx	Clean Energy/Tech	1,243
Fullgoal China Secs new energy vehicles	Climate Solutions	1,127
Cinda New Energy Ind Stk Fd	Clean Energy/Tech	954
E Fund pro-environment Alloc	Climate Solutions	848
ChinaAMC CSI New En Car Ind ETF	Climate Solutions	831

- As in the past, Climate Solutions and Clean Energy/Tech strategies have dominated the flow leaders and laggards so far this year. Among the flow leaders, we see the rare, but strong, presence of Low Carbon strategies, including **Sun Life AM Global Low Carbon Index Fund**, **CSOP CGS-CIMB FTSE Asia-Pacific Low-Carbon Selected ETF**, and **Maxwealth Low-Carbon Envir Pro Srt Mix**.

- Meanwhile, **E Fund Pro-Environment Alloc** showed up as a newcomer in the largest climate fund list. The active Climate Solutions strategy focuses on companies involved in photovoltaic system production, energy storage, power generation and infrastructure, and lithium battery technologies. **ChinaAMC New Energy Fund** remains in the list of best-selling funds, focusing mostly on renewable energy generation and resource exploitation, including solar, photovoltaics, wind, nuclear, hydroelectricity, shale gas, hydrogen, and geothermal energy.

- This year's most noticeable regulatory advancement related to China's green and climate finance is the publication of "the Three-Year Action Plan on Improving ESG Information Disclosure Quality of Listed Companies on the Shanghai Stock Exchange". While acknowledging the vital importance of regulatory convergence and co-operation with international standards in terms of sustainability disclosure, the plan also emphasizes issues pertaining to the country's current socio-economic realities, such as the "Double Carbon" goal, revitalization of the rural economy, and poverty alleviation supply chain security. In addition, the Shanghai Stock Exchange will encourage the issuance of various ESG-themed funds.

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

The US Climate Funds Landscape

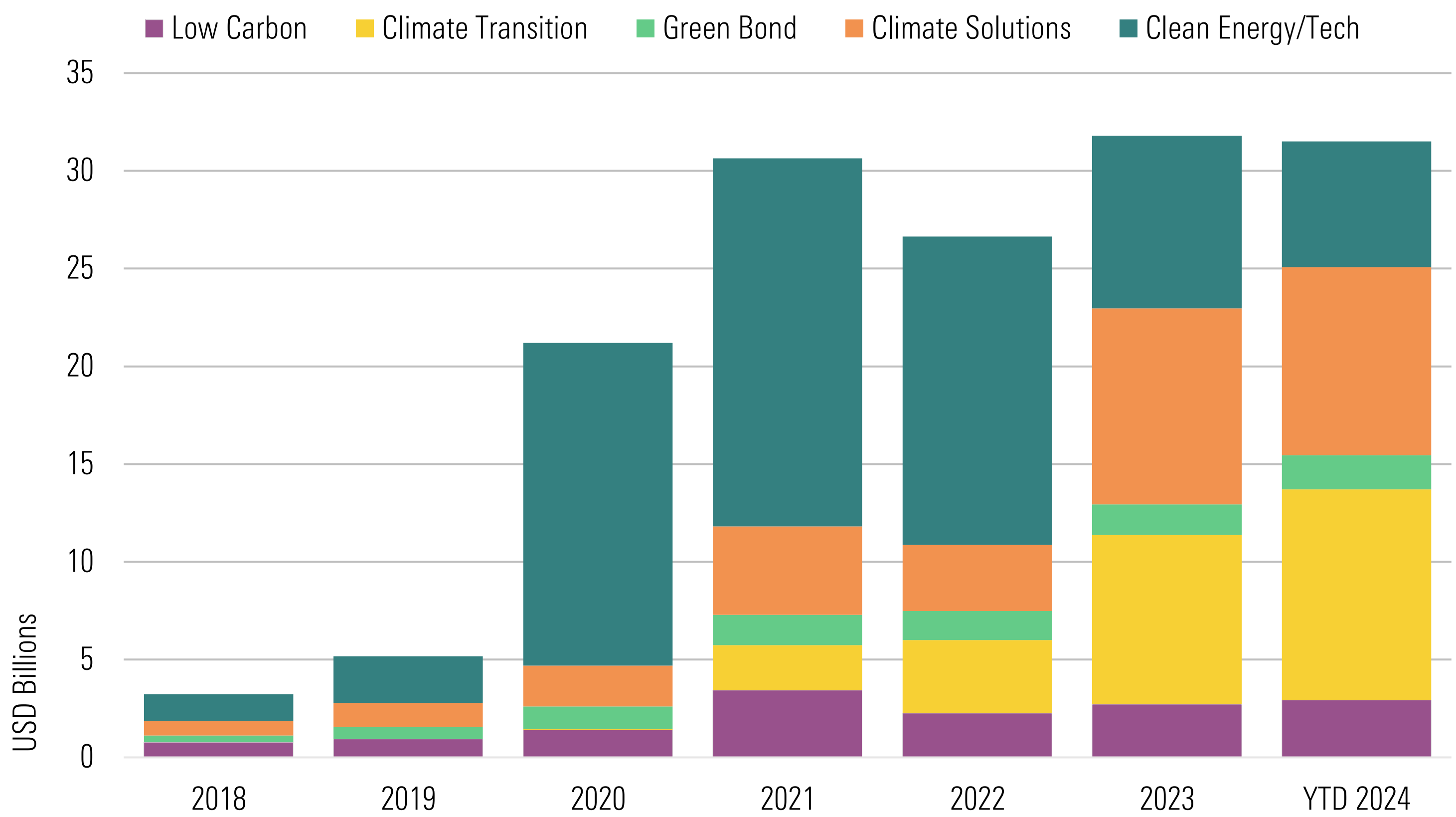
The US Climate Fund Market Remains Subdued - Climate Transition Becomes the Dominant Climate Strategy

- Assets in US climate funds decreased marginally (by 0.9%) from their record-high levels in 2023, amounting to USD 31.5 billion as of the end of September 2024.

- Assets in Climate Transition strategies rose by 25% in the past nine months, boosted by product launches and market price appreciation. At USD 10.7 billion, Climate Transition funds have overtaken the Climate Solutions fund category, which has seen assets decrease by 4% so this year to USD 9.6 billion.

- The category that faces the most significant contraction is Clean Energy/Tech, which saw a sharp decline of 27% in the first nine months of the year, dropping to USD 6.4 billion at the end of September. This sector has shrunk by almost 66% over the past three years, penalized by high interest rates and inflation.

Assets in US Climate Funds

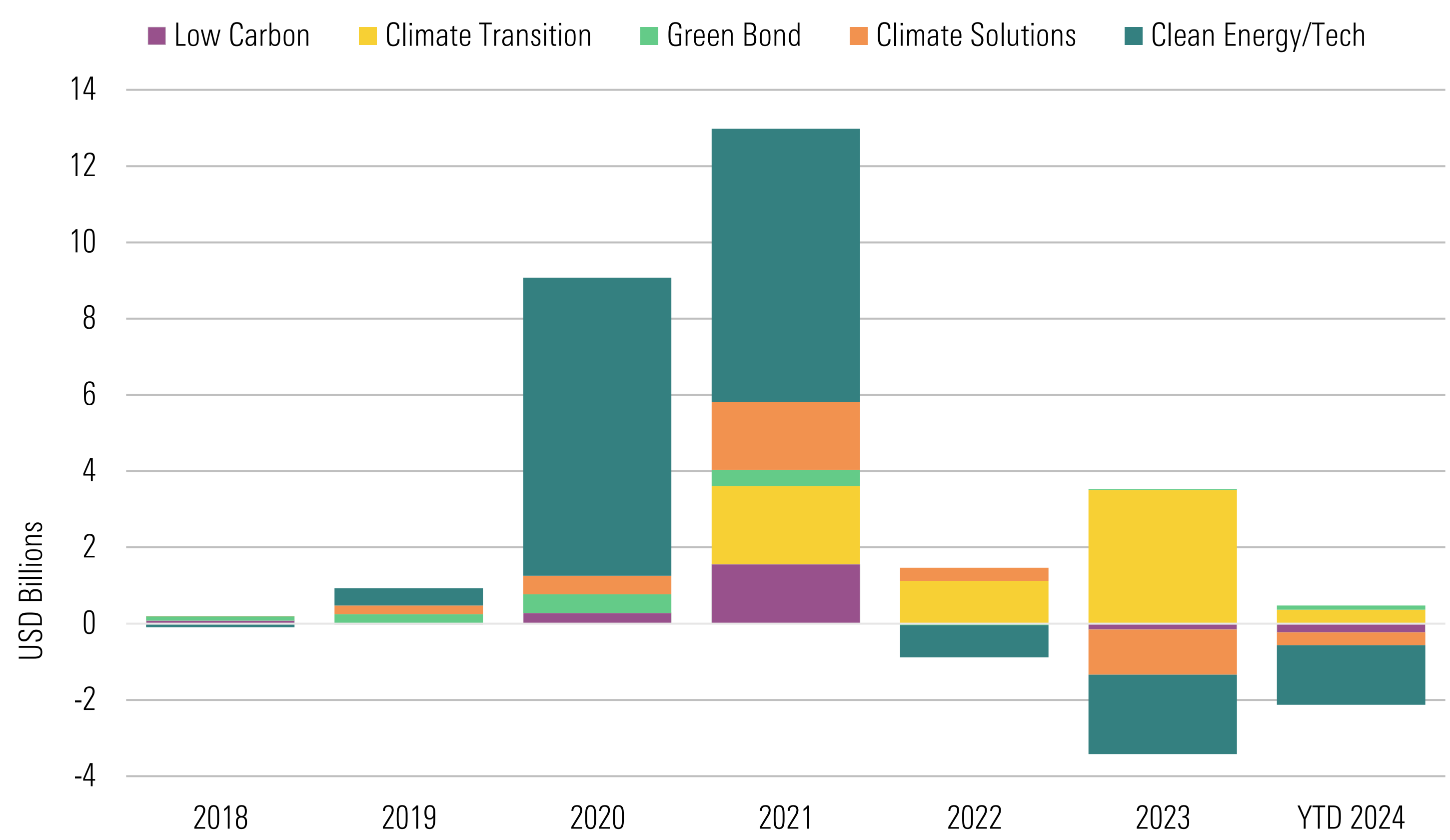


Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Clean Energy/Tech Funds Continue to Bleed Money, while Climate Transition Funds Register Inflows

- Flows into US-domiciled climate funds were negative for the first time, at USD 1.66 billion, during the first nine months of the year, following insignificant inflows of USD 110 million in 2023.
- Clean Energy/Tech experienced the highest contraction, with redemptions of USD 1.5 billion, followed by Climate Solutions (USD 340 million) and Low Carbon (USD 230 million) outflows.
- Climate Transition funds attracted the most new money, with a modest USD 370 million so far in 2024, followed by Green Bond funds, with USD 110 million of subscriptions.
- **Invesco MSCI Global Climate 500 ETF** registered inflows of USD 1.6 billion. The fund tracks an index that seeks to provide reduced exposure to greenhouse gas emissions and increased exposure to companies whose emissions reduction targets are approved by the Science Based Targets initiative (SBTi).

Flows into US Climate Funds



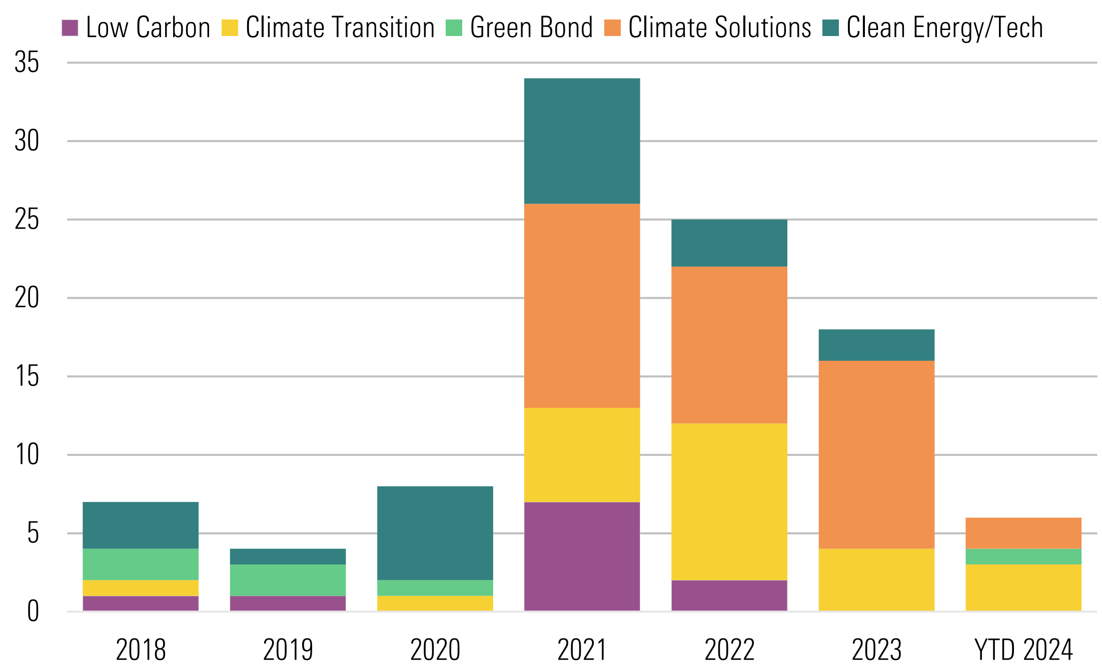
Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Product Development Activity Continue its Decline

- Product development in US climate funds has dropped since the peak in 2021. So far in 2024, only six new climate strategies have been launched.

- The latest climate funds offer a varied approach to climate investing. Both **Kraneshares Sustainable Ultra Short Duration Index ETF** and **iShares Paris-Aligned Climate MSCI World Ex USA ETF** track indices that align with the Paris Agreement's goals. Similarly, the **Invesco MSCI Global Climate 500 ETF** is categorized as a Climate Transition fund. In the Climate Solutions category, two specialized funds have emerged: **Themes Lithium & Battery Metal Miners ETF**, focusing on Battery Technology, and **Range Global LNG Ecosystem ETF**, which targets Energy Transition. Finally, **Carbon Collective Short Duration Green Bond ETF** represents the Green Bond category. Together, these funds highlight diverse pathways for investors to support climate-focused objectives.

Launches of US Climate Funds



2024 Flow Leaders & Laggards US Climate Funds

Name	Climate Category	AUM (USD bn)	Net Flows (USD mn)
Invesco MSCI Global Climate 500 ETF	Climate Transition	1.72	1,622
First Trust NASDAQ® Clean Edge® Smart Grid Infrast. Index Fund	Climate Solutions	1.85	797
Kraneshares Sustainable Ultra Short Duration Index ETF	Climate Transition	0.30	300
iShares Paris-Aligned Climate MSCI USA ETF	Climate Transition	2.02	139
VanEck Uranium and Nuclear ETF	Climate Solutions	0.24	90
Xtrackers EM Carbon Reduction and Climate Improvers ETF	Climate Transition	0.10	-741
iShares Global Clean Energy ETF	Clean Energy/Tech	2.20	-642
BlackRock U.S. Carbon Transition Readiness ETF	Climate Transition	1.23	-507
Global X Lithium & Battery Tech ETF	Climate Solutions	1.34	-443
First Trust NASDAQ® Clean Edge® Green Energy Index Fund	Clean Energy/Tech	0.68	-287

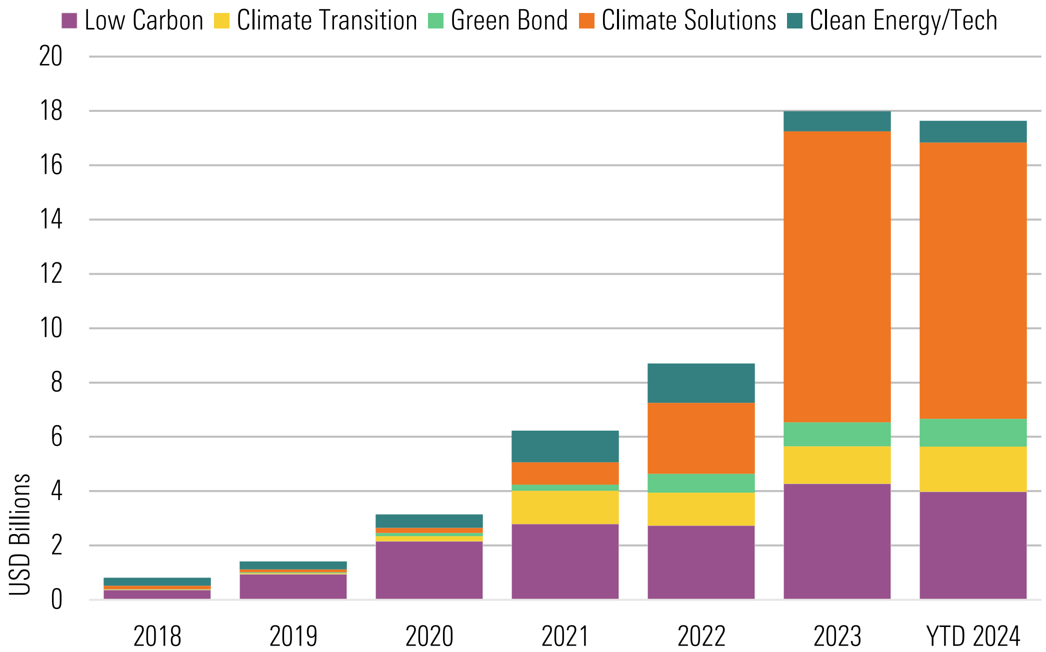
Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

The Climate Funds Landscape in the Rest of the World

A Steady Recovery: South Korea, Australia, and Taiwan Dominate the Space

- Dragged down by the Low Carbon and Climate Solution categories, assets in Climate funds in the rest of the world declined to around USD 17.6 billion, a 1.9% decrease compared to December 2023.
- Climate Solutions remain the dominant strategy, taking up 58% of the assets in this universe. In a distant second is the Low Carbon strategy (22%), of which the assets totaled almost USD 4 billion as of September 2024.
- As for the geographical distribution, South Korea keeps its place at the top of the list in terms of both numbers and assets, with Canada overtaking Australia and moving to second place. Climate Solution (50) and Clean Energy/Tech (18) strategies took over almost the entirety of the South Korean climate fund universe, reflecting the commitment of the government and businesses to the energy transition.

Assets in Climate Funds in the Rest of the World



Climate Funds in the Rest of the World

Country	Number of Climate Funds	AUM (USD mn)
South Korea	70	7,635
Canada	52	3,140
Australia	38	2,349
Taiwan	27	2,158
Japan	29	1,059
Singapore	7	827
India	1	159
Malaysia	4	143
New Zealand	3	81
Thailand	2	65
Brazil	4	10
Chile	3	3

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

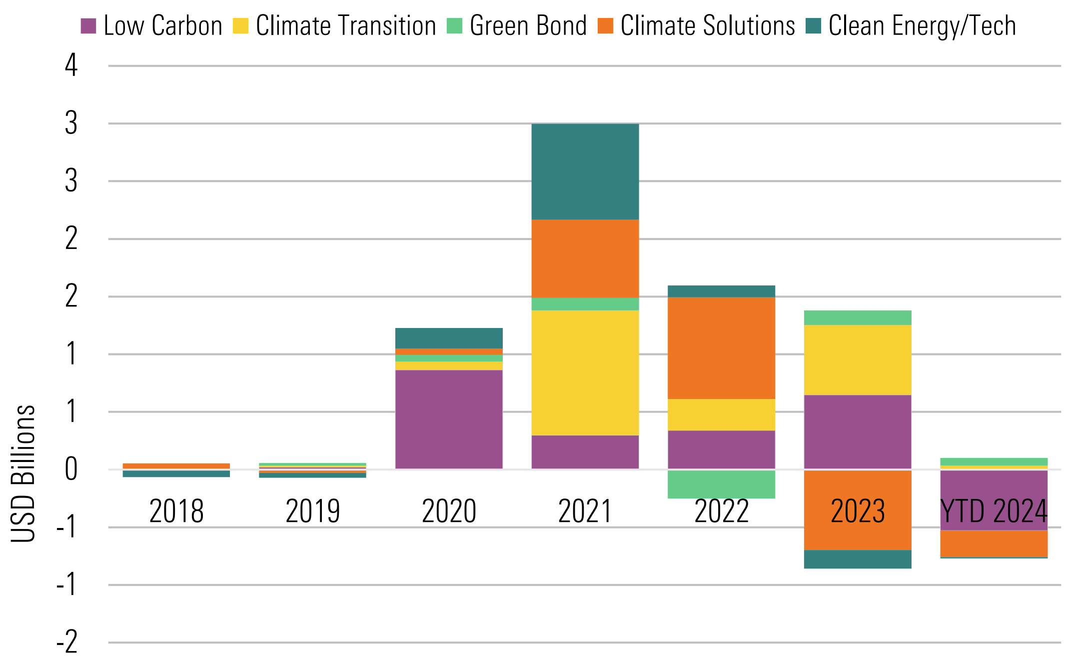
Flows Plummet As Low Carbon Bore the Brunt

- In line with the outflow trend in the Asian-Pacific region, flows into climate funds in the Rest of the World group have slid to just USD 100 million since January. While Climate Transition and Green Bond funds registered inflows, the figures proved trivial.

- Low Carbon funds bore the brunt of investor withdrawal, which totaled USD 530 million. The redemptions from Climate Solutions strategies have extended into 2024, albeit reduced to USD 230 million from USD 700 million almost nine months ago.

- The funds with the highest inflows include four Climate Solutions funds from South Korea and one Taiwanese ESG fund, the Capital Tip Customized Taiwan ESG Low Carbon 50 ETF. Among the South Korean funds, the Samsung KODEX Secondary Battery Industry ETF leads with inflows of USD 255 million, offering exposure to companies across the secondary battery value chain, including production, innovation, and supporting technologies. These trends underscore the growing investor focus on sustainable investment opportunities in Asia, particularly those aligned with energy transition and low-carbon initiatives.

Annual Flows into Climate Funds in the Rest of the World



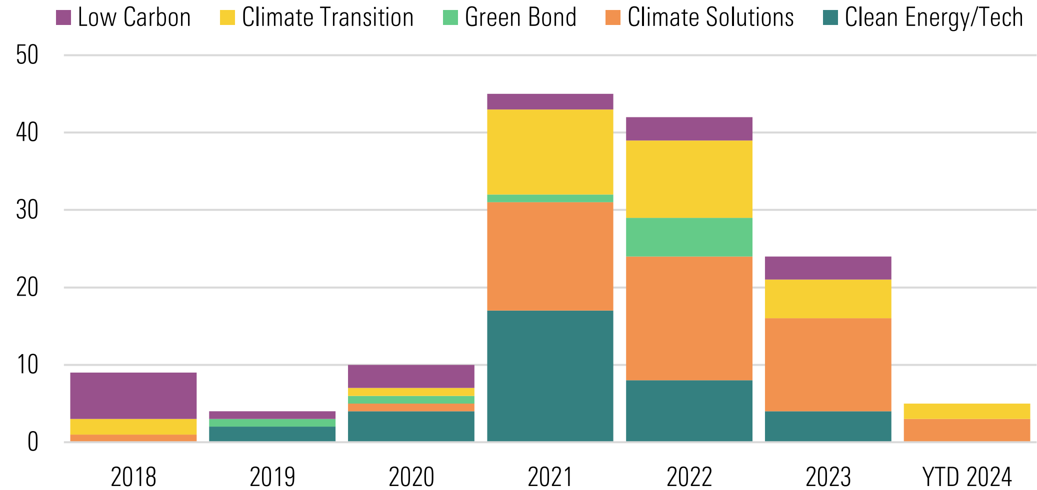
Leaders and Laggards Climate Funds in the Rest of the World

Name	Climate Category	AUM (USD bn)	Net Flows (USD mn)
Samsung KODEX Secondary Battery Industry ETF	Climate Solutions	0.93	255
MiraeAsset TIGER Secondary Cell ETF	Climate Solutions	0.93	120
MiraeAsset TIGER Secondary Battery TOP10 ETF	Climate Solutions	0.30	119
KIM ACE Tesla Value Chain Active ETF	Climate Solutions	0.29	100
Capital Tip Customized Taiwan ESG Low Carbon 50 ETF	Low Carbon	0.57	93
Russell Investments Low Carbon Global Shares Fund	Low Carbon	0.29	-374
Cathay Global Autonomous and Electric Vehicles ETF	Climate Solutions	0.41	-333
Russell Investments Low Carbon Global Shares Fund Class AUDH	Low Carbon	0.32	-303
MiraeAsset TIGER China Electric Vehicle Solactive ETF	Climate Solutions	1.34	-197
KIM Global Electric Car & Battery Equity	Climate Solutions	1.01	-101

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Cooldown of Product Development

Number of Climate Fund Launches in the Rest of the World



Largest Rest of the World Climate Funds

Name	Climate Category	Domicile	AUM (USD mn)
MiraeAsset TIGER China Electric Vehicle Solactive ETF	Climate Solutions	South Korea	1,336
KIM Global Electric Car & Battery Equity	Climate Solutions	South Korea	1,009
Samsung KODEX Secondary Battery Industry ETF	Climate Solutions	South Korea	930
MiraeAsset TIGER Secondary Cell ETF	Climate Solutions	South Korea	929
iShares MSCI Japan Climate Action ETF	Climate Transition	Japan	692
Capital Tip Customized Taiwan ESG Low Carbon 50 ETF	Low Carbon	Taiwan	575
iShares MSCI Asia ex Japan Climate Action ETF	Low Carbon	Singapore	531
Mirae Asset TIGER Secondary Battery Material ETF	Climate Solutions	South Korea	491
Fidelity Climate Leadership Fund	Climate Transition	Canada	463
Cathay Global Autonomous and Electric Vehicles ETF	Climate Solutions	Taiwan	412

- Similar to other regions, product development of climate funds in the rest of the world has dropped to a new low, with only five launches recorded so far this year, including two Climate Transition and three Climate Solutions funds domiciled in five different countries.

- Among the two Climate Transition launches, the **Amundi TW Net Zero Ambition Global Corporate Bond Fund** represents an active Climate Transition strategy that seeks to achieve a carbon intensity reduction relative to the parent benchmark. The other one is **K Target Net Zero Thai Equity Fund**.

- Among the largest climate funds in the region, we find four South Korea thematic funds at the top of the ranking. The first fund, with USD 1.3 billion, the **Mirae Asset TIGER China Electric Vehicle Solactive ETF**, invests in Chinese companies within the electric vehicle supply chain, emphasizing ESG by focusing on firms advancing low-carbon technologies and clean transportation. The **KIM Global Electric Car & Battery Equity** and **Samsung KODEX Secondary Battery Industry ETF** share a common theme of investing in the electric vehicle and battery industries.

Source: Morningstar Direct and Morningstar Sustainalytics. Data as of September 2024.

Assessing Climate Funds Through the Lens of Three Transition Metrics

Implied Temperature Rise (ITR), Management Score, Value at Risk (VaR) – Three Metrics in Focus

- In this section, we examine the transition risk and climate action profiles of the five climate fund categories through the lens of three transition metrics: Implied Temperature Rise, Management Score, and Value at Risk. These metrics were developed by Morningstar Sustainalytics as part of its Low Carbon Transition Rating.

- **Implied Temperature Rise** is a science-based and forward-looking assessment of a company's current alignment to a net zero pathway that limits global warming to 1.5°C above preindustrial levels. It is based on the principle that each company is expected to limit its fair share budget of emissions. A company's ITR also signifies the expected level of global warming if the global economy had the same proportion of emissions misaligned to the net zero budget of the company.

- **Management Score**: A company's ITR comprises two assessments: the exposure assessment, which evaluates how the company would be expected to perform if it took no actions to reduce emissions; and the management assessment, which evaluates how prepared the company is to manage its emissions. Company management receives a score ranging from Very Weak to Very Strong and is based on indicators such as the use of an internal carbon price, programs to support customers' reduction of energy or water consumption, and management incentives to reduce emissions.

- For funds' ITR and Management Scores, Morningstar aggregates the ITR and Management Scores of the portfolios' covered holdings on an asset-weighted basis.

- The **Value at Risk (VaR)** metric signals the potential loss in value that an issuer may experience due to the risk posed by the transition to a low carbon economy between now and 2050. LCT-VaR considers the most material transition risks to generate a dollar value impact that shows the potential value impact of not transitioning to a low carbon economy. It is based on both the future projected carbon pricing impact on expected emissions, and for companies in the Oil and Gas sector, the impact of changes in market demand. Thus, the VaR provides a forward-looking metric that demonstrates how such transition risk may impact the future value of a company.

- For funds, the VaR is expressed as a percentage of the portfolios' covered holdings, in US dollars, for a 2050 time horizon, stemming from both policy and market risks. For the purposes of this analysis, the VaR assumes an orderly transition scenario under the Inevitable Policy Response (IPR) Net Zero pathway.

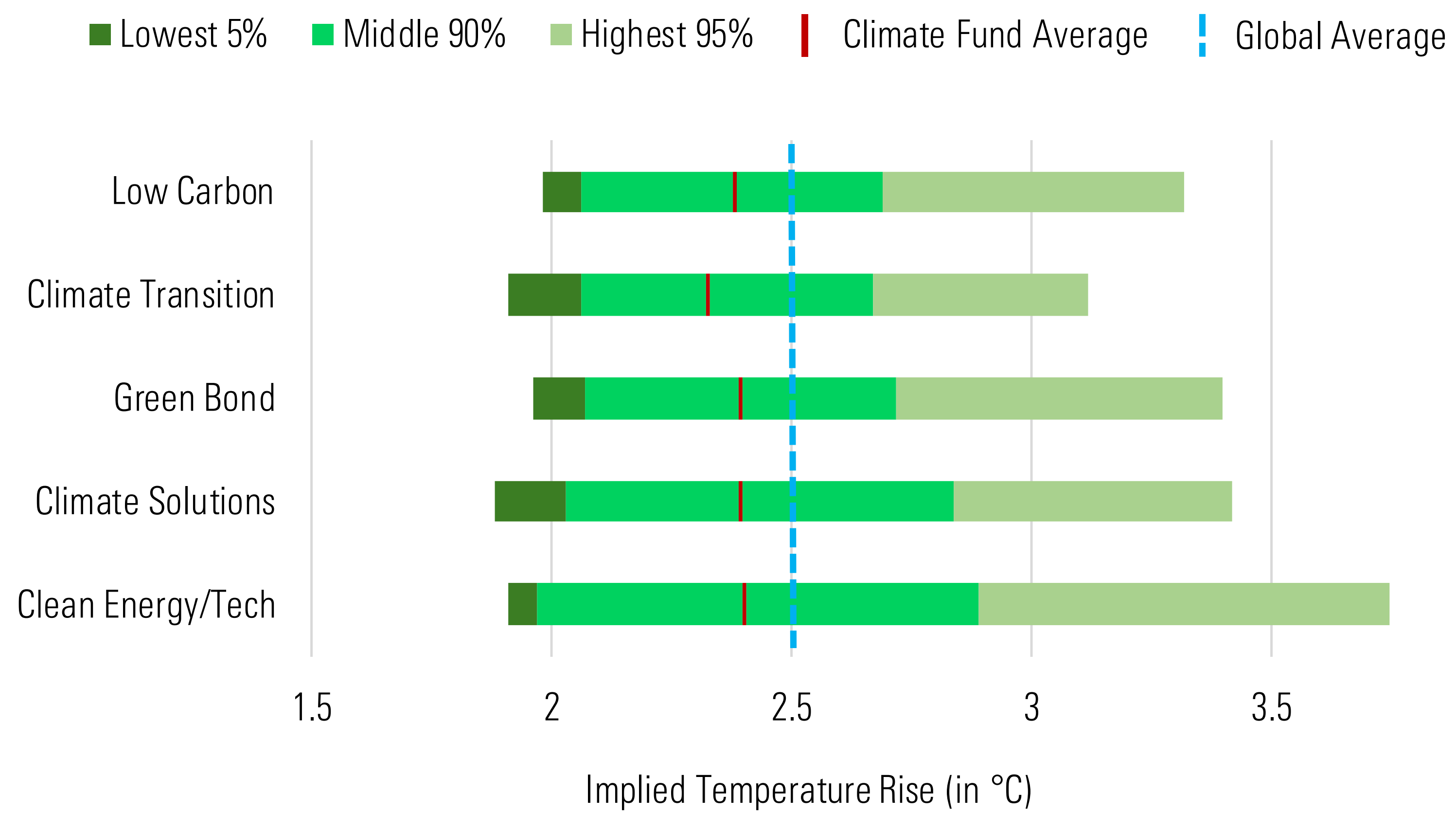
- The methodology for the three metrics can be found here.

- More detailed analysis can also be found here.

Implied Temperature Rise – Climate Transition Funds Exhibit the Lowest ITR Scores

- No fund is aligned to a net zero pathway consistent with a 1.5-degree Celsius global warming scenario.
- The five climate fund types have similar average implied temperature rise (ITR) scores between 2.3°C and 2.4°C, all below the global average of 2.5°C.
- Climate Transition strategies exhibit the lowest average ITR score of 2.3°C.
- Climate Transition funds are typically broad, well-diversified funds that select or tilt toward companies that consider climate change in their business strategy and therefore are better prepared for the transition to a low-carbon economy.

Distribution of Implied Temperature Rise Scores Across Climate Fund Types

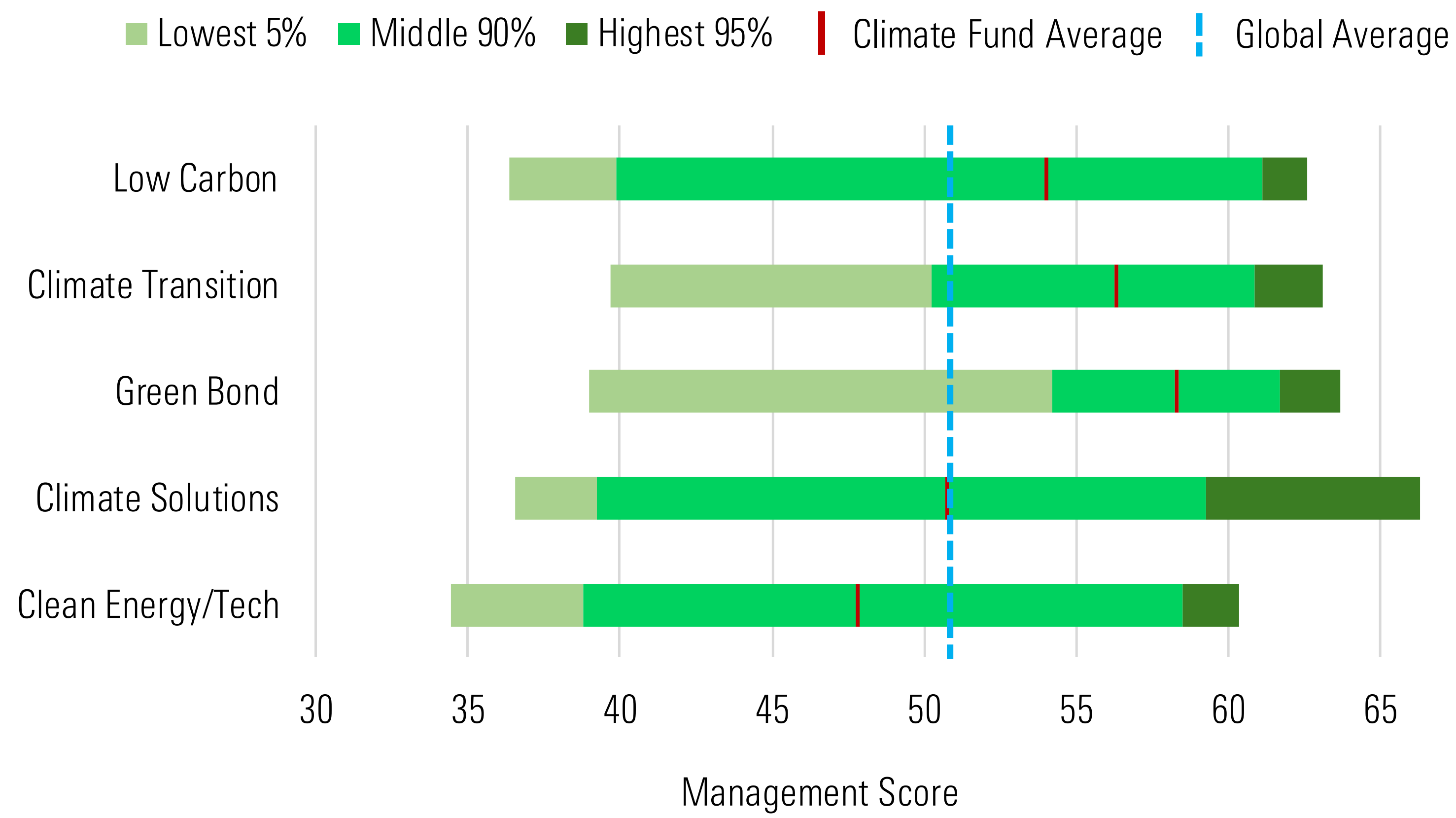


Source: Morningstar Direct and Morningstar Sustainalytics. [Measuring Transition Risk and Climate Action in Portfolios Report]

Management Score - Green Bond and Climate Transition Funds Have the Best Emission Management Practices

- Green Bond funds and Climate Transition funds have the highest average emissions management scores, at 58 and 56, respectively, while Clean Energy/Tech funds have the lowest, at 48.
- Green bond issuers are typically more advanced in their transition journey, given the stringent eligibility criteria required to issue green bonds and the greater investor and regulatory scrutiny.
- On the other end, Clean Energy/Tech and Climate Solutions funds exhibit lower management scores, as they target companies focused on offering products that contribute to the transition to a low-carbon economy but are less focused on improving their manufacturing processes and reducing their carbon emissions. Some companies may also be operating in hard-to-abate sectors, where there is currently no alternative to manufacturing goods essential to the transition in a less carbon-intensive way.

Distribution of Management Scores Across Climate Fund Types

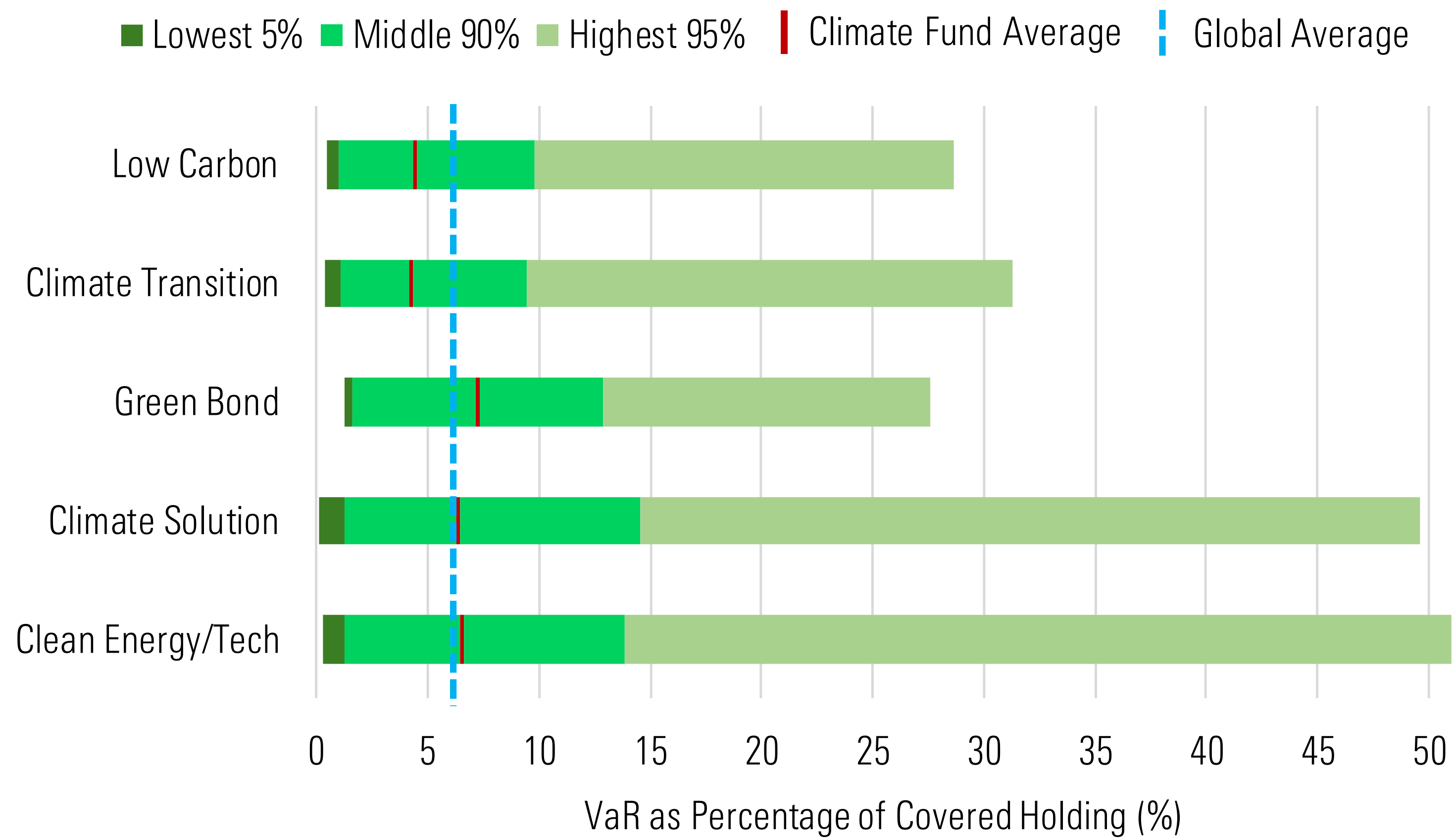


Source: Morningstar Direct and Morningstar Sustainalytics. [Measuring Transition Risk and Climate Action in Portfolios Report]

Value at Risk – Low Carbon and Climate Transition Feature Lowest VaR

- Climate funds, in general, have a lower Value at Risk than the global average of 6.2%.
- Green Bond strategies exhibit the highest average VaR. This could be explained by the relatively high exposure of these funds to traditional Utilities companies that are looking to finance infrastructure upgrades and transition away from their coal-fired electricity generation activities.
- Low Carbon and Climate Transition strategies show relatively lower VaR, in general, given the widely adopted targets related to carbon emissions reduction.

Distribution of Value at Risk Across Climate Fund Categories

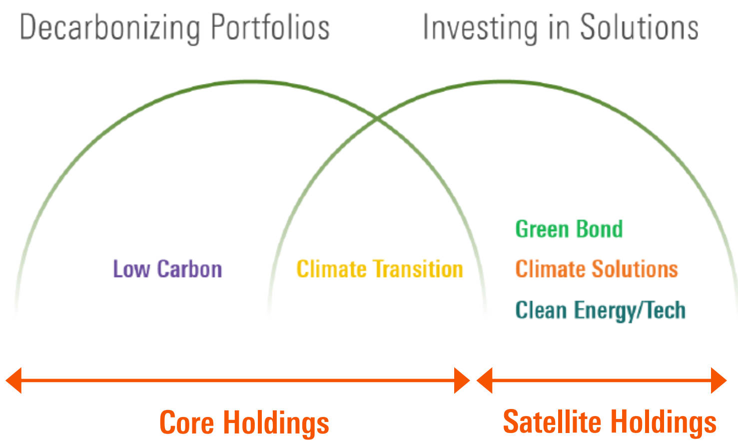


Source: Morningstar Direct and Morningstar Sustainalytics. [Measuring Transition Risk and Climate Action in Portfolios Report]

How Climate Funds Fit into an Investor's Portfolio

PORTFOLIO CONSTRUCTION

How Climate Funds Fit into an Investor's Portfolio



The five climate fund groupings we have identified represent a broad range of approaches globally that aim to meet different investor needs and preferences. The choice of one type over another largely depends on one's investment goals, risk appetite, and preferences.

Investors who simply want to protect their portfolios against climate change risks can use Low Carbon funds to "decarbonize" their portfolios. These approaches provide broad and diversified exposure to the market and are therefore suitable as part of a portfolio core allocation. In fact, within an asset allocation, Low Carbon funds can substitute for a lot of core equity exposure. They would, however, be less suitable for investors who want to benefit from the opportunities offered by the climate transition. For that, investors must choose from the remaining types.

Risk-conscious investors looking to also take advantage of this transition can turn toward Climate Transition funds. These typically exhibit low-carbon risk, like Low Carbon funds, with the added benefit of higher exposure to carbon solutions.

These are suitable for investors wanting to strike a balance between mitigating risk and looking to benefit from the green transition.

Further along the risk-opportunity spectrum, Climate Solutions and Clean Energy/Tech strategies can appeal to investors with a greater risk appetite and who consider climate change as an alpha-generating opportunity. Because of their narrower market exposure and often mid- and small-cap bias, Climate Solutions and Clean Energy/Tech funds represent more-volatile investments. Sharp price fluctuations in the clean energy sector over the past few years are testament to this. Since registering their best annual performance in 2020, with returns of more than 200%, Clean Energy/Tech funds have lagged the market.

Climate Solutions and Clean Energy/Tech funds can also come with higher carbon intensity. We have seen this begin to change gradually as transitioning companies implement their solutions. Given their less-diversified and higher risk profile, Climate Solutions and Clean Energy/Tech funds are more suitable as part of a satellite allocation to complement, rather than replace, existing core holdings.

Green Bonds may be inherently lower risk, but investors must be sure that the projects sitting within the bonds have positive environmental and/or climate benefits; many green-bond issuers operate in traditional "brown" sectors, including Utilities, Energy, and Industrials. Ideally, in the coming years, we would like to see increased disclosure on green bond projects and how they serve to lower the environmental impact of their issuer in a material way. For instance, a distribution company issuing a green bond to electrify its fleet has a greater impact on the issuer than an oil and gas firm issuing a green bond to electrify warehouse operations.

Appendix

Defining the Universe of Climate Funds

The global universe of climate funds consist of open-end funds and ETFs that have investment strategies related to the climate change theme.

Morningstar's universe of climate funds is based on intentionality, rather than on holdings. For example, many sustainable portfolios score well on climate metrics, but if climate issues are not the focus of these funds' investment strategies, they are not included in our universe. To identify intentionality and understand the strategies, we relied on a combination of fund names (a strong indicator of intentionality) and information found in legal filings.

To identify these funds, we used a range of key terms in their names (or index names in the case of passive funds). Key terms include obvious words such as "climate", "carbon", "transition", and "green", but also words related to themes and sectors linked to climate change solutions such as "renewable energy", "electric vehicles", and "batteries". Using natural-language-processing technology to comb Morningstar's comprehensive global fund database, we made efforts to identify as many of these funds as possible. We used this sample to analyze the latest trends in terms of assets, flows, product development, and the climate-related profiles of these portfolios.

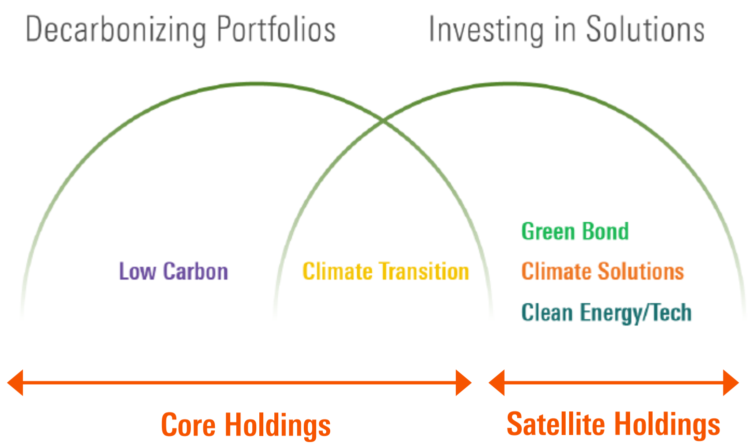
In this spirit, we did not include those funds whose sole climate-related mandate is to exclude fossil fuel companies. Globally, a small number of funds are branded ex-fossil fuel (with "ex-fossil fuel" or "fossil fuel-free" in their names), but many more unbranded funds similarly exclude fossil fuels. Fossil fuels have become part of a broader exclusion list for many asset managers, alongside weapons, tobacco, and other controversial activities.

Moreover, the scope of fossil fuel exclusions varies greatly, from the limited omission of companies involved in thermal coal extraction and generation to full-scale removal of companies with fossil fuel reserves or any involvement in fossil fuel-related activities, including exploration, production, and distribution. Excluding fossil fuels is one way to decarbonize a portfolio, but we elected to exclude ex-fossil fuel funds from this study to ensure a well-defined and cohesive universe of climate funds.

Similarly, we did not include the growing number of funds that seek to maintain a lower carbon intensity relative to their investable universe without providing a specific carbon-reduction target. For most of these funds, climate considerations represent only a small part of the investment process.

Finally, we did not include funds that claim using investment stewardship as an approach to mitigate climate risks, unless it is the sole objective of the fund. We acknowledge the crucial role that proxy voting and engagement activities play in better understanding and managing climate risks and opportunities in portfolios. But these activities often complement other key objectives and cannot be considered the focus of the strategy. We have included only a couple of climate-engagement funds in our universe.

Defining the Universe of Climate Funds



Low Carbon

Low Carbon funds seek to invest in companies with reduced carbon intensity and/or carbon footprint relative to a reference benchmark. These funds typically market themselves as low-carbon strategies and incorporate quantifiable targets related to carbon-emissions reduction. Low Carbon funds tend to offer broad market exposure across all sectors.

Within the portfolio, Low Carbon funds provide core allocation, featuring asset classes such as equity, fixed income, and real estate.

Climate Transition

Climate Transition funds select or tilt toward companies that consider climate change in their business strategy and therefore are better prepared for the transition to a low-carbon economy. Climate Transition funds tend to invest in a mix of companies: those that better align with the transition and those that provide climate solutions. Also included in this category are passive funds tracking EU Paris-aligned benchmarks—or EU PAB—or EU climate-transition benchmarks, or EU CTB. These benchmarks are designed to account for both risk mitigation and opportunity-seeking while generally replicating the broad market and matching the transition to a climate-resilient economy.

Green Bond

Green Bond funds invest in debt instruments that finance projects facilitating the transition to a green economy. The Green Bond Principles, formulated by the International Capital Market Association, provide high-level categories for eligible green projects. The eligible categories include, but are not limited to, renewable energy, energy efficiency, pollution prevention and control, clean transportation, sustainable water and wastewater, climate change adaptation, eco-efficient and/or circular economy-adapted products, and green buildings.

Climate Solutions

Climate Solutions funds target companies that are contributing to the transition to a low-carbon economy through their products and services and that will benefit from this transition. Included in this category are funds that provide exposure to companies involved in industries and technologies such as hydrogen, nuclear, electric vehicles, batteries, critical raw materials, energy storage, carbon capture and storage, circular economy, and pollution control. Climate Solutions funds differ from Climate Transition funds in that they invest primarily in companies whose goods and services provide solutions for climate change mitigation and adaptation.

Clean Energy/Tech

Clean Energy/Tech funds invest in companies that contribute to or facilitate the clean energy transition. This includes renewable energies such as wind, solar, hydro, wave, and geothermal power along with grid infrastructure improvements, transmission, and distribution. Clean Energy/Tech funds are characterized as sector-specific, are typically more concentrated than the first three fund groupings above and often have a bias toward mid- and small caps.

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