Global Sustainable Fund Flows: Q4 2022 in Review

European investors show continued appetite for ESG products despite headwinds, while U.S. investors retreat.

Morningstar Manager Research
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Contents

Key Takeaways

- Global sustainable funds attracted USD 37 billion of net new money in the fourth quarter of 2022, compared with USD 24.5 billion of inflows in the previous quarter.
- The rebound in sustainable fund flows was felt in only three regions: Europe, Australia, and Canada, while the rest of the world[1], including the United States, experienced outflows.
- Amid inflationary pressures, rising interest rates, lingering recession fears, and the conflict in Ukraine, global sustainable fund flows proved resilient again relative to the broader market, which experienced USD 200 billion of net withdrawals over the fourth quarter.
- Global sustainable fund assets recovered to hit USD 2.5 trillion at the end of December, from USD 2.24 trillion three months earlier. This 11.6% surge put an end to three quarters of asset decline and was almost double the growth of the broader global fund market.

The Global Sustainable Fund Universe

The global sustainable fund universe encompasses open-end funds and exchange-traded funds that, by prospectus or other regulatory filings, claim to focus on sustainability; impact; or environmental, social, and governance factors[2]. (See the Appendix for more details on how we define the global sustainable fund universe.)

The global universe is divided here into three segments by domicile: Europe, United States, and Rest of World. There is more-granular data available in this report for Canada, Australia and New Zealand, and Japan. China, Hong Kong, India, Indonesia, Malaysia, Singapore, Taiwan, Thailand, and South Korea are grouped under the Asia ex-Japan label because of their relatively low assets.

This report examines recent activity in the global sustainable fund universe and details regional flows, assets, and launches for the fourth quarter of 2022. A summary is provided in Exhibit 1.

1 Excluding China. Because China's data was not available at the time of publication, we used third-quarter 2022 data as a proxy for fourth-quarter 2022 data.

2 This is not the same as the definition under the European Union's Sustainable Finance Disclosure Regulation, which defines "sustainable investments" at a holding level.

Exhibit 1 Global Sustainable Funds' Fourth-Quarter 2022 Statistics

Q4 2022	Flows	Assets		Funds	
Region	USD Billion	USD Billion	% Total	#	% Total
Europe	40.0	2,078	83%	5,316	76%
United States	-6.2	286	11%	598	9%
Asia ex-Japan	1.5	51	2%	459	7%
Australia/New Zealand	1.6	29	1%	198	3%
Japan	-0.6	25	1%	238	3%
Canada	0.5	28	1%	203	3%
Total	**36.9**	**2,497**		**7,012**	

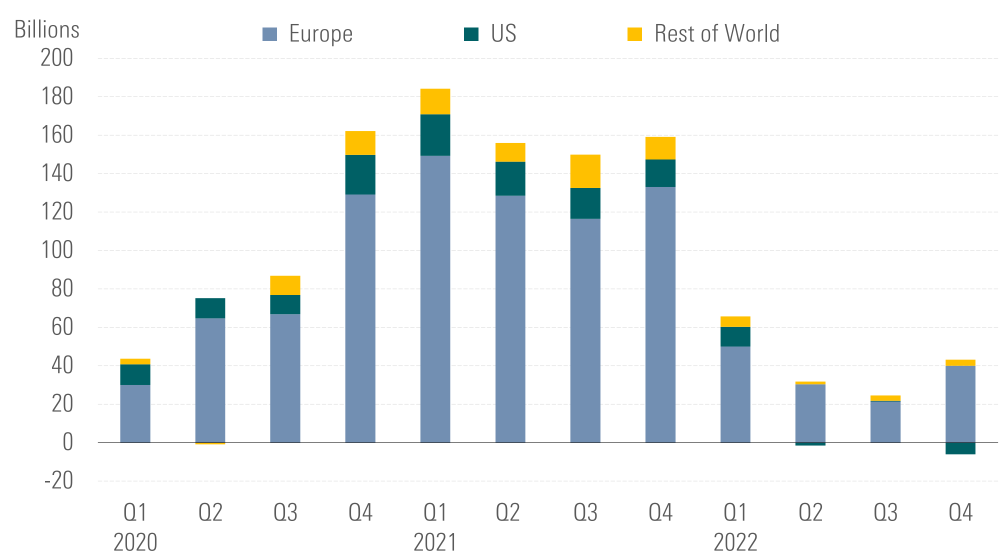
Source: Morningstar Direct, Manager Research. Data as of December 2022.

Sustainable Fund Inflows Rebound but Not Everywhere

The global universe of sustainable funds attracted almost USD 37 billion of net new money in the fourth quarter of 2022. These inflows were 50% higher than the revised USD 24.5 billion of the third quarter and 22% higher than those in the second quarter. The rebound also shows when looking at quarterly organic growth rates. Calculated as net flows relative to total assets at the start of a period, global sustainable funds saw their organic growth rate rise to 1.6% from 1% in the previous quarter.

In comparison, the overall global fund universe suffered outflows of USD 200 billion in the fourth quarter, after suffering USD 198 billion of outflows in the third quarter. Macroeconomic headwinds, including enduring inflationary pressures, rising interest rates, and lingering recession fears have persisted during the fourth quarter, spelling trouble for global fund markets.

Exhibit 2 Quarterly Global Sustainable Fund Flows (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Looking at flows at individual region and country levels reveals a divided picture. The rebound in net new money into sustainable funds was felt in only three regions: Europe, Australia, and Canada, while the rest of the world experienced outflows.

Europe, the biggest market for sustainable funds, registered an 88% increase in inflows after three quarters of decline. European investors poured USD 40 billion into sustainable products in the fourth quarter, despite the challenging financial market conditions.

U.S.-domiciled sustainable funds, however, shed nearly USD 6.2 billion, after registering a small net inflow of USD 459 million in the previous quarter.

In Australia and New Zealand, net inflows clocked higher, at USD 1.6 billion, from USD 0.4 billion in the third quarter. The two other geographies experiencing net withdrawals were Asia ex-Japan (excluding China[3]) and Japan, which bled USD 22 million and USD 556 million, respectively.

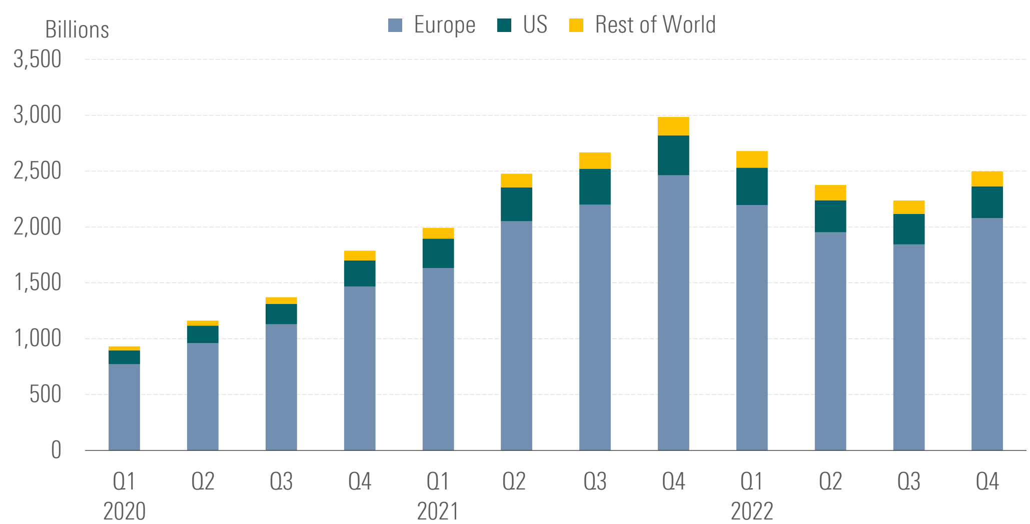
Global Assets Up 11.6% but Still Below Their Highs

Global sustainable fund assets recovered in the fourth quarter to hit nearly USD 2.5 trillion at the end of December, from the restated USD 2.24 trillion three months earlier. This 11.6% increase put an end to three quarters of asset decline. In comparison, the overall global fund market grew by 6% in the three months through December 2022.

Europe continued to make up the lion's share of the sustainable fund landscape with 83% of global sustainable fund assets. It also remains by far the most developed and diverse ESG market, followed by the U.S., which housed 11% of global sustainable fund assets through December 2022. Asia ex-Japan, of which China is the biggest sustainable market with more than 68% of the region's asset base, ranks third in terms of sustainable fund market size.

3 Excluding China. Because China’s data was not available at the time of publication, we used third-quarter 2022 data as a proxy for fourth-quarter 2022 data.

Exhibit 3 Quarterly Global Sustainable Fund Assets (USD Billion)

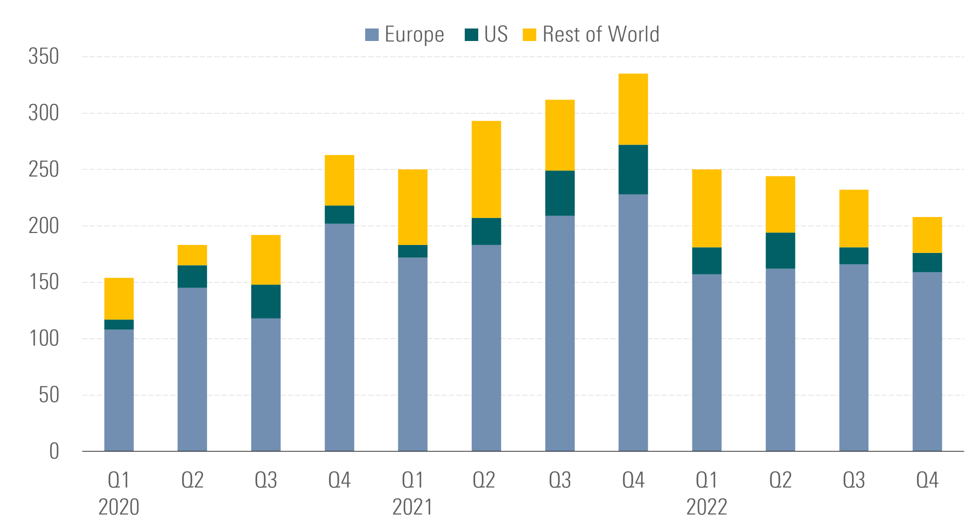


Source: Morningstar Direct, Manager Research. Data as of December 2022.

Global Fund Launches

An estimated 208 new sustainable funds hit the shelves globally in the fourth quarter. However, this number will likely be restated upward in our next report as we identify more launches and as additional ones are reported to Morningstar. The third-quarter number was restated to 232, from 148. It is therefore probably too early to conclude that product development has continued to slow down at the end of last year. Historically, fund launches in the last quarter of each year have been higher than in preceding quarters.

Exhibit 4 Global Sustainable Fund Launches per Quarter



Source: Morningstar Direct, Manager Research. Data as of December 2022.

While in the fourth quarter, product development activity in Europe and the U.S. remained similar to that of previous quarters in 2022, the rest of the world experienced a slowdown after several quarters of intense activity. China and South Korea experienced the biggest slowdowns.

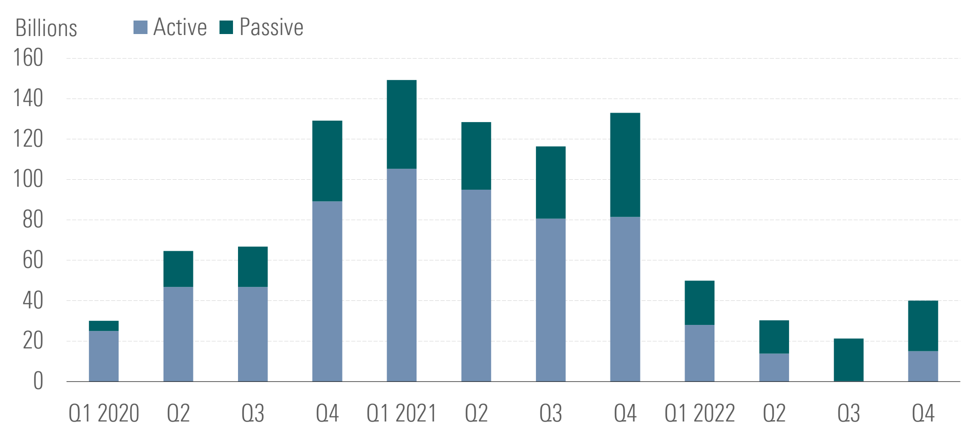
Quarterly Statistics per Domicile

Europe

Revival After Downward Spiral

In the fourth quarter of 2022, flows into the European sustainable fund universe rebounded after a three-consecutive-quarter decline and stood at almost USD 40 billion. This represents a noticeable 88% growth from the readjusted USD 21.3 billion of net inflows of the previous quarter. Passive strategies pocketed over 60% of the new capital.

Exhibit 5 European Sustainable Fund Flows (USD Billion)

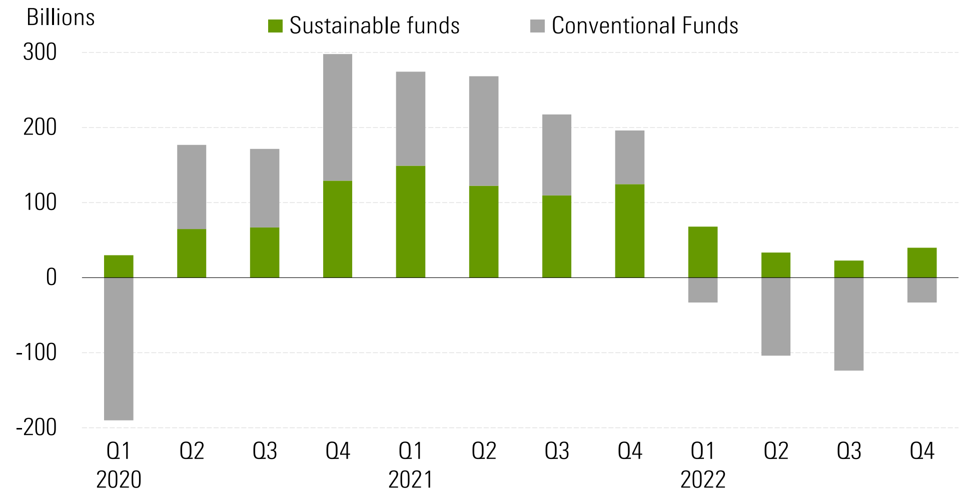


Source: Morningstar Direct, Manager Research. Data as of December 2022.

The rebound was further confirmed when looking at organic growth rates. Calculated as net flows relative to total assets at the start of a period, the European sustainable fund universe saw its organic growth rate surge to 2.2% in the fourth quarter, from 1.2% in the third quarter and 1.5% in the second quarter. Nevertheless, 2022 organic growth rates were lower than previous years'. Until the end of last year, quarterly organic growth rates were consistently above 5% (except in first-quarter 2020, when it fell to roughly 3.5%).

In comparison, European conventional funds continued to bleed assets. Against a backdrop of continued geopolitical concerns with the Russian invasion of Ukraine, high inflation, interest-rate hikes, and lingering recession fears, European conventional funds suffered USD 33.3 billion of outflows in the last quarter of 2022. The overall European fund flows' organic growth rate was negative 0.1%, a slight improvement over the negative 0.9% of the second quarter.

Exhibit 6.a Sustainable Fund Flows Compared With Conventional Fund Flows (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of December 2022.

The resilience of European sustainable fund flows reflects the continued appetite of investors in Europe for investment products that focus on a range of ESG issues from a risk and/or impact perspective, despite greenwashing concerns and the evolving regulatory environment. Asset managers have also continued to adapt their strategies to meet the growing investor demand.

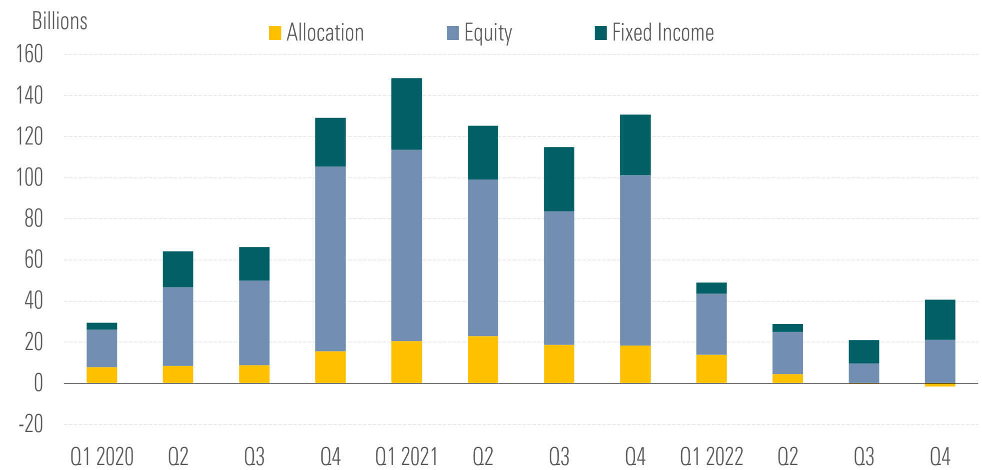
Exhibit 6.b Sustainable Fund Flows Compared With Conventional Fund Flows by Asset Class (USD Billion)

USD Billion	Sustainable Funds		Conventional Funds		Overall Fund Universe	
	Q3 2022	Q4 2022	Q3 2022	Q4 2022	Q3 2022	Q4 2022
Allocation	0.2	-1.5	-8.7	-11.3	-8.5	-12.8
Alternative	0.3	0.0	-5.3	-5.2	-5.0	-5.2
Commodities	0.1	0.0	-11.0	-4.0	-10.9	-4.0
Convertibles	-0.1	0.2	-1.8	-1.5	-2.0	-1.3
Equity	10.8	21.1	-69.6	-12.0	-58.7	9.1
Fixed Income	11.0	19.6	-29.5	-0.2	-18.5	19.5
Miscellaneous	0.2	0.2	1.6	1.4	1.8	1.6
Property	0.3	0.3	0.0	-0.4	0.2	-0.1
Total	**22.6**	**40.0**	**-124.3**	**-33.3**	**-101.7**	**6.7**

Source: Morningstar Direct, Manager Research. Data as of December 2022.

Sustainable equity funds remain the most favored, pocketing USD 21.1 billion, almost double the inflows of the previous quarters. By contrast, conventional equity funds endured outflows of USD 12 billion. Sustainable bond funds gathered USD 19.6 billion, representing all the inflows into European bond funds in the fourth quarter. However, allocation fund flows fell in the red.

Exhibit 7 European Sustainable Fund Flows by Asset Class



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Leaders and Laggards

In the fourth quarter, passive strategies continued their dominance (six out of 10) among the bestselling sustainable products, netting altogether over USD 6.7 billion of net new money. Amid cooling inflation expectations in the U.S., **Mercer Passive Global High Yield Bond Fund** topped the leaderboard, capturing inflows of USD 2.1 billion alone, followed closely by an active strategy—**BlackRock ACS North America ESG Insights Equity**. The former tracks the J.P. Morgan ESG Global High Yield BB-B Rated Liquid Corporate Index, which, in addition to sector exclusions, screens out securities with low ESG scores.

Exhibit 8.a Top 10 Sustainable Fund Flows in Fourth-Quarter 2022

Fund Name	Jet Flows (USD, Million)
Mercer Passive Global High Yield Bond Fund	2,121
BlackRock ACS North America ESG Insights Equity	1,977
BlackRock ACS World ESG Insights Equity Fund	1,801
iShares MSCI Europe ESG Enhanced ETF	1,295
Mercer Passive Sustainable Global Equity CCF	1,176
iShares € Corp Bond ESG ETF	1,120
Van Lanschot Kempen Vermogensfonds - Duurzaam - Neutraal	1,083
Credit Suisse Index Fund Equity Switzerland Total Market ESG Blue	953
Pimco GIS Global Bond ESG Fund	950
iShares $ Corp Bond ESG ETF	899

Source: Morningstar Direct, Manager Research. Data as of December 2022.

Passive strategies were equally well represented in the bottom 10 fund flows table below. Following the stellar inflow performance of USD 5.3 billion in the previous quarter, **iShares MSCI USA ESG Enhanced ETF** was set back, bleeding over USD 800 million in the fourth quarter. The fund tracks a climate transition benchmark that aims to reduce exposure to CO_2 and other greenhouse gases as well as exposure to potential emissions risk of fossil fuel reserves by 30% with respect to the parent MSCI USA Index.

Exhibit 8.b Bottom 10 Sustainable Fund Flows in Fourth-Quarter 2022

Fund Name	Jet Flows (USD, Million)
iShares MSCI USA ESG Enhanced ETF	-805
BlackRock Sustainable Fixed Income Strategies Fund	-697
Northern Trust World Custom ESG EUR Hedged Equity Index Fund	-631
Nordea 1 - Emerging Stars Equity Fund	-623
DPAM L - Bonds Emerging Markets Sustainable	-553
SEB Sverige Indexfond	-535
Veritas Asian Fund	-515
FundLogic MSCI Emerging Markets ESG Equity Fund	-508
Xtrackers II EUR Corporate Bond SRI PAB ETF	-487
State Street Sustainable Climate EM Enhanced Equity Fund	-471

Source: Morningstar Direct, Manager Research. Data as of December 2022.

The aggregate net inflows among the top 10 bestselling firms in the fourth quarter overtook the previous quarter by almost 70%. BlackRock continued excelling in the leaderboard by gathering a record high of sustainable fund inflows at USD 16.4 billion alone. The firm was followed distantly by Mercer Global Investment and Swisscanto, which pocketed USD 3.6 and 2.9 billion, respectively. The rapid rise of Mercer could be attributed almost entirely to its two passive strategies, that is, **Mercer Passive Global High Yield Bond Fund** and **Mercer Passive Sustainable Global Equity CCF**. The latter is also among the top 10 European sustainable funds with the largest inflows.

Exhibit 9.a Top 10 European Sustainable Fund Providers by Flows in Fourth-Quarter 2022

Firm	Net Flows (USD Million)
BlackRock (incl. iShares)	16,367
Mercer Global Investments	3,576
Swisscanto	2,911
Kempen	2,238
Credit Suisse	1,839
Northern Trust	1,598
BNP Paribas	1,440
Amundi (incl. Lyxor)	1,401
JPMorgan	1,355
Pimco	1,309

Source: Morningstar Direct, Manager Research. Data as of December 2022.

State Street and **Alliance Global Investors** topped the ranking of the worst-selling asset managers. The former suffered heavy outflows mostly due to **State Street Sustainable Climate Emerging Markets Enhanced Equity Fund**, which alone bled USD 471 million. Another State Street fund that registered significant outflows is **State Street Euro Corporate Bond ESG Screened Index Fund**. The passive strategy saw net outflows of USD 364 million.

Exhibit 9.b Bottom 10 European Sustainable Fund Providers by Flows in Fourth-Quarter 2022

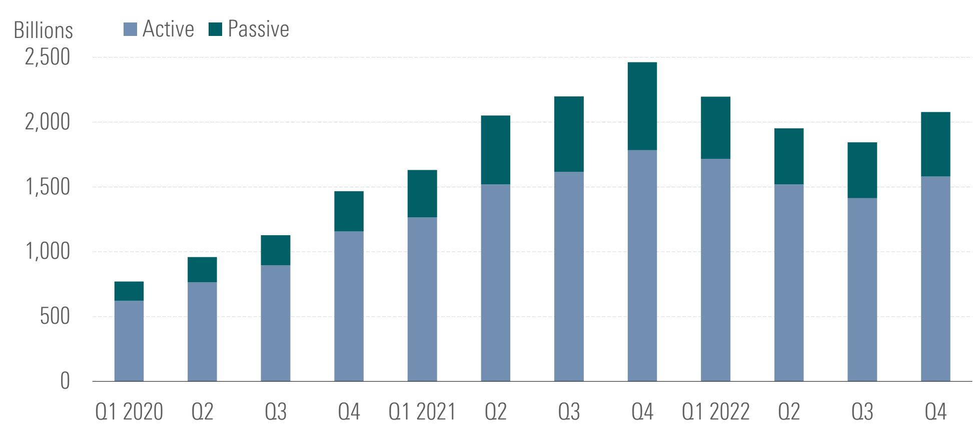
Firm	Net Flows (USD Million)
State Street	-1,201
Allianz Global Investors	-745
Pictet	-731
Hermes Fund Managers	-615
BlueOrchard	-556
Veritas Asset Management	-532
SEB	-531
FundLogic	-510
Carne	-365
Danske Invest	-292

Source: Morningstar Direct, Manager Research. Data as of December 2022.

European Sustainable Funds Assets Rise Back Above the USD 2 Trillion Mark

Higher inflows, new funds joining the universe, as well as market appreciation helped European sustainable fund assets in the fourth quarter. As of December 2022, assets in European sustainable funds totaled USD 2.1 trillion, up 12.7% in the last three months and almost level with the restated figure for the first quarter of 2022 (USD 2.2 trillion). In comparison, assets in the overall European fund universe remained constant.

Exhibit 10 European Sustainable Fund Assets (USD Billion)



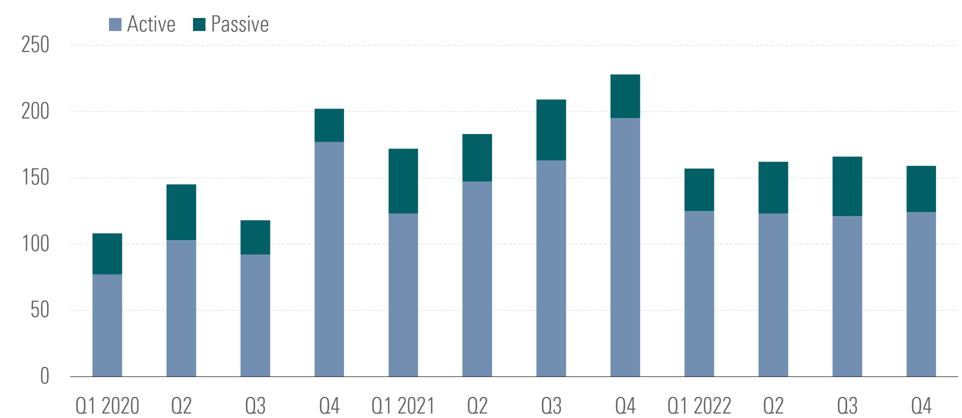
Source: Morningstar Direct, Manager Research. Data as of December 2022.

Overall, sustainable funds accounted for 20% of European fund assets at the end of December 2022, surpassing the third-quarter market share of 18%. We expect this percentage to continue rising as investors' demand for strategies aligning with their sustainability preferences continues to grow, prompting asset managers to launch additional sustainable products and repurpose existing conventional ones. The MiFID II amendment, which came into effect in August 2022 and requires financial advisors to consider their clients' sustainability preferences, has the potential to accelerate adoption of sustainable investments among retail investors. Increased disclosure requirements for asset managers and companies will also likely contribute to growing investor demand for sustainability-focused products. (See details in the Regulatory Update section and SFDR Article 8 and Article 9 Funds: Q4 2022 in Review.)

Launches

While product development slowed down over 2022 compared with 2021, the number of newly launched ESG funds in the fourth quarter almost levelled with the restated number of the previous quarter. It is likely that the fourth-quarter number will be restated in future reports as we identify more launches and as additional ones are reported to Morningstar. As of this writing, we identified 159 new sustainable products launched in the fourth quarter.

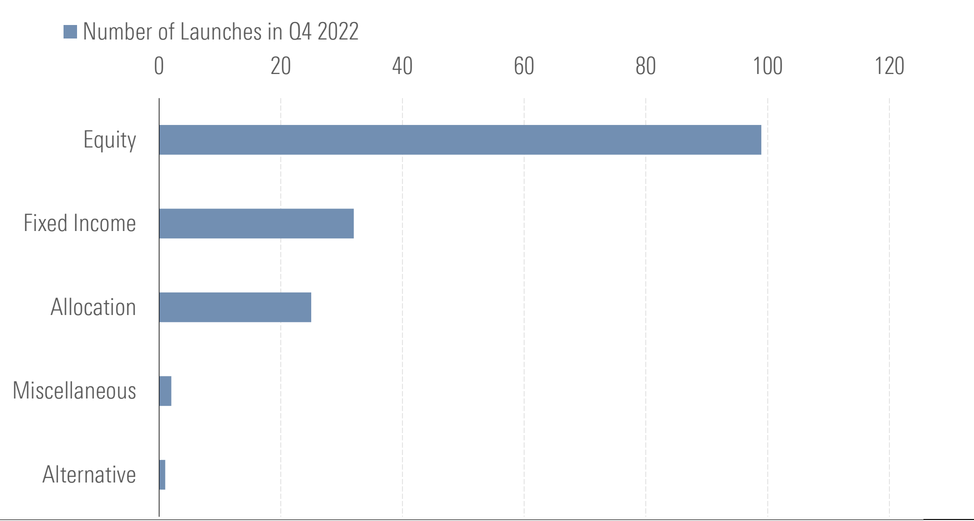
Exhibit 11.a European Sustainable Fund Launches



Source: Morningstar Direct, Manager Research.

Equity offerings (99) constituted the majority of new fund launches, thanks to the inception of 53 large-cap funds, making up over one third of the total sustainable fund launches in the last three months.

Exhibit 11.b European Sustainable Fund Launches in Fourth-Quarter 2022 by Broad Asset Class



Source: Morningstar Research. Data as of December 2022.

While general ESG-focused offerings continued to account for the majority of product development, climate remained by far the most popular theme represented among new product launches. Thirty-seven new climate-related funds came to market in the fourth quarter[4]. These span all climate investment approaches, from Paris-aligned and green bonds to climate solutions strategies.

Examples include **Northern Trust World Natural Capital PAB Index Fund**, which tracks an index that aims to reduce the weighted average greenhouse gas intensity relative to the MSCI World Index by 50% and reduce the weighted average greenhouse gas intensity by 7% on an annualized basis. The index additionally aims to reduce exposure to companies according to select indicators that are associated with adverse impact on natural resources and to increase exposure to companies that are associated with positive contribution to the environment through their products or services or through their management of natural-capital-related risks. The fund had gathered USD 768 billion of assets at the end of December.

Another example of a successful launch last quarter, though focused on impact, is **Schroder BlueOrchard Emerging Markets Impact Bond Fund**, which already has USD 456 billion in assets. The fund invests in bonds issued by government-related entities and companies in emerging markets that the investment manager deems to be contributing toward the advancement of one or more of the United Nations Social Development Goals. Such issuers may be involved in activities such as micro, small, and medium enterprise lending, affordable housing, affordable education, health, agriculture, improvements in energy efficiency, renewable energy, among others.

The overwhelming majority of newly incepted funds distributed in the EU were classified as either Article 8 or 9 under SFDR.

Regulatory Update

The final quarter of 2022 was another busy one on the regulatory front and, in Europe, culminated with perhaps some of the most significant milestones to date. One comes in the form of the detailed SFDR annexes that must be added to product disclosures, and the self-assignment of products to SFDR Article 6, 8, or 9 takes on additional importance because it dictates the details of what must be disclosed in the annexes. In the runup to the 1 January 2023 application date, we have seen a wave of products move to Article 8 from 9 as providers address that Article 9 products should be fully invested in assets qualifying as sustainable investments (excepting only cash and assets used for hedging purposes). (For more detail, see SFDR Article 8 and Article 9 Funds: Q4 2022 in Review).

The other milestone comes in the corporate arena and will see the first tranche of companies start disclosing the proportion of their turnover, capital expenditures, and operating expenses that is aligned with EU Taxonomy activities, and in November, the European Parliament approved the text of the Corporate Sustainability Reporting Directive, or CSRD. The new rules will extend the breadth and depth

4 For more information on climate strategies, read Investing in Times of Climate Change - A Global View.

of companies' nonfinancial data reporting, applying to large public-interest companies with more than 500 employees, all large companies with over 250 employees and an annual turnover of at least EUR 40 million, and all companies listed on regulated markets except micro undertakings. However, implementation will be on a staged basis between 2025 and 2028.

Meanwhile, the fight against greenwashing continued, with the three European Supervisory Authorities (European Banking Authority, European Insurance and Occupational Pensions Authority, and European Securities and Markets Authority) conducting a Call for Evidence on greenwashing to gather input from stakeholders on how to understand the key features, drivers, and risks associated with greenwashing and to collate examples of potential greenwashing practices. Additionally, ESMA is exploring the imposition of more-restrictive use of ESG-terms in financial product names. The authority is seeking feedback on proposals that would require a fund with any ESG-related words in its name to have a minimum proportion of at least 80% of its investments being used to meet the environmental or social characteristics or sustainable-investment objectives of its investment strategy. Additionally, if a fund has the word "sustainable" or any other term derived from the word "sustainable" in its name, it would need to allocate within the 80% at least 50% toward sustainable investments as defined in SFDR.

It is a topic also on the radar of other national regulators: in the United Kingdom within the Financial Conduct Authority's Sustainability Disclosure Requirements and investment labels, and also in the U.S. Securities and Exchange Commission proposals last August[5].

The UK proposals include restrictions on the use of ESG terms in product names and marketing materials. The proposals mark some of the most visible post-Brexit divergences from EU regulation. Unlike SFDRs Article 6, 8, and 9, which have become de facto unofficial labels, the UK regulator is proposing three specific consumer-facing labels—Sustainable Focus; Sustainable Improvers, and Sustainable Impact—with specific requirements to which firms can elect to manage their products. Further divergence will see UK products producing new short-form consumer-facing sustainability disclosure documents in addition to the more detailed SFDR-type disclosures, which bring more quantification to investors of the ESG and sustainability goals and objectives that products aim to provide. However, the UK's own taxonomy has seen progress stall, with further activity delayed until later in the year.

United States

U.S. sustainable funds shed nearly USD 6.2 billion during the fourth quarter to cap off the roller-coaster ride that was 2022. After a USD 10.4 billion intake during 2022's first quarter, sustainable funds lost USD 1.6 billion in the second quarter and netted a modest USD 459 million in the third quarter.

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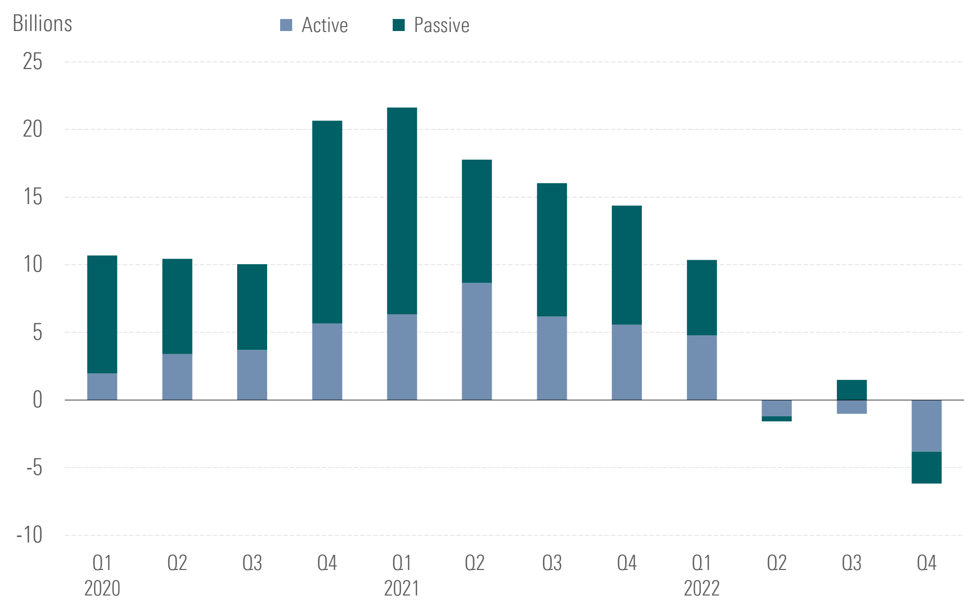
5 On May 25, 2022, the U.S. Securities and Exchange Commission proposed two form and rule amendments seeking to enhance and standardize disclosures related to ESG factors considered by funds and advisors and to also expand the regulation of the naming of funds with an ESG focus. ESG Disclosures for Investment Advisers and Investment Companies is available on: https://www.sec.gov/news/press-release/2022-92

Although sustainable funds ended in the black, netting more than USD 3 billion for the year, flows into U.S. sustainable funds peaked two years ago in the first quarter of 2021 and have fallen steadily since. Much of this was driven by the broader market environment; in 2022, U.S. funds bled more than USD 370 billion, cementing their first calendar year of outflows since Morningstar began tracking data in 1993. Investors generally pulled out of actively managed funds and fixed-income funds amid persistent inflation and rising interest rates, risk of an impending recession, and poor market returns.

Sustainable funds showed resilience in the face of some of these headwinds—sustainable fixed-income funds fared better than nonsustainable peers—but in the case of market returns, the impact was felt more acutely by sustainable funds. In 2022, the energy sector was the best performing unit of the S&P 500 index, gaining a remarkable 66%. On the other hand, communication services, consumer discretionary, and information technology suffered the most, losing 40%, 37%, and 28%, respectively. Funds with a structural underweighting in the energy sector, including many sustainable funds, suffered as a result. The opposite was true in 2020, when the tech sector gained 44% compared with energy's 34% loss. Investors may have favored traditional energy exposure over energy-light sustainable funds given relative return expectations.

Finally, the conversation around sustainable investing was increasingly plagued by concerns about greenwashing and an anti-ESG sentiment. In the U.S., prominent politicians have spoken out against ESG investing, and some have taken measures to limit state investment funds from doing business with asset managers based on perceptions of those managers' ESG approaches.

Exhibit 12 U.S. Sustainable Fund Flows



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Although both sustainable funds and their nonsustainable counterparts saw outflows in the fourth quarter, the short-term loss was more severe for sustainable funds. For the first quarter in more than three years, the U.S. sustainable funds landscape saw a lower organic growth rate than the total U.S. fund universe. Calculated as net flows as a percentage of total assets at the start of a period, the organic growth rate puts the magnitude of fund flows into perspective. During the fourth quarter, sustainable funds shrank by 2.2% compared with an 0.8% shrinkage in the overall U.S. landscape. The organic growth rate becomes a more meaningful measure over longer periods of time, and sustainable funds still beat the total U.S. funds landscape for 2022. During the year, sustainable funds grew by 0.7%, while the overall universe shrank by 1.3%. Although sustainable funds maintained stronger growth than nonsustainable peers, this pales in comparison to the two previous years. In 2021 and 2020, sustainable funds outgrew the broader universe by 22 and 31 percentage points, respectively.

Investors Pulled Out of Passive Sustainable Funds

Passive sustainable funds bled USD 2.4 billion during the fourth quarter, their steepest outflows in more than three years. One fund—**iShares ESG Aware MSCI USA ETF** ESGU—constituted more than three fourths of the total loss, with a USD 1.8 billion withdrawal over the period. Historically a fan favorite, this fund landed among the top 10 flow-getters each quarter for the past three years, but the tide turned halfway through 2022.

Sustainable passive funds couldn't keep up with their nonsustainable peers in 2022. In the overall U.S. fund universe, index-tracking funds collected USD 556 billion, down more than 40% from their record haul in 2021 but still a bright spot in an otherwise gloomy flows picture for the year.

Actively managed sustainable funds posted their third consecutive quarter of outflows, shedding USD 3.8 billion during 2022's fourth quarter. Losses offset the first quarter's gains, and these funds landed in negative territory for the full year with USD 1.3 billion in net outflows. Still, this is relatively minor compared with active funds in the U.S. overall, which lost an incredible USD 926 billion in 2022, roughly triple their second-worst calendar-year outflows in 2018.

A Familiar Face Among the Top Flow-Getters

Just one fund has managed to place in the top 10 for inflows during each quarter in 2022. **Vanguard ESG U.S. Stock ETF** ESGV features a straightforward approach to portfolio construction that harkens to the early days of socially responsible investing. The fund tracks a diversified equity index but screens out controversial activities such as tobacco, cannabis, civilian firearms, and coal & oil. The fund's popularity is largely driven by its low fee of just 9 basis points.

Exhibit 13.a. Top 10 Sustainable Fund Flows in Fourth-Quarter 2022

Fund Name	Net Flows (USD Million)
American Century Sustainable Equity Fund	1,006
Calvert Equity Fund	237
iShares ESG U.S. Aggregate Bond ETF	184
SPDR® S&P 500® ESG ETF	151
Dimensional US Sustainability Core ETF	134
Vanguard ESG U.S. Stock ETF	117
Dimensional International Sustainability Core ETF	97
TIAA-CREF Social Choice International Equity Fund	93
Dimensional Emerging Markets Sustainability Core ETF	89
Vanguard ESG International Stock ETF	82

Source: Morningstar Direct, Manager Research. Data as of December 2022.

American Century Sustainable Equity AFDAX secured the top spot for inflows when it captured more than USD 1 billion in the fourth quarter. The fund's process provides diversified exposure to the S&P 500 universe but maintains a stronger ESG score than the index. During the final quarter of 2022, the fund outperformed its benchmark by more than 1 percentage point, gaining 8.9% versus the S&P 500's 7.6% total return.

Two Funds Accounted for Nearly Half of the Quarter's Outflows

Two funds that have consistently placed among the top flow-getters accounted for nearly half of the quarter's net outflows from U.S. sustainable funds. **IShares ESG Aware MSCI USA ETF** ESGU and **Parnassus Core Equity** PRBLX bled USD 1.8 billion and USD 1.2 billion during the quarter, respectively. These outflows accounted for nearly 9% of **iShares ESG Aware MSCI USA ETF**'s assets and more than 5% of **Parnassus Core Equity**'s assets coming into the fourth quarter.

Exhibit 13.b Bottom 10 Sustainable Fund Flows in Fourth-Quarter 2022

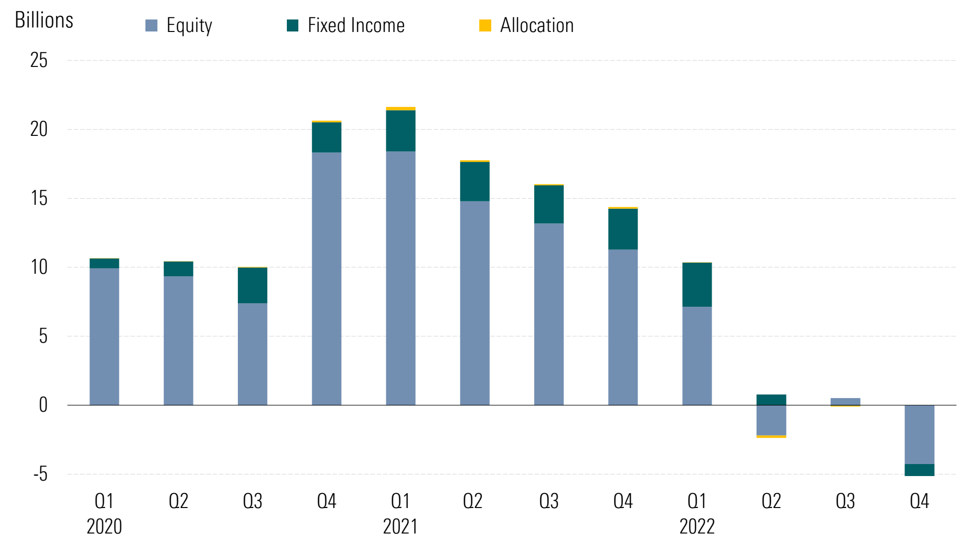
Fund Name	Net Flows (USD Million)
iShares ESG Aware MSCI USA ETF	-1783
Parnassus Core Equity Fund	-1186
Invesco Floating Rate ESG Fund	-733
Parnassus Mid Cap Fund	-411
TIAA-CREF Social Choice Equity Fund	-334
iShares ESG Aware MSCI EM ETF	-294
TIAA-CREF Core Impact Bond Fund	-278
Calvert Emerging Markets Equity Fund	-240
Pioneer Fund	-208
Osterweis Short Duration Credit Fund	-190

Source: Morningstar Direct, Manager Research. Data as of December 2022.

Fixed Income Fell Out of Favor

Flows into sustainable fixed-income funds were on a steady upward trajectory until the Federal Reserve started raising rates in early 2022. During the fourth quarter, sustainable bond funds lost USD 1.7 billion, their second-consecutive quarter of outflows in more than three years. Still, a strong first-quarter showing kept these funds above water to net USD 2.4 billion for the year. This paled in comparison to nonsustainable taxable and municipal-bond funds, which surrendered a record USD 335 billion during the year.

Exhibit 14 U.S. Sustainable Fund Flows by Asset Class



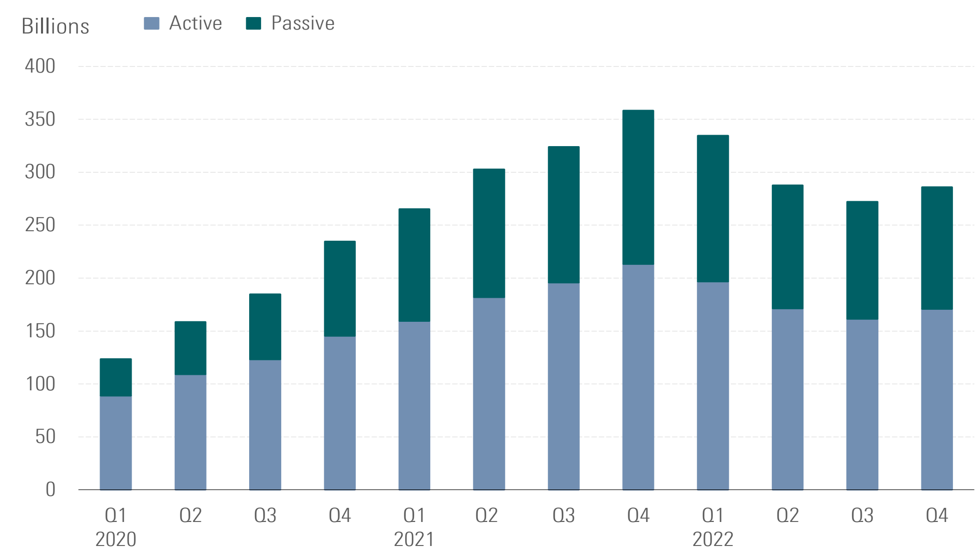
Source: Morningstar Direct, Manager Research. Data as of December 2022.

Flows into sustainable equity funds seesawed throughout 2022, and fourth-quarter outflows nearly erased the year's gains. These funds registered the second quarter of outflows in more than five years. Still, nonsustainable U.S. equity funds fared worse, shedding assets in half of all quarters over the past three years.

Market Appreciation Boosted Assets in U.S. Sustainable Funds

Despite outflows, assets in sustainable funds rose to round out the year. Total assets in sustainable funds grew to USD 286 billion at the end of December, almost fully recovering from the third quarter's losses. The rise was supported by market appreciation as the typical sustainable U.S. equity fund gained 8% during the fourth quarter. Still, this represents a 20% decline from the all-time record of USD 358 billion at the end of 2021. By comparison, assets in the broader U.S. fund universe also peaked at the end of 2021 (at USD 28 trillion) and slid by 19% to USD 22.7 trillion at the end of 2022.

Exhibit 15 U.S. Sustainable Fund Assets

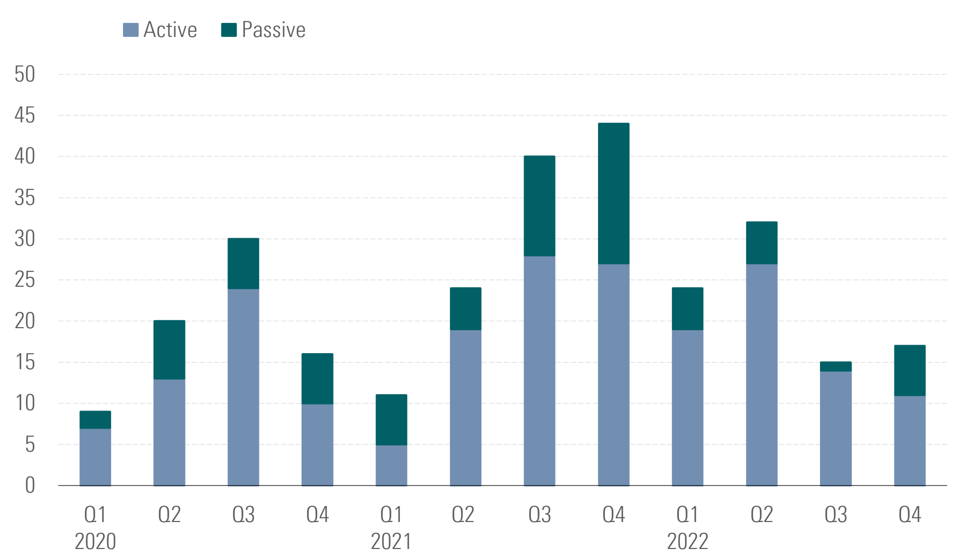


Source: Morningstar Direct, Manager Research. Data as of December 2022.

Active Funds Dominated New Launches Once Again

Despite persistent investor preference for passive funds, 11 of the 17 sustainable funds launched in the U.S. during 2022's fourth quarter are actively managed. On average over the past three years, active funds have accounted for two thirds of sustainable fund launches, and this quarter's 65% matched that trend.

Exhibit 16 U.S. Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Only two of the new sustainable offerings were launched as open-end funds, and both focus on the climate transition. **Amundi Climate Transition Core Bond** CTCYX invests in green bonds and those whose issuers have relatively low carbon emissions or are implementing robust sustainability strategies. **Vanguard Global Environmental Opportunities Stock** VEOAX invests in companies that derive a majority of revenue from climate-related activities such as renewable energy development and waste reduction in manufacturing.

The three largest new U.S. sustainable funds were core portfolio holdings launched by Dimensional: **Dimensional US Sustainability Core ETF** DFSU, **Dimensional International Sustainability Core ETF** DFSI, and **Dimensional Emerging Markets Sustainability Core ETF** DFSE. These funds, which pulled a total of USD 350 million since inception, follow the firm's hallmark investment philosophy focused on smaller and less expensive companies, and they overlay the process with a focus on sustainability factors including biodiversity, fossil fuel involvement, and ownership of private prisons.

The new offerings brought the total number of sustainable open-end and exchange-traded funds in the U.S. to 598 at the end of the quarter.

Regulatory Update

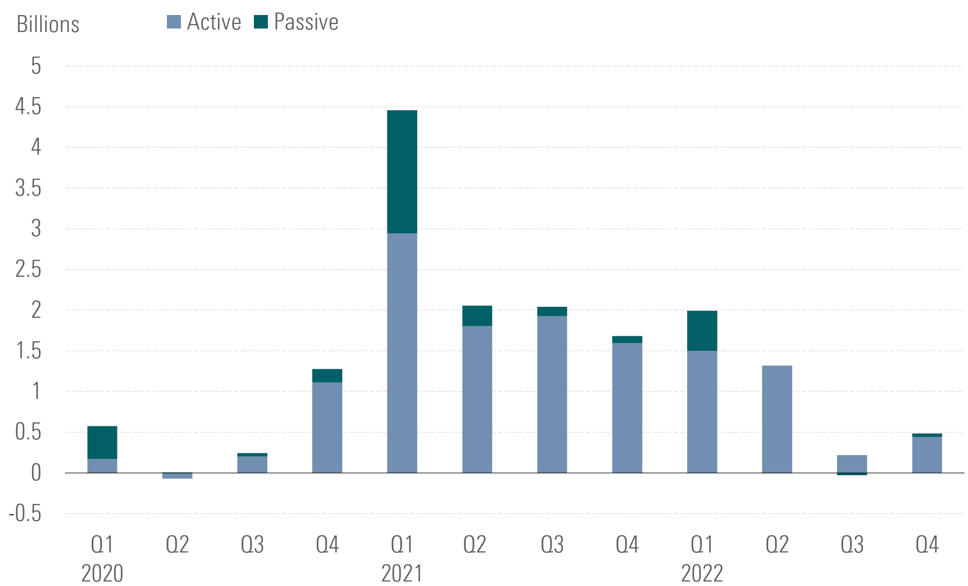
The Department of Labor issued its final rule on ESG considerations for retirement plan investment options, permitting plan fiduciaries to consider ESG factors. The ESG rule, Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights, reverses one that the Trump administration finalized in November 2020. That rule generally required plan fiduciaries to select investments and investment courses of action based solely on consideration of "pecuniary factors."

Canada

Flows

In the fourth quarter, net inflows into sustainable funds and ETFs totaled USD 485 million, a 157% increase from the previous quarter. Active strategies represented 91% of the flows.

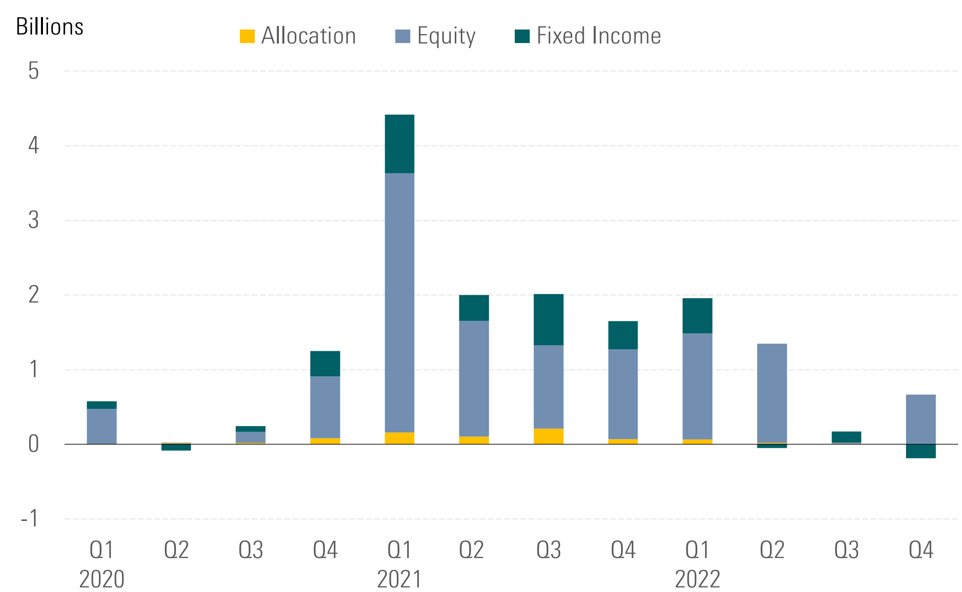
Exhibit 17 Canada Sustainable Fund Flows



Source: Morningstar Direct, Manager Research. Data as of December 2022.

When looking at the breakdown of asset classes, equities accounted for 98% of the inflows, while allocation and alternatives each represented 1% of the flows. Meanwhile, fixed income experienced outflows.

Exhibit 18 Canada Sustainable Flows by Asset Class



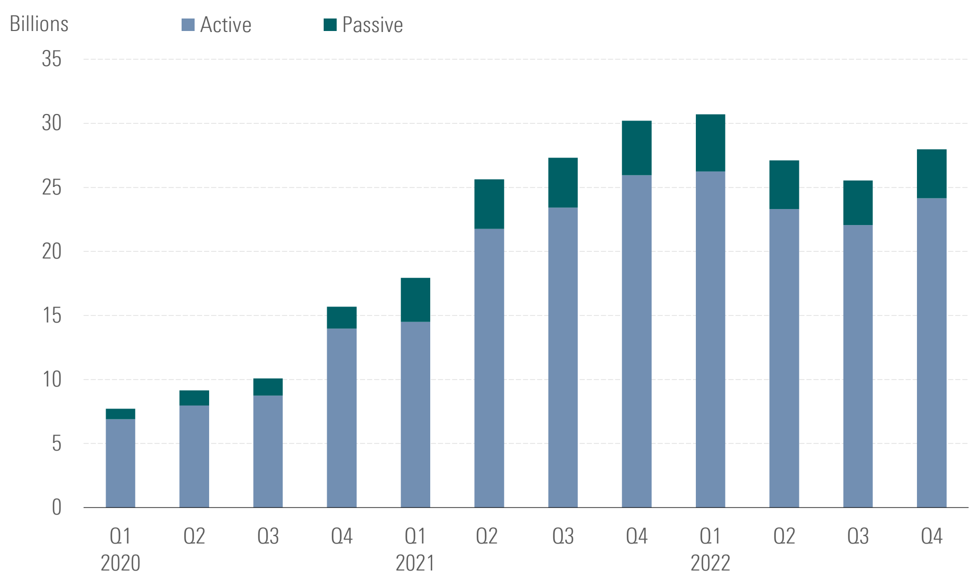
Source: Morningstar Direct, Manager Research. Data as of December 2022.

The top 10 funds by net inflows experienced a significant increase in investment, with an estimated USD 891 million. This represents a 101% increase from the previous quarter. Among these top funds, NEI products experienced the largest positive flows, accounting for 87% of the total inflows. Most of these inflows were seen at the beginning of the quarter, with December experiencing a decrease in investment, representing only 4% of total inflows for the quarter.

Assets

The market for sustainable funds in Canada saw a 10% increase in asset size during the fourth quarter of 2022. Assets stood at USD 27.9 billion at the end of December. This, however, represents a 7% decrease in assets on a year-over-year basis. Both actively and passively managed strategies saw a 9.5% increase in assets from the previous quarter.

Exhibit 19 Canada Sustainable Fund Assets



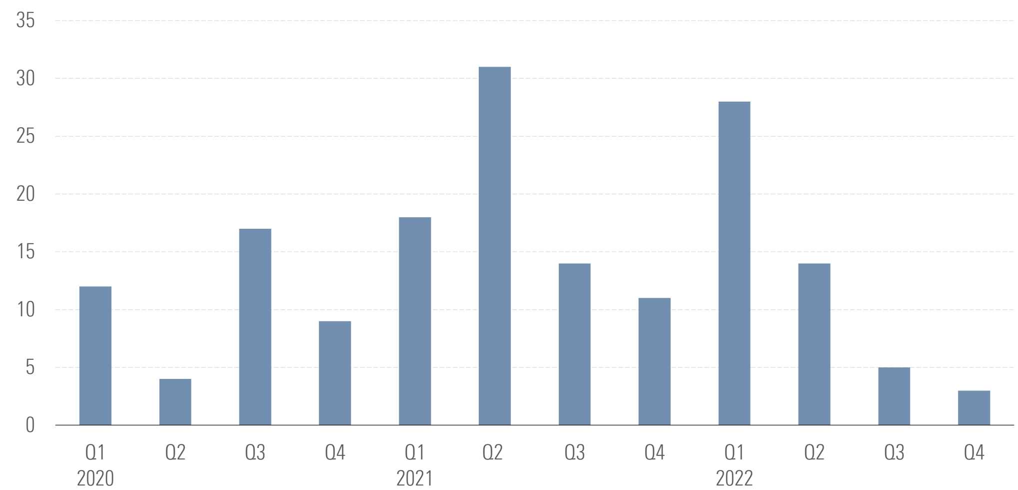
Source: Morningstar Direct, Manager Research. Data as of December 2022.

The trend of investor interest in fixed income over equities that was observed in the third quarter of 2022 did not continue into the fourth quarter. Instead, there was a resurgence in equities, as the asset class increased by 13.5%. Conversely, fixed income saw a 0.6% decrease in assets. Alternative funds also saw an increase of 7.1%. As of the end of the fourth quarter, equities made up 72% of sustainable fund assets, followed by fixed income at 24%, with the remaining assets allocated to allocation and alternative funds.

New Launches

The Canadian sustainable-investing landscape remained relatively flat in the fourth quarter of 2022 in terms of new products. According to Morningstar data, only three new sustainable mutual funds were launched, marking the lowest number of launches in the sustainable-product space in nearly three years. This decline in product development is not unique to sustainable funds, as traditional fund products also saw a decrease in launches in the fourth quarter. In fact, the total number of product launches in the quarter, 31, represents a nearly 55% drop from the previous quarter, a decline not seen since the third quarter of 2019. This trend may be attributed to ongoing uncertainty about the global economy, as well as concerns of a potential recession, which may have led to decreased investor appetite for new products.

Exhibit 20 Canada Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Regulatory Update

In late January 2023, the Canadian Investment Funds Standards Committee launched its Responsible Investment Identification Framework, which will include an inaugural list of Canada-domiciled investment funds for which the committee has reviewed prospectus documents and has confirmed the presence of sustainable or responsible investment objectives and strategies.

The framework outlines six nonmutually exclusive approaches to responsible investment, aligning closely with the Morningstar Sustainable-Investing Framework, the Canadian Securities Administrators' guidance on sustainable fund disclosure, as well the CFA Institute's Global Disclosure Standards for ESG-Related Investment Products. The framework was formed collaboratively by major Canadian mutual fund research and data providers and included detailed consultation with industry trade bodies representing fund manufacturers. The framework has also set up a mechanism for fund companies to request a review of regulatory documents for funds that they believe are flagged incorrectly, analogous to how fund category reclassification requests are handled today in Canada. To help Canadian investors gain a consistent view of sustainable investments, future iterations of the Sustainable Landscape for Canadian Fund Investors will utilize the CIFSC framework to define the primary universe of sustainable funds.

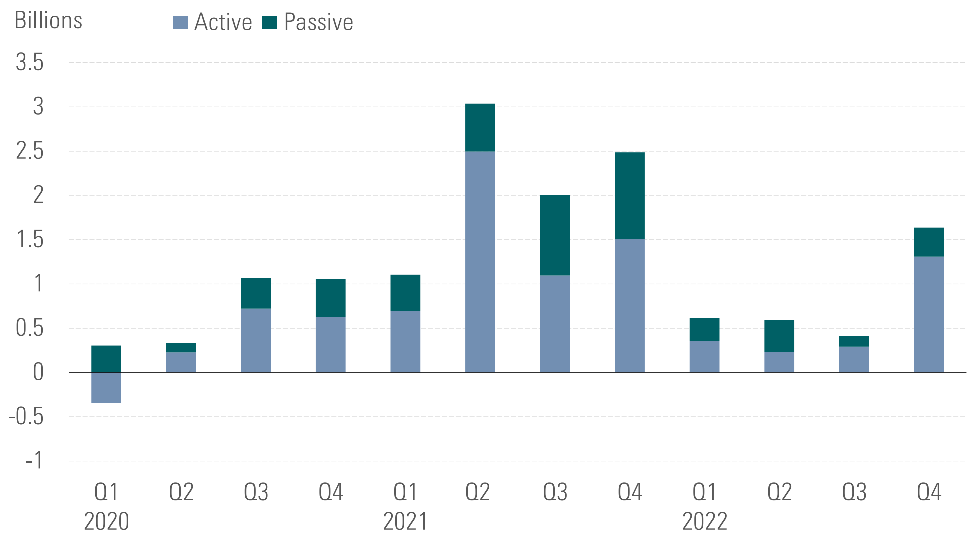
Australia and New Zealand

Flows

Inflows into the Australasian (Australia and New Zealand) sustainable funds universe bounced back in the final quarter of 2022 and increased fourfold compared with the previous quarter at USD 1.6 billion. Despite this significant jump, fourth-quarter 2022 inflows are still 34% lower than fourth-quarter 2021's. For context, 2021 was an extraordinarily year for inflows, with record sustainable fund inflows.

The fourth quarter also saw the third-quarter move toward active strategies continue, as inflows into active strategies accounted for nearly 80% of all sustainable fund flows, at USD 1.3 billion.

Exhibit 21 Australia and New Zealand Sustainable Fund Flows

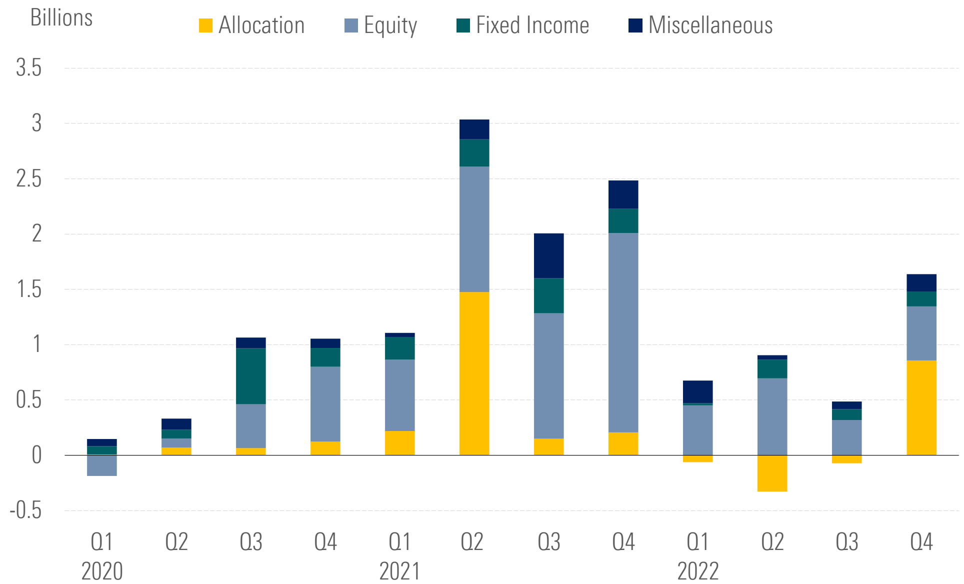


Source: Morningstar Direct, Manager Research. Data as of December 2022.

Flows by Category

The fourth quarter saw more than half of sustainable fund inflows invested in allocation strategies, USD 857 million. This is a reversal of the previous quarter when allocation strategies were in outflows. Over the past eight quarters, equities have captured the bulk of inflows; while they lost the mantle this quarter, they were the next biggest category, attracting 30% of inflows. The remaining inflows were relatively evenly split across fixed income and miscellaneous categories.

Exhibit 22 Australia and New Zealand Sustainable Flows by Asset Class



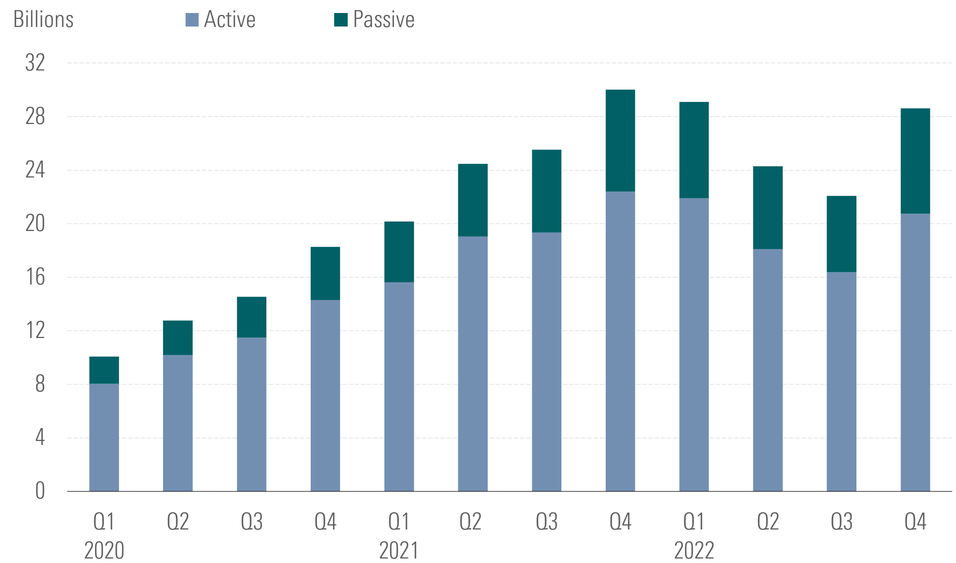
Source: Morningstar Direct, Manager Research. Data as of December 2022.

Assets

Assets in Australasian sustainable funds increased by 30% in fourth-quarter 2022, to an estimated USD 28.6 billion, via a combination of market movements and strong inflows. The Australasian sustainable funds market remains quite concentrated, with the top 10 funds accounting for 68% of the assets.

The top five fund houses by sustainable fund assets are Australian Ethical (16.5%), DFA Australia (11%), ETF provider Beta Shares (10.6%), Vanguard Investments Australia (9.1%), and Pendal (5.8%). The most interesting observation is that Vanguard's market share is continuing to slip. Vanguard had the largest market share in second-quarter 2022, falling to second place in the third quarter, and is now in fourth place in the fourth quarter.

Exhibit 23 Australia and New Zealand Sustainable Fund Assets



Source: Morningstar Direct, Manager Research. Data as of December 2022.

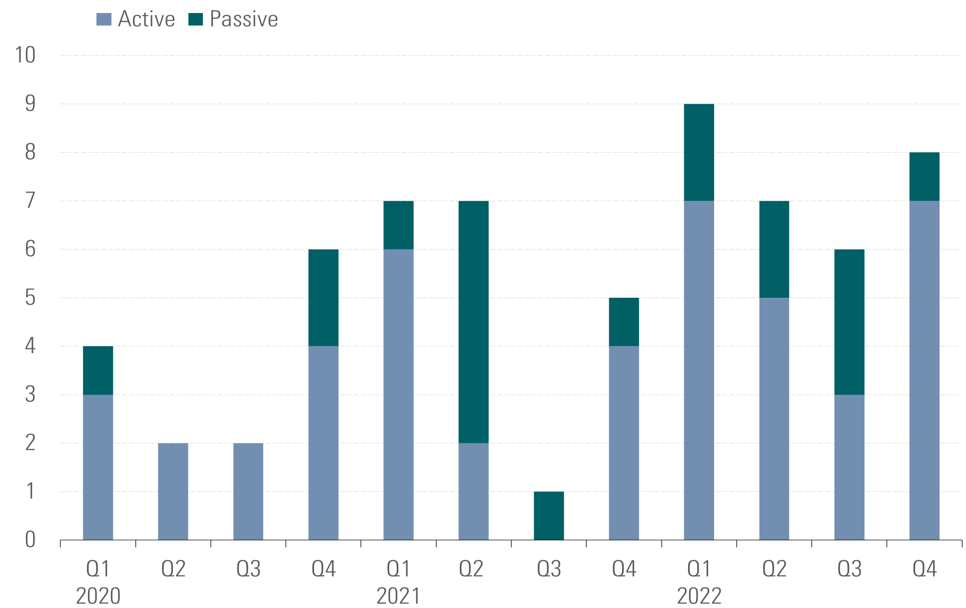
Launches

There were eight new sustainable funds launched in the fourth quarter of 2022, including seven active strategies and one passive: Equity strategies made up the bulk of the new launches, with five in total. These were **JP Morgan Climate Change Solutions, CFS FC AXA IM W Sustainable Equity, Global X Green Miners Metal ETF, JP Morgan Sustainable Infrastructure**, and **Vanguard Active Positive Impact**. There were two launches in the miscellaneous category, **Argyle Water Access** and **MA Sustainable Future**, and one in the aggressive allocation strategy, **CFS FC W Inv - Thrive + Sustainable Growth**.

The previous quarter saw three active and three passive fund launches. We are consistently seeing new sustainable strategies come to market, and these launches tend to be skewed to active approaches.

At the end of 2022, we counted 190 strategies in the Australasian sustainable fund universe. This universe does not contain the growing number of funds that now formally consider ESG factors in a nondeterminative way in their security selection (funds commonly known as "ESG-integrated funds").

Exhibit 24 Australia and New Zealand Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Regulatory Update

In December, the Australian Treasury Office, or ATO, issued a consultation paper seeking views on a climate-related financial risk and opportunity disclosure framework that is anticipated to cover large listed entities, financial institutions, and potentially large unlisted entities. The ATO is looking for input on the key considerations for the design and implementation of standardized, internationally aligned disclosure requirements in Australia.

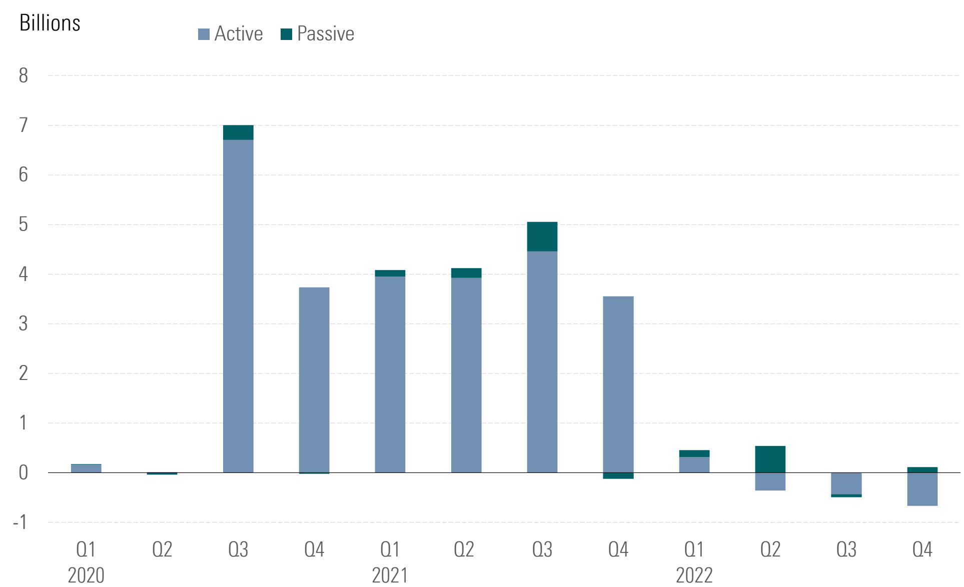
Japan

Flows

In the fourth quarter of 2022, the Japanese sustainable fund market recorded net outflows for the second consecutive quarter. Net outflows amounted to USD 557 million.

In Japan, newly launched funds tend to drive inflows, but within two years, investors take their money out. Sustainable funds were no exception to this trend. Seven out of top 10 in terms of inflows were funds incepted in 2022. However, these inflows were not large enough to offset the older funds' outflows, where nine out of top 10 funds in terms of outflows were launched in 2020 or 2021. All top 10 funds in terms of outflows were actively managed equity funds, which, in aggregate, bled USD 565 million; this mostly explains the active/passive and asset-class split of the flows in the two exhibits below.

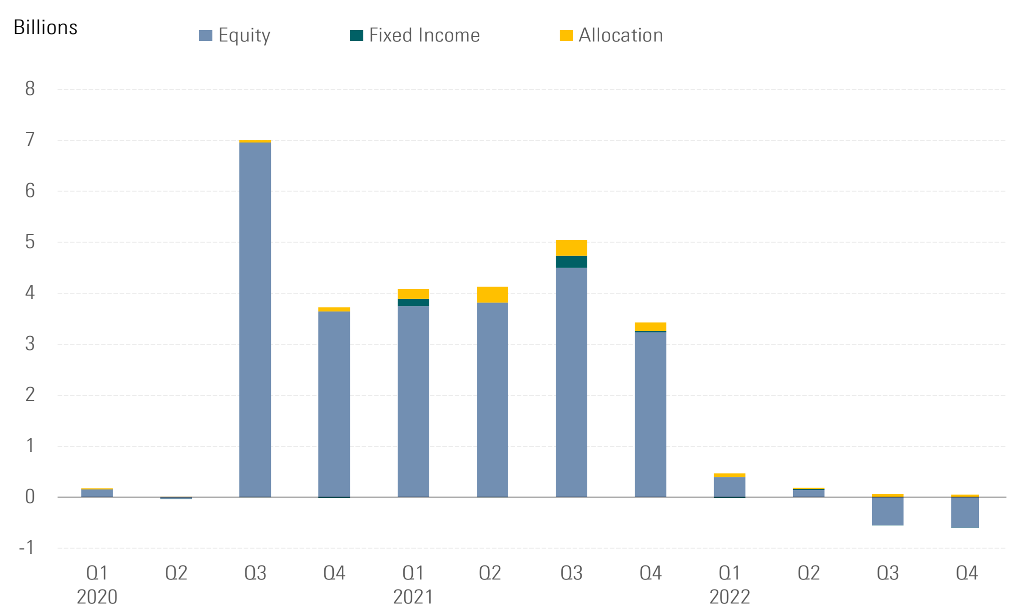
Exhibit 25 Japan Sustainable Fund Flows



Source: Morningstar Direct, Manager Research. Data as of December 2022.

It should be noted that there is a possibility of double-counting at the global level. We include Japan-domiciled funds of funds and feeder funds in this review to better reflect the actual flow situation in the Japanese fund market, as many Japanese funds of funds are invested in European funds.

Exhibit 26 Japan Sustainable Fund Flows by Asset Class

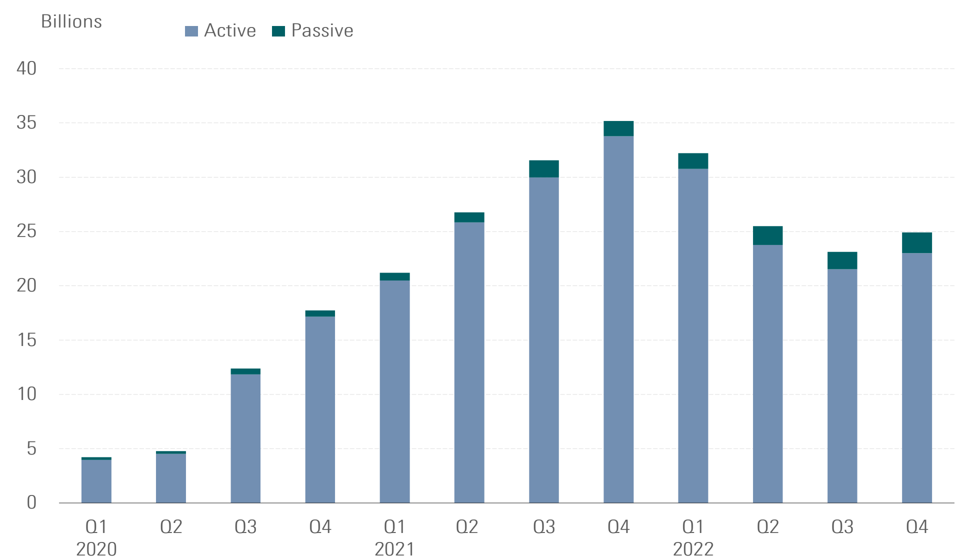


Source: Morningstar Direct, Manager Research. Data as of December 2022.

Assets

Total assets in Japan-domiciled sustainable funds increased by 8% in the fourth quarter to USD 25 billion at the end of December 2022. Despite the outflows mentioned earlier, two factors contributed to the increase: higher stock prices (equity funds constitute 95% of Japan-domiciled sustainable funds, most being exposed to global equities, which rose by about 10%) and a 9% appreciation in the Japanese yen against the U.S. dollar over the period.

Exhibit 27 Japan Sustainable Fund Assets

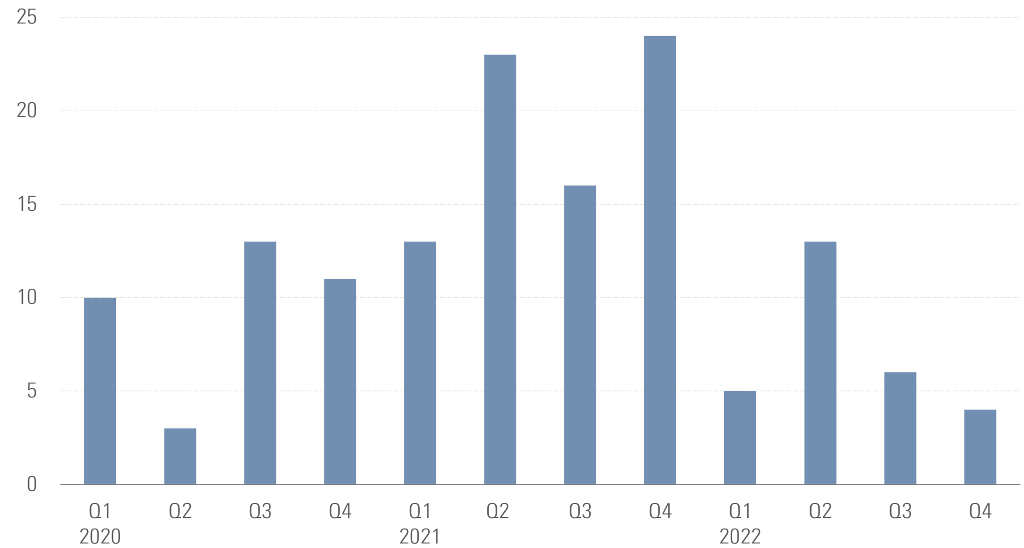


Source: Morningstar Direct, Manager Research. Data as of December 2022.

Launches

Four new sustainable funds came to the Japanese market in fourth-quarter 2022, a decrease compared with six new funds in the previous quarter. Two out of the four new products are passively managed, including **Resona Smart-i World Equity Climate Change Index**, which tracks the MSCI World Climate Change Index. Net inflows into newly launched funds in the quarter were USD 3.7 million in total.

Exhibit 28 Japan Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of December 2022.

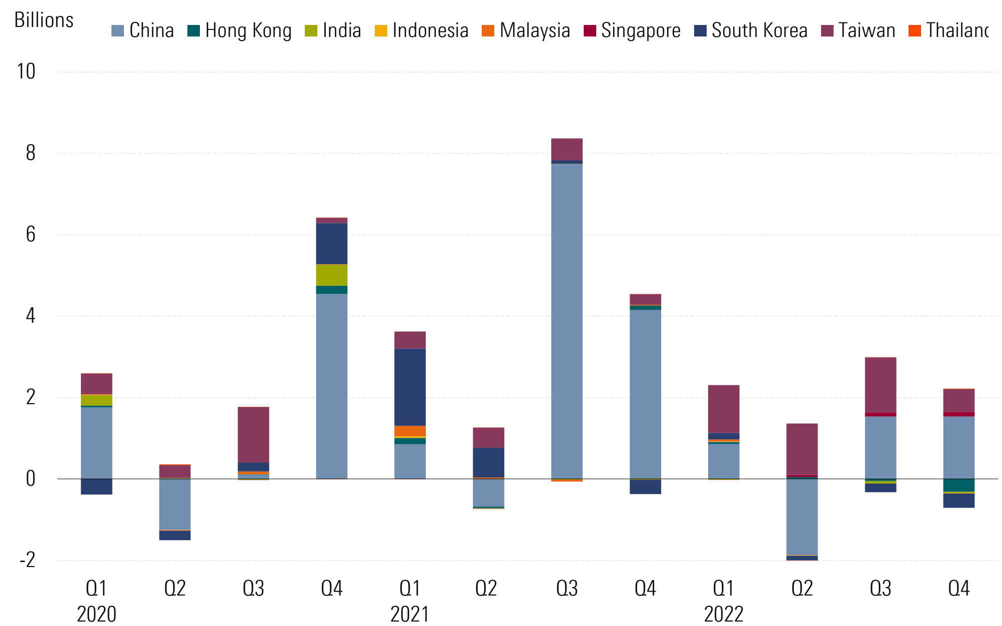
Asia ex-Japan

For funds of which full quarterly data was unavailable at the time of publication, we used the most-recent data available within the past quarter. Because China's data was not available at the time of publication, we used third-quarter 2022 data as a proxy for fourth-quarter 2022 data.

Flows

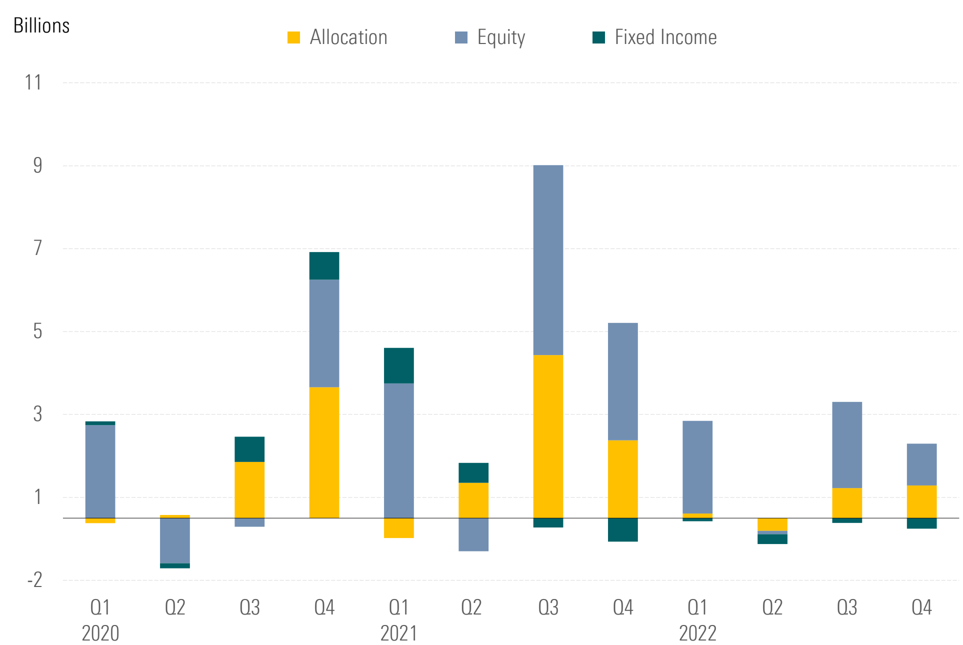
Excluding China, the Asia ex-Japan region recorded net outflows of roughly USD 22 million over the fourth quarter. Hong Kong experienced USD 314 million in outflows, while India and Malaysia saw outflows of USD 38 million and USD 8 million, respectively. By contrast, Thailand experienced inflows of USD 11 million, while Taiwan continued to lead the region with USD 564 million in net inflows. Singapore recorded the second-highest inflows at USD 110 million. South Korea saw net outflows for the third consecutive quarter, reaching USD 349 million in fourth-quarter 2022, driven by bond funds.

Exhibit 29 Asia ex-Japan Sustainable Fund Flows (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Exhibit 30 Asia ex-Japan Sustainable Fund Flows by Asset Class (USD Billion)

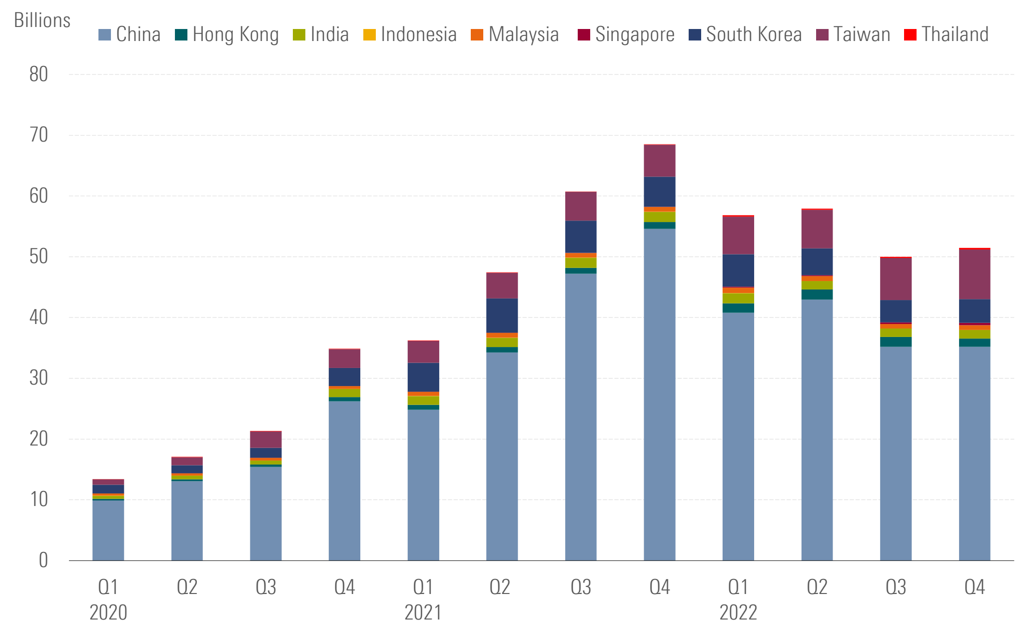


Source: Morningstar Direct, Manager Research. Data as of December 2022.

Assets

Total assets in Asia ex-Japan sustainable funds were slightly higher at the end of December 2022, at nearly USD 52 billion, registering an increase of 2.9% quarter-over-quarter. Outside of China (for which data was not available at the time of publication), Taiwan and South Korea remained the two largest markets by asset size, accounting for 15.9% and 7.5% of the region's assets, respectively. South Korea's sustainable fund assets rebounded after falling in the previous two quarters, increasing by 5.7% from third-quarter 2022. South Korean equity funds were a major contributor to the increase in assets.

Exhibit 31 Asia ex-Japan Sustainable Fund Assets (USD Billion)



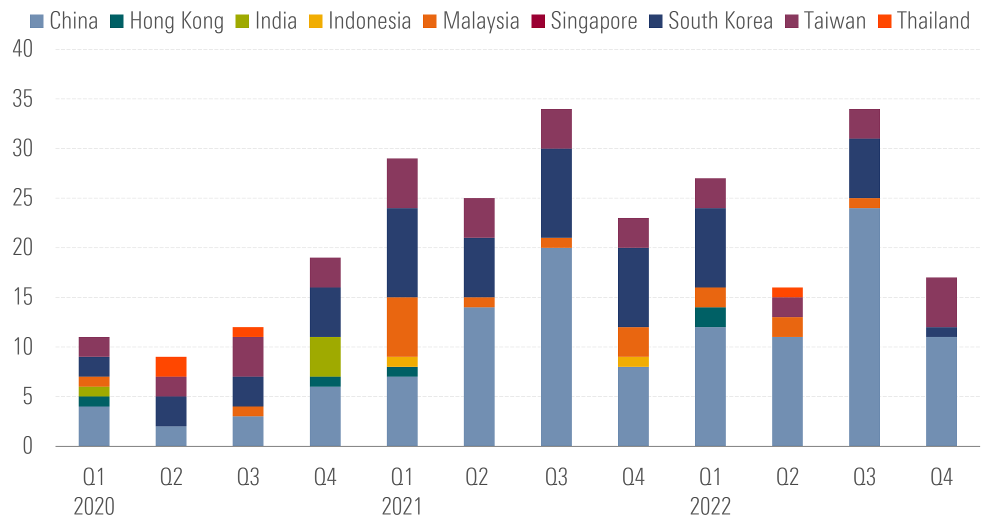
Source: Morningstar Direct, Manager Research. Data as of December 2022.

Following a quarter-over-quarter increase of 4.2% in assets, equities represented 67.7% of Asia ex-Japan sustainable fund assets at the end of December 2022, while allocation and fixed-income funds comprised 26.9% and 5.3%, respectively. Meanwhile, passive funds accounted for 34.7%, a slight increase from 33.7% in third-quarter 2022.

Launches

Product development slowed from an exceptional third quarter, with 17 launches in the fourth quarter versus 34 in the previous three months. Within the 17 new launches, 11 were in China, five in Taiwan, and one in South Korea. Equity funds continued to make up the bulk of new launches, accounting for 13, while allocation and fixed-income funds both took up two slots.

Exhibit 32 Asia ex-Japan Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of December 2022.

Regulatory Update

The Asia ex-Japan regulatory landscape continued to evolve in fourth-quarter 2022. In November 2022, Bursa Malaysia, the stock exchange of Malaysia, signed a memorandum of understanding with the London Stock Exchange Group to improve ESG data quality and expand ESG scoring coverage in the country. Elsewhere in the region, Taiwan's Financial Supervisory Commission amended prospectus requirements to enable the labeling of ESG-themed funds and announced plans to revise a program developed to attract overseas fund managers. The program encourages foreign managers to assist local agents in developing their ESG-related businesses and talents as well as adding ESG performance-related measures to the selection process. In December 2022, the Korea Sustainability Standards Board was established within the Korea Accounting Standards Board to effectively respond to international discussions on ESG disclosure standards and review ESG disclosure standards to be applied by domestic companies.

Appendix—Defining the Global Sustainable Fund Universe

The global sustainable fund universe encompasses open-end funds and ETFs that, by prospectus or other regulatory filings, claim to focus on sustainability; impact; or environmental, social, and governance factors.

Our universe of sustainable funds is based on intentionality rather than holdings. For example, a portfolio can score well on ESG metrics such as the Morningstar Sustainability Rating, but if ESG issues are not the focus of the fund's investment strategy, it will not be included in our universe. To identify intentionality, we relied on a combination of fund names (a strong indicator of intentionality) and information found in fund documents. The fund's documents should contain enough details to leave no doubt that ESG concerns figure prominently in the security-selection and portfolio-construction process.

The global sustainable fund universe does not contain the growing number of funds often referred to as "ESG integrated funds," which formally consider ESG criteria in the investment process and engage with portfolio holdings but do not make ESG considerations the focus of the investment process.

Furthermore, the global sustainable fund universe doesn't include funds that employ limited exclusionary screens such as controversial weapons, tobacco, and thermal coal (combined with an ESG integration approach or not). We however include ESG-screened passive funds in our universe as, typically for these, the exclusions are the sole purpose of the strategy.

Finally, the global sustainable fund universe excludes money market funds, feeder funds, and funds of funds to avoid double counting and inflating flows and assets. We make an exception for Japan and South Korea to better reflect the actual flow situation there as many Japanese funds of funds are invested in European funds.

To identify sustainable funds in their respective regions, manager research analysts use the "Sustainable Investment–Overall" data point in Morningstar Direct. We also use the "Sustainable Investment Overall Start Date" data point to account for repurposed funds, where relevant.

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