Global Sustainable Fund Flows: Q1 2022 in Review

Flows and assets slip but prove resilient amid market uncertainty.

Morningstar Manager Research
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Contents

Key Takeaways

- Global sustainable funds attracted close to USD 97 billion of net new money in the first quarter of 2022, representing a fall of almost 36% relative to the fourth quarter of 2021.
- Amid investor concerns over inflationary pressures and the war in Ukraine, sustainable funds still held up better than the broader market, which saw inflows slump by 73% over the period.
- Global sustainable fund assets slipped to USD 2.77 trillion. The 4% quarterly decline was less pronounced than the 5.5% dip for the broader market.
- Product development slowed down, as it usually does at the beginning of each year, with 227 new sustainable funds launched globally. Asset managers continued to repurpose and rebrand conventional products into sustainable offerings.

The Global Sustainable Fund Universe

The global sustainable fund universe encompasses open-end and exchange-traded funds that, by prospectus or other regulatory filings, claim to focus on sustainability; impact; or environmental, social, and governance factors. (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 first quarter of 2022. A summary is provided in Exhibit 1.

Exhibit 1 Global Sustainable Funds' Q1 2022 Statistics

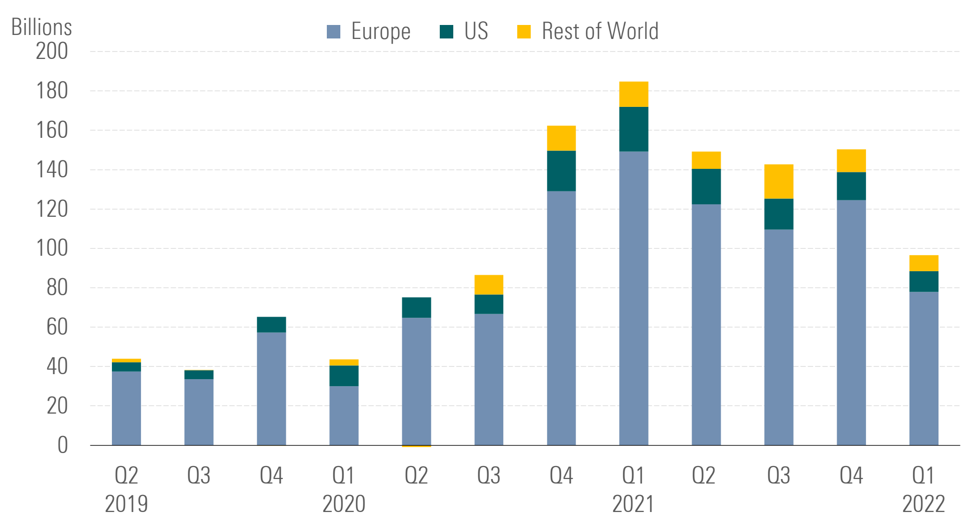
Region	Flows		Assets		Funds	
Q1 2022	USD Billion	% Total	USD Billion	% Total	#	% Total
Europe	77.9	81%	2,276	82%	4,958	77%
United States	10.6	11%	343	12%	555	9%
Asia ex-Japan	5.0	5%	71	3%	369	6%
Australia/New Zealand	1.0	1%	29	1%	153	2%
Japan	0.5	0%	32	1%	214	3%
Canada	1.7	2%	26	1%	203	3%
Total	**96.6**		**2,778**		**6,452**	

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

Sustainable Fund Inflows Fall by Almost 36% but Hold Up Better Than Their Conventional Peers

The global universe of sustainable funds attracted USD 96.6 billion of net new money in the first quarter of 2022, representing a fall of 35.7% relative to the revised USD 150.3 billion of inflows in the fourth quarter. This is the sharpest quarterly slowdown in sustainable fund net inflows over the past three years, and atop the 33% decline experienced by sustainable funds in the first quarter of 2020 at the beginning of the coronavirus crisis. Similar to then, sustainable funds are currently facing macroeconomic headwinds, including inflationary pressures, rising interest rates, and market volatility stemming from the Russian invasion of Ukraine, which translated into a decline in net new investments in the first quarter. Nonetheless, inflows in sustainable funds held up better than those of the broader market. In comparison, inflows in the overall global fund universe nosedived by 73% in the first quarter of 2022 to USD 138 billion, from USD 517 billion in the fourth quarter of 2021.

Exhibit 2 Quarterly Global Sustainable Fund Flows (USD Billion)



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

The slump in sustainable fund inflows was felt in all regions over the first quarter, with the exception of Canada and Asia ex-Japan, which saw investors' money increase by 31% and 21%, respectively.

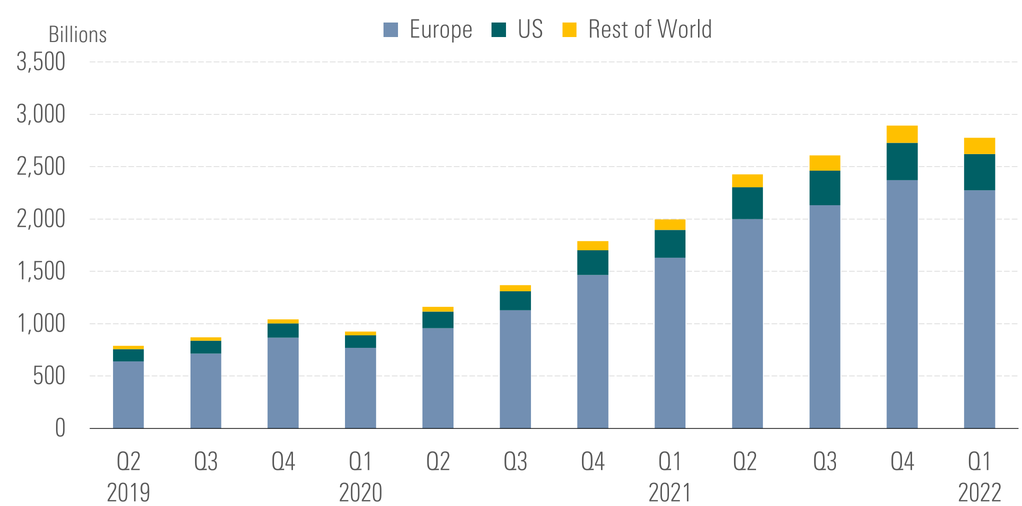
Japan-domiciled sustainable funds felt the most pain with an 87% fall in net new money, from USD 3.5 billion at the end of 2021 to less than USD 500 million as of March 2022. Australasia (Australia and New Zealand) followed with a 62.4% drop in net inflows garnered. Europe, the biggest market for sustainable funds, suffered a 40% drop in net purchases over the same period, as flows amounted to shy of USD 78 billion. Finally, the US recorded the smallest decline (26.4%) as local sustainable funds captured USD 10.6 billion of net new money, down from USD 14.4 billion in the previous quarter.

Global Assets Slip by 4%

Amid a broad market slowdown, global sustainable fund assets tapered off to USD 2.77 trillion as of March 2022 from the restated USD 2.89 trillion at the end of last year. For the first time since the first quarter of 2020, sustainable fund assets experienced a dip (nearly 4%). Year-on-year, however, the global sustainable fund universe expanded by 38%.

Europe continued to dominate the global sustainable fund landscape: 82% of sustainable fund assets were held in Europe, which also remains by far the most developed and diverse ESG market, followed by the US, which housed 12% of global sustainable fund assets through March 2022.

Exhibit 3 Quarterly Global Sustainable Fund Assets (USD Billion)

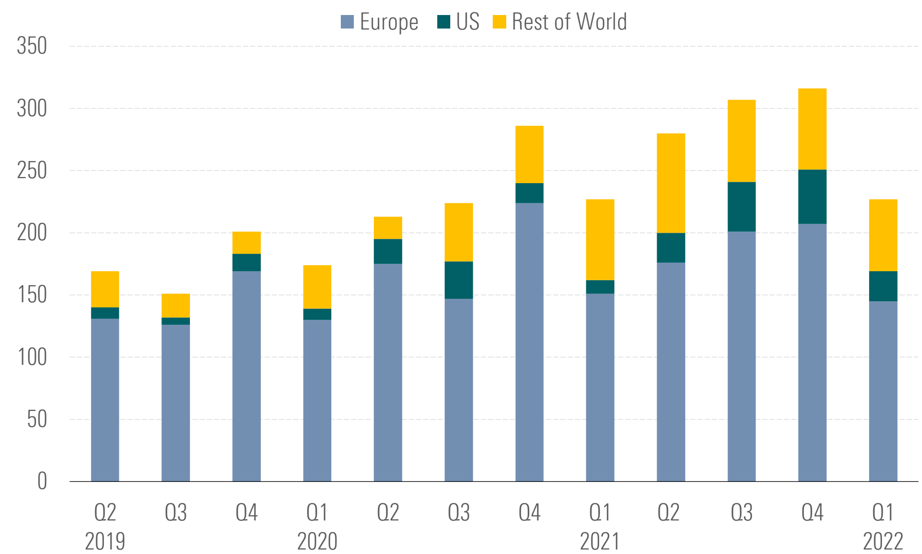


Source: Morningstar Direct, Manager Research. Data as of March 2022.

Global Fund Launches

Product development also waned in the first quarter of 2022 compared with the previous quarter, with an estimated 227 new sustainable funds launched globally. It represents a 28% decline versus the revised count of 316 new entrants in the fourth quarter of 2021. However, first-quarter numbers of newly incepted products have historically been lower than fourth-quarter numbers and this year's was identical to last year's, signaling that product development remains strong. Moreover, it is likely that the number of launches last quarter will be restated in future reports as we identify more launches and additional ones are reported to Morningstar.

Exhibit 4 Global Sustainable Fund Launches per Quarter



Source: Morningstar Direct, Morningstar Research. Data as of March 2022.

Close to two thirds of the world's new sustainable fund launches (64%) in the first quarter took place in Europe, which also saw many strategies being repurposed over the same period. However, the 145 new European products launched in the first quarter are 30% fewer than in the previous quarter. The US and Japan's launches decreased by 45% and 79%, respectively, to 24 and five, while Australasia recorded no new product launch at all for the first time in years. Asia ex Japan (27 launches of sustainable funds) and Canada—with a record 26 launches—were the only regions to see an increase in their product development quarter to quarter.

Quarterly Statistics per Domicile

Europe

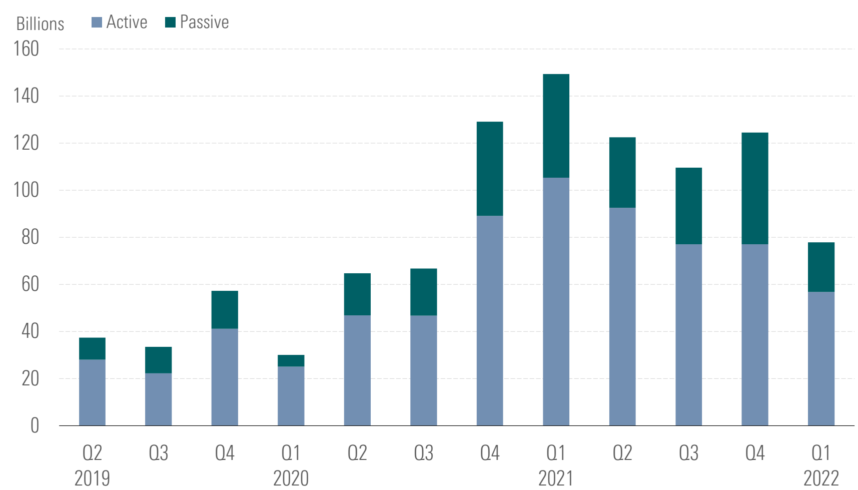
Flows

In the first quarter of 2022, the European sustainable fund universe (as defined in the Appendix section) attracted shy of 78 billion in net inflows, which represents a 37% decline over the USD 124 billion net inflows of the previous quarter.

This was one of the largest drops in inflows experienced by sustainable funds in the past three years, second only in magnitude to 2020's first-quarter fall of 48%. Similar to the impact of the beginning of the

COVID-19 pandemic in early 2020, the Russian invasion of Ukraine in February 2022 has resulted in heightened uncertainty and volatility in financial markets. An economic backdrop of high inflation and the prospect of aggressive interest-rate hikes have added to investors' concerns, resulting in a slowdown of new money into both conventional and sustainable funds.

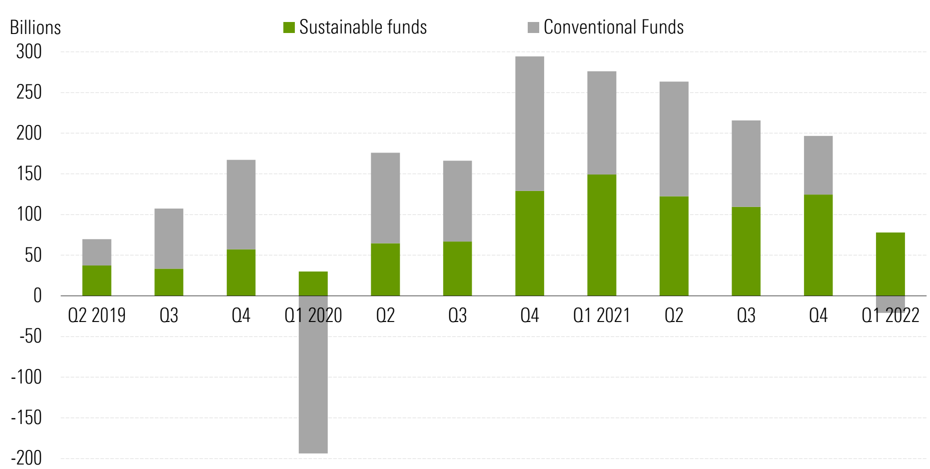
Exhibit 5 European Sustainable Fund Flows (USD Billion)



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

Nonetheless, European sustainable products held up better than their conventional peers: Amid first-quarter 2022's market volatility, European conventional funds saw USD 21 billion of net outflows. As demonstrated in the past as well as in 2020 at the start of the COVID-19 pandemic, and once again in the first quarter of 2022, sustainable fund flows seem to be more resilient in times of market volatility than their traditional peers.

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



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

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

USD,Bn	Sustainable Funds		Conventional Funds		Overall Fund Universe	
	Q4 2021	Q1 2022	Q4 2021	Q1 2022	Q4 2021	Q1 2022
Allocation	18.5	17.2	26.9	7.6	45.4	24.8
Alternative	0.8	0.3	5.0	3.4	5.8	3.7
Commodities	0.2	0.1	0.7	7.8	0.9	7.8
Convertibles	0.4	-0.1	-0.5	-2.2	-0.1	-2.3
Equity	74.8	48.9	-3.6	5.1	71.2	53.9
Fixed Income	28.6	11.4	41.4	-43.8	70.0	-32.3
Miscellaneous	1.1	0.1	-0.8	-2.4	0.2	-2.3
Property	0.1	0.1	3.0	3.3	3.1	3.3
Total	**124.5**	**77.9**	**72.1**	**-21.2**	**196.5**	**56.7**

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

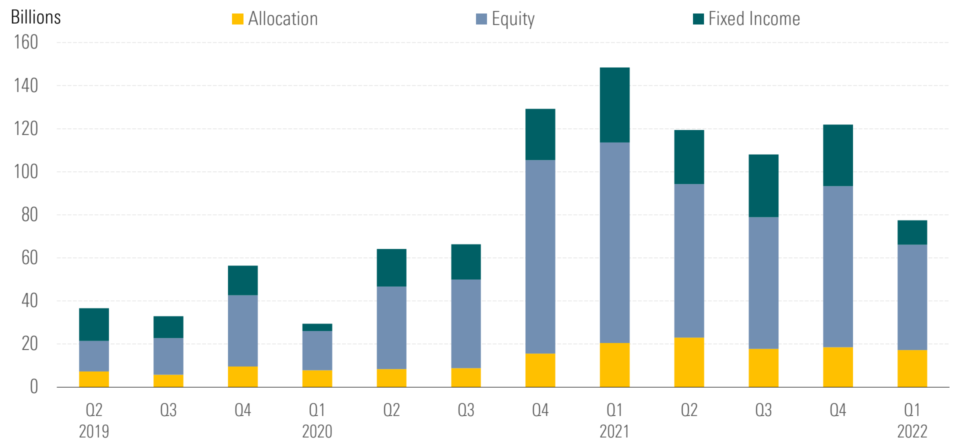
Sustainable fund flows tapered off across all asset classes, with fixed-income unsurprisingly seeing the sharpest drop (down 60%) amidst rising inflation and interest rates. That said, the USD 11.4 billion of inflows captured by sustainable fixed-income funds outshone the USD 44 billion outflows registered by their conventional counterparts.

While equity remained the asset class of choice for ESG-oriented investors, they poured 35% less new money into such funds in the first quarter: Inflows reached USD 48.9 billion, down from USD 74.8 billion in the previous quarter. This was still ahead of the USD 5.1 billion that conventional equity funds recorded in the first quarter.

Sustainable allocation funds suffered the least pain in the first quarter of 2022 among their ESG focused peers, with only a 7% decrease in net inflows. They garnered USD 17.2 billion, more than twice the net new money attracted by their conventional counterparts over the same period.

The nine sustainable commodity related products we identified (four of which are invested in gold) didn't benefit from the strong investor interest in commodities products amid surging commodity prices. Net inflows into the former halved to USD 96 million, while those in their conventional counterparts were multiplied by 10, reaching USD 7.8 billion, boosted by demand for precious metals, especially gold, which is often regarded as the ultimate hedge against inflation and other market risks.

Exhibit 7 European Sustainable Fund Flows by Asset Class



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

Leaders and Laggards

Four of the 10 best-selling sustainable funds in the first quarter were new products: **SPP USA Plus**; **Multi Manager Access—Green, Social and Sustainable Bonds**; **Northern Trust FGR Fund—Emerging Markets Custom ESG Equity Index**; and **ASR Duurzaam Wereldwijd Aandelen Fonds**.

SPP USA Plus, which tops the leaderboard with USD 6.37 billion of inflows, is a Swedish fund that invests in companies with strong ESG credentials, low carbon footprints, or companies that provide solutions to sustainability issues.

All top 10 funds, but one, are actively managed offerings. The exception is **SPDR Bloomberg SASB U.S. Corporate ESG ETF**, which tracks an investment-grade US corporate credits index that not only screens out issuers based on their ESG ratings and involvement in controversial activities, but also optimizes position sizing to maximize its portfolio ESG credentials.

Exhibit 8.a Top 10 Sustainable Fund Flows in Q1 2022

Fund Name	Net Flows (USD, Million)
SPP USA Plus	6,372
ACS Climate Transition World Equity Fund	4,306
Multi Manager Access - Green, Social and Sustainable Bonds	2,792
Swedbank Robur Transition Global	2,126
BlackRock Global Funds - ESG Multi-Asset Fund	1,661
SPDR® Bloomberg SASB U.S. Corporate ESG ETF	1,624
Northern Trust FGR Fund - Emerging Markets Custom ESG Equity Index	1,572
ASR Duurzaam Wereldwijd Aandelen Fonds	1,205
World TPI Climate Transition Index Equity Sub-Fund	1,141
Eurizon Step 50 Futuro Sostenibile ESG Marzo 2027	1,017

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

Seven out of the 10 funds with the biggest outflows in the first quarter of 2022 were passive strategies. **IShares Green Bond Index Fund** bled the most with nearly USD 2 billion of outflows. Since the beginning of the year, green bonds—which are issued by companies and countries to finance green projects—are facing the same headwinds as mainstream bonds, namely rising inflation and the prospect of further interest-rate hikes. In addition, corporate issuers have increasingly turned to alternative solutions such as sustainability-linked bonds, whose interest rate is tied to meeting specific ESG targets.

Exhibit 8.b Bottom 10 Sustainable Fund Flows in Q1 2022

Fund Name	Net Flows (USD, Million)
iShares Green Bond Index Fund (IE)	-1,989
Multi Manager Access II - US Multi Credit Sustainable	-1,362
Northern Trust FGR Fund - Emerging Markets Custom ESG Equity Index Fund	-1,343
iShares MSCI EMU ESG Screened ETF	-947
UBS(Lux)Fund Solutions – MSCI Japan Socially Responsible ETF	-773
Carmignac Patrimoine	-695
Focused Fund - Corporate Bond Sustainable	-629
SPP Aktiefond USA	-585
Xtrackers MSCI World ESG ETF	-548
Xtrackers MSCI Japan ESG ETF	-540

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

The league table of asset managers that gathered the most inflows over the quarter was dominated by passive fund providers. Like every previous quarter, BlackRock ranked first with almost USD 11 billion of net inflows, followed by UBS, which garnered USD 7 billion. SPP stood in the third position, propelled by the net inflows of its newly launched **SPP USA Plus**. The remainder of the leaderboard averaged USD 2.7 billion in inflows.

Exhibit 9.a Top 10 European Sustainable Fund Providers by Flows in Q1 2022

Firm	Net Flows (USD,Million)
BlackRock (inc iShares)	10,877
UBS	7,027
SPP	6,336
Amundi (inc Lyxor)	4,505
Swisscanto	3,164
Eurizon	2,818
KBC	2,405
State Street	2,373
Swedbank	2,051
Legal & General	1,973

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

Exhibit 9.b Bottom 10 European Sustainable Fund Providers by Flows in Q1 2022

Firm	Net Flows (USD, Million)
Carmignac	-945
Northern Trust	-827
Fidelity	-695
La Financière de l'Echiquier	-441
DNCA Finance	-394
J. Safra Sarasin	-381
Öhman	-363
Handelsbanken	-362
LGT	-330
ODDO BHF	-330

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

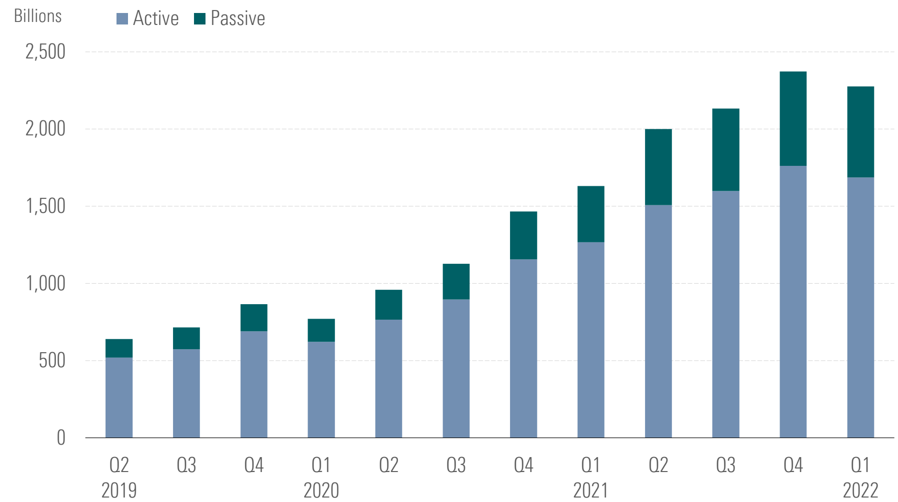
Assets

Supported by its strong regulatory agenda, and the EU's Sustainable Financial Disclosure Regulation in particular, Europe has seen consistent growth in sustainable fund assets over the past couple of years, except in the first quarter of 2022. As of March, assets in European sustainable funds amounted to USD 2.28 trillion, down 4% from a restated USD 2.37 trillion as of December 2021. But assets in the overall European fund universe took a greater hit, declining by more than 7%, suggesting that sustainable fund assets were more resilient[1] in the face of growing concerns about a slower economic recovery, strong inflationary pressures, potential interest-rate hikes, and the Russian-Ukrainian conflict.

Overall, sustainable funds accounted for more than 17% of European fund assets at the end of March 2022. We expect this percentage to keep rising in subsequent quarters as investors' demand for strategies that align with their values and sustainability preferences continues to grow, prompting asset managers to launch additional sustainable products and repurpose existing conventional ones. The MiFID II amendment coming into effect in August 2022, which will require financial advisers to consider their clients' sustainability preferences, has the potential to accelerate adoption of sustainable investments among retail investors.

1 Acknowledging that the sustainable fund universe expanded in the first quarter, with the additions of close to 500 new funds, when excluding these additions, the drop in sustainable fund assets would have been 5.8%, which is still lower than the decline in the overall European fund universe.

Exhibit 10 European Sustainable Fund Assets (USD Billion)



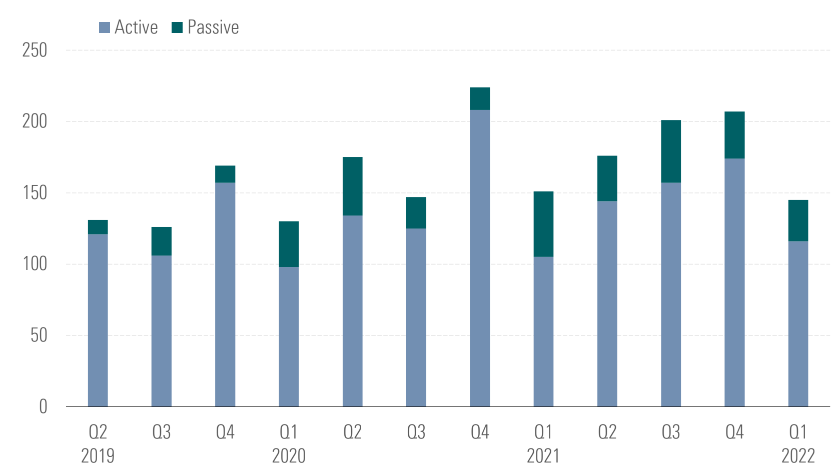
Source: Morningstar Direct, Manager Research. Data as of March 2022.

Launches

Compared with the last quarter of 2021, product development down slowed in the first quarter of 2022. This is no surprise as first-quarter launch activity has historically lagged that of fourth quarters.

We have so far identified 145 new entrants in Europe. This was roughly 30% less than the restated fourth-quarter number of 207, but still in line with the 151 funds which hit the shelves a year ago. This quarter number is also likely to be restated in future reports as we identify more launches in first-quarter 2022 and additional ones are reported to Morningstar.

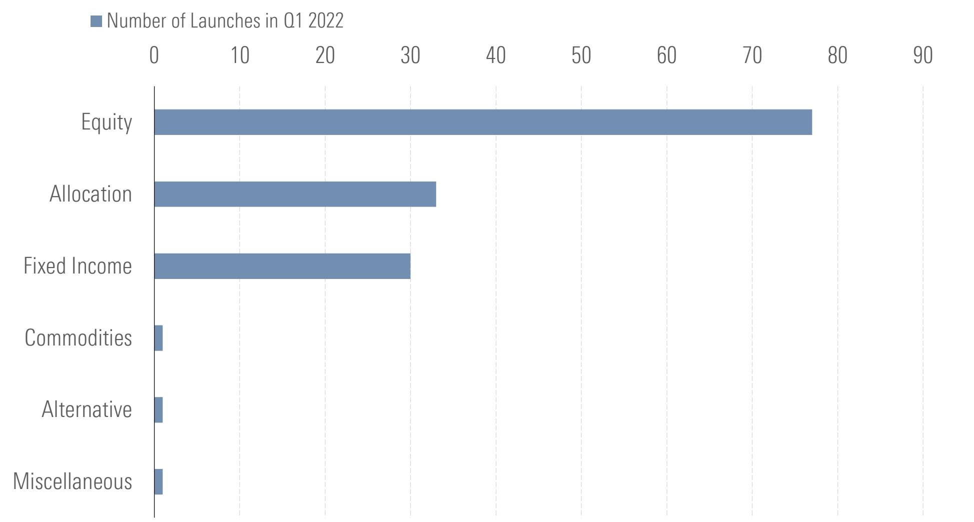
Exhibit 11.a European Sustainable Fund Launches



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

Clocking at 80% of the new products, active strategies formed again the lion's share of product development in the European ESG space. We identified 116 new sustainable active strategies in the last three months, which is one third less than last quarter's active sustainable strategies' launches. In comparison, the number of passive offerings which hit the shelves remained relatively stable: 29 new passive funds in first-quarter 2022 versus 33 in the previous quarter.

Exhibit 11.b European Sustainable Fund Launches in Q1 2022 by Broad Asset Class



Source: Morningstar Research. Data as of March 2022.

Equity funds continued to dominate sustainable fund launches, accounting for about 53% of total new sustainable offerings in the first quarter (77 funds), while the bulk of the remaining new launches was almost equally split between allocation and fixed-income products.

While general ESG-focused offerings continued to account for the majority of product development, this quarter again, climate funds remained by far the most popular theme represented among new product launches. We counted 27 new climate funds spanning all climate-related themes: low carbon, climate transition, climate solutions, clean energy/tech, and green bonds. Like in the last quarter of 2021, a UBS fund was the largest of the kind: **UBS Global Equity Climate Transition**, which invests in companies based on their contributions towards climate change, with a focus on mitigating the effects of climate risk by limiting exposure to greenhouse gas emissions and considering how companies contribute to the transition to a low-carbon economy.

On the passive side, we saw seven Paris-aligned and net-zero products come to market, including a suite of four **SPDR MSCI Climate Paris Aligned ETFs**. To achieve Paris-alignment classification, a fund must invest in companies that reduce their carbon intensity by an average of 7% annually—the pace of phasing-out of fossil fuels set out in the Paris Agreement—and the fund overall must have a carbon footprint (including scope 3 emissions) 50% below that of the investable universe.

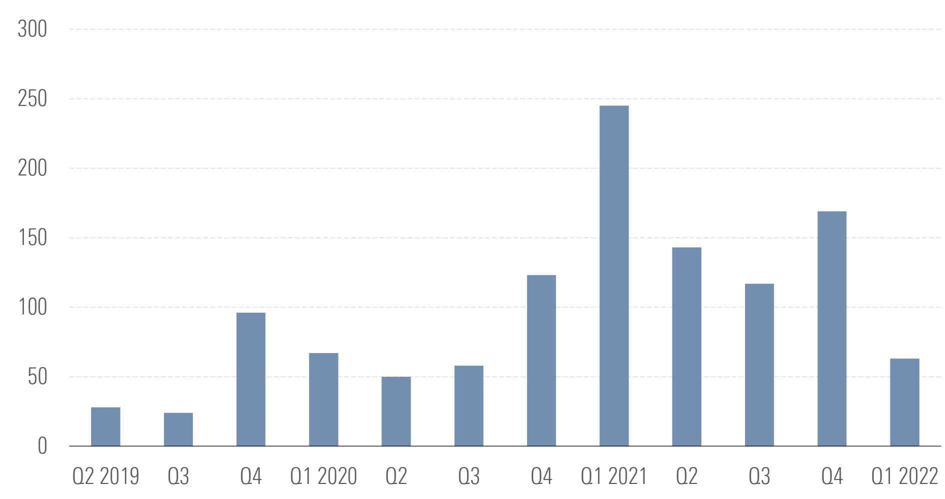
A few new funds were impact offerings, including **Edentree Global Impact Bond**, which invests in ESG-labelled debt such as green, social, and sustainable bonds, as well as debt instruments issued by companies that demonstrate gender and/or ethnic diversity and contribute to positive measurable environmental and social impact such as sustainable solutions, economic inclusion, and education.

Repurposed Funds

Launching new sustainable funds has been a key priority for asset managers in Europe. But it's not the only way they are responding to the growing investor demand for sustainable investment options. They're also repurposing existing conventional funds into ESG and sustainable strategies, by for example, changing the investment objectives or by adding ESG criteria and exclusions to the investment policies. And many reflect these changes by rebranding the funds to increase their visibility among investors who are looking to invest more sustainably.

In the first quarter of 2022, we identified 63 repurposed funds. This is the lowest quarterly count we recorded since SFDR came into force in March 2021, and a 37% drop quarter to quarter. This is in line with the slowdown in product development activity highlighted previously. However, this number is likely to be restated in future reports after we identify more repurposed funds for the quarter[2].

Exhibit 12 Estimated Number of Repurposed Funds by Quarter



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

Recently repurposed funds included **Mirae Asset Sustainable Asia Pacific Equity Fund** and **Mirae Asset Sustainable India Sector Leader Equity**, which were rebranded in January following the adoption of a

2 Identifying repurposed funds is not straightforward. We are able to pinpoint those that change names, as they appear in the Morningstar database under a new name that often includes ESG-related terms, but it's harder to identify those that add ESG constraints or switch to a sustainable mandate if they don't reflect the change in their name or clearly articulate it in the fund's description. Moreover, we continue to struggle to find the effective dates at which funds repurpose as prospectuses, fact sheets, and Key Investor Information Documents rarely indicate when the changes took place. This is an area for improvement.

best-in-class ESG investment approach supplemented by a negative screening of companies with more than 15% revenue stemming from weapons, tobacco, adult entertainment, cannabis, and fossil fuels (including thermal coal mining and unconventional oil and gas).

Other examples are **JPM EUR Corporate Bond 1-5 year Research Enhanced ESG ETF**, **JPM EUR Corporate Bond Research Enhanced Index (ESG)**, and **JPMUSD Corporate Bond Research Enhanced Index (ESG)**, which have added value and norms-based ESG screens whereby issuers in breach of the UN Global Compact and the ones involved in the manufacturing of controversial weapons, thermal coal, and tobacco are excluded .

Regulatory Updates

By the time the Sustainable Finance Disclosure Regulation (SFDR) celebrated its first anniversary on March 10, the European Commission had finalised its Delegated Act, which will apply from 1 January 2023. The Act specifies the details of the content, presentation, and methodologies in relation to the principle of "do no significant harm," sustainability indicators, adverse sustainability impacts, and the promotion of environmental or social characteristics and sustainable investment objectives in pre-contractual documents, on websites and in periodic reports.

Ahead of these expanded reporting requirements, and despite the current lack of corporate taxonomy reporting, the European Supervisory Authorities also published a statement clarifying that fund companies should be providing an explicit quantification of the extent to which their products are taxonomy-aligned. Further, while estimates should not be used, in cases where information is not readily available from investee companies' public disclosures, fund companies may rely on equivalent information on taxonomy-alignment obtained directly from investee companies or from third-party providers. Prior to the ESAs statement, Sustainalytics, a Morningstar company that provides sustainability research, found that in the absence of corporate taxonomy data, many products are not yet committing to any level of alignment, while others indicate that some level of alignment is still possible and a few offer target alignment ranges.

In relation to another strand of the EU Sustainable Finance Action Plan, ESMA is consulting on updated guidelines to conducting suitability assessments, reflecting the MiFID II amendments that will apply from 2 August, requiring financial advice to incorporate consideration of clients' sustainability preferences. The new requirements are a second-stage top-up to the existing suitability rules, designed to identify a range of suitable products for clients, in accordance with the criteria of knowledge and experience, financial situation, and other investment objectives, such as the length of time for which clients wish to hold the investment, their preferences regarding risk-taking, risk profile, and the purposes of the investment. Thus, advisers will need to explain to clients the concept of Sustainability Preferences, the three-part definition of which is a MiFID investment with a minimum proportion in EU Taxonomy-aligned sustainable investments; a light green (SFDR Article 8 product) or dark green (Article 9 product) with a minimum proportion in SFDR sustainable investments; or a MiFID investment that considers Principal Adverse Impacts (the harm that comes from investment decisions) and this can be demonstrated in accordance with the client's preferred methodology.

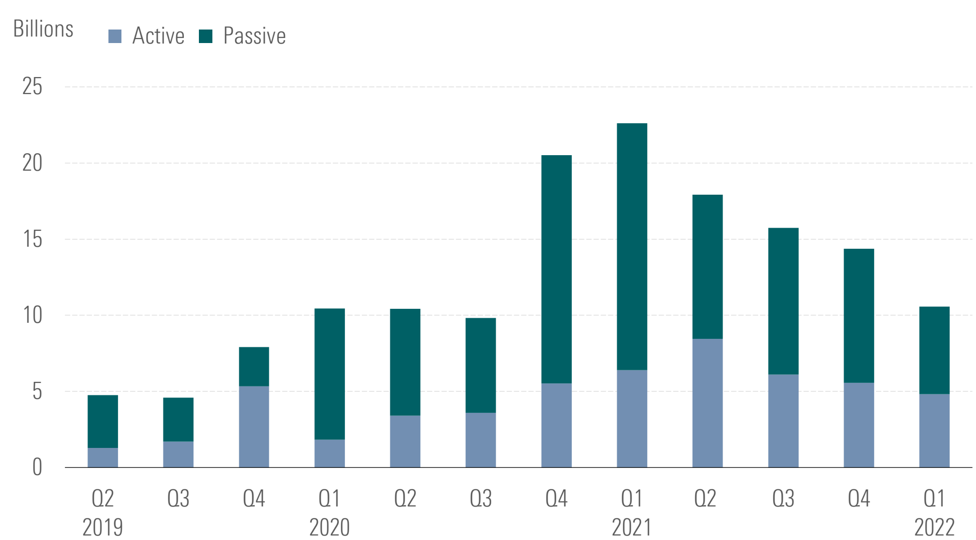
Lastly in Europe, the Council of the EU agreed its position on the European Commission proposal for a corporate sustainability reporting directive. CSRD will apply more sustainability reporting obligations on to a wider cohort of companies, in turn enhancing the completeness of asset managers reporting to investors. Further discussions will now commence with the European Parliament.

United States

Flows

During the first quarter of 2022, net flows into US sustainable funds posted their fourth consecutive decline. Inflows fell to USD 10.6 billion. That's 26% less than in the previous quarter and half of the all-time record, nearly USD 22 billion, set one year ago in the first quarter of 2021.

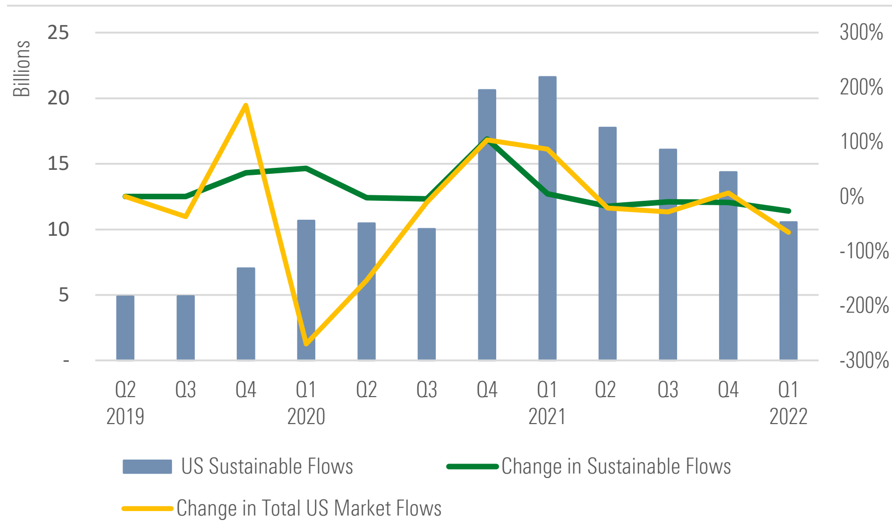
Exhibit 13 US Sustainable Fund Flows (USD Billion)



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

However, when compared with the broader US funds market, demand for sustainable funds showed higher resilience. During the first quarter of 2022, flows into the broader US market dipped by 65%, to USD 85.7 billion. Confronted with volatility, inflationary pressures, and lofty valuations, investors appeared cautious. This was the weakest quarter since the first quarter of 2020, which was heavily influenced by the onset of the pandemic and a bear market. Last quarter, sustainable funds attracted 12% of total fund flows, compared with an average 6% of quarterly US flows over 2021.

Exhibit 14 US Fund Flows: Sustainable versus Non-Sustainable



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

Weaker flows into sustainable funds affected active and passive strategies alike during the first quarter. Demand for sustainable active funds slid for the third consecutive quarter, attracting USD 4.8 billion for the period.

In recent years, investor preference has shifted towards low-cost passive funds: Over the past three years, passive strategies have attracted about two thirds of quarterly sustainable fund flows on average. However, the split last quarter was close to 50-50, with passive funds netting USD 5.7 billion for the period.

Leaders and Laggards

Still, eight of the 10 funds attracting the most flows in the first quarter of 2022 were passive funds. **Invesco Floating Rate ESG** AFRAX, which topped the chart this quarter, was the top fixed-income fund in terms of annual flows last year. Having only repurposed to a sustainable mandate in the second half of 2020, this fund has seen strong early adoption by the market. In the face of rising interest rates, investors may seek to use floating-rate bonds as a hedge, helping this fund garner assets.

Remarkably, **iShares Paris-Aligned Climate MSCI USA ETF** PABU only launched on 8 February 2022 and secured fourth place on the league table, attracting USD 608 million during the quarter. Climate-focused investing has grown tremendously over the past few years, raking in nearly USD 13 billion in net flows during 2021.

Five of those were also in the top 10 for the fourth quarter of 2021. In addition to **Invesco Floating Rate ESG** AFRAX, there were **iShares ESG Aware MSCI USA ETF** ESGU, **Vanguard ESG US Stock ETF** ESGV, **Vanguard FTSE Social Index I** VFTNX, and **Fidelity U.S. Sustainability Index** FITLX. Notably, **iShares ESG**

Aware MSCI USA ETF ESGU has defended its position on the leader board since the third quarter of 2019.

Exhibit 15.a Top 10 Sustainable Fund Flows in Q1 2022

Name	Q1 2022 Flows (USD Million)
Invesco Floating Rate ESG A	1,224
iShares ESG Aware MSCI USA ETF	956
iShares ESG Aware MSCI EM ETF	722
iShares Paris-Aligned Climate MSCI USA ETF	608
Vanguard ESG US Stock ETF	407
Vanguard FTSE Social Index I	364
Fidelity® U.S. Sustainability Index	362
Xtrackers EM CarbReduc&ClimtImprvs ETF	302
iShares ESG U.S. Aggregate Bond ETF	293
Calvert Bond A	290

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

Exhibit 15.b Bottom 10 Sustainable Fund Flows in Q1 2022

Name	Q1 2022 Flows (USD Million)
iShares MSCI USA ESG Select ETF	-325
Xtrackers MSCI USA ESG Leaders Equity ETF	-320
First Trust NASDAQ® Clean Edge® Green Energy ETF	-236
iShares ESG MSCI USA Leaders ETF	-200
Parnassus Core Equity	-195
iShares® ESG Screened S&P 500 ETF	-173
Putnam Sustainable Leaders	-115
Quantified Common Ground	-113
BlackRock US Carbon Transition Readiness ETF	-86
iShares MSCI ACWI Low Carbon Target ETF	-79

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

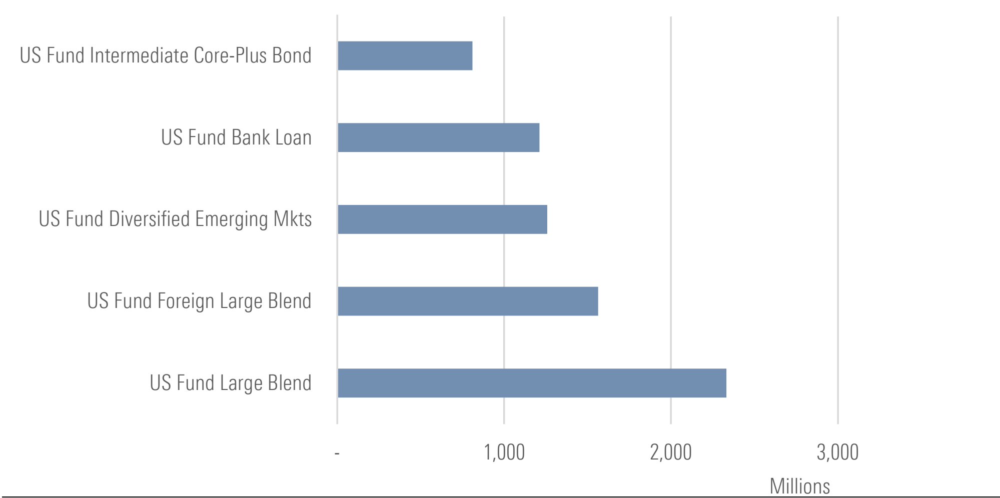
Some of the funds with the strongest inflows during 2021 topped the chart for outflows in the first quarter of 2022, indicating that investors may be redeeming from funds that have seen widespread demand. For example, **iShares MSCI USA ESG Select ETF** SUSA, **Parnassus Core Equity** PRBLX, and **BlackRock US Carbon Transition Readiness ETF** LCTU were all on the leaderboard for 2021, with annual flows of USD 1.7 billion, USD 2.4 billion, and USD 1.4 billion, respectively.

Flows by Category and Asset Class

Over the past two years, since the coronavirus-driven selloff, markets have grown tremendously, but as the enthusiasm wanes in the face of rising volatility and inflation, investors have begun to diversify their portfolios. Although sustainable funds in the large-blend and foreign large-blend Morningstar Categories continued to attract the majority of flows,[3] the first quarter saw increasing demand for bank loans, core- and core-plus bond funds, and emerging-markets equities.

For example, although investors have only two sustainable options in the bank loan category (**Invesco Floating Rate ESG** AFRAX and **Calvert Floating-Rate Advantage** CFORX), that category secured fourth place in net flows for the quarter. Those two funds attracted USD 1.2 billion over the period, a 262% increase over the previous quarter. As more funds launch and build out track records in smaller categories, sustainability-focused investors will have greater choice during volatile markets.

Exhibit 16 Morningstar Categories With the Largest Q1 Inflows: Sustainable Funds

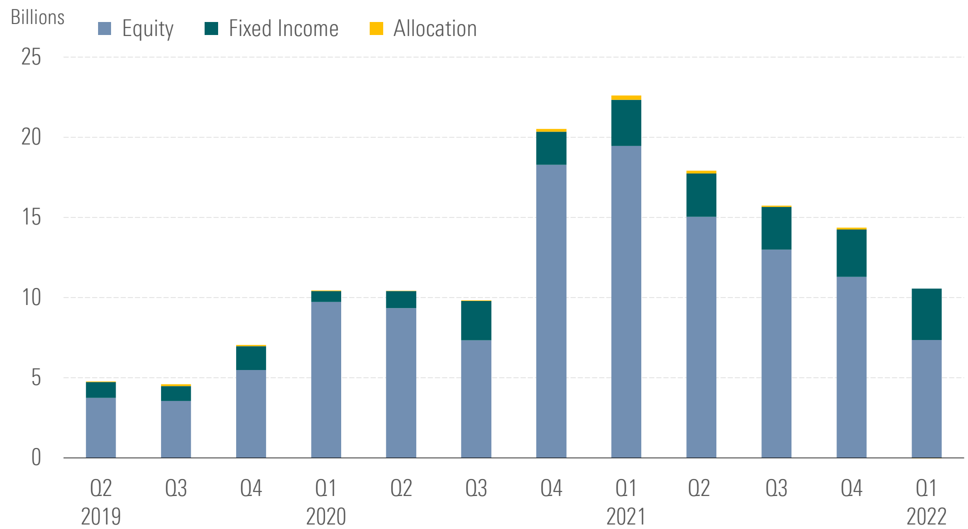


Source: Morningstar Direct, Manager Research. Data as of March 2022.

While sustainable equity funds flows have steadily decreased over recent quarters, flows into sustainable bond funds have increased. Last quarter, sustainable fixed-income funds attracted a record USD 3.2 billion, up 9% from the previous period. The number of sustainable fixed-income funds has increased substantially in the past three years, to 116 from 46. More fixed-income choices help investors fill their bond allocations, making ESG-focused multi-asset portfolios more viable and ultimately helping drive more flows.

3 The large-blend and foreign large-blend categories have been in the top five categories for sustainable fund flows in nearly every quarter over the past three years. With 94 and 36 funds (at the end of the first quarter), respectively, these categories have the greatest number of sustainable fund options available to investors.

Exhibit 17 US Sustainable Fund Flows by Asset Class



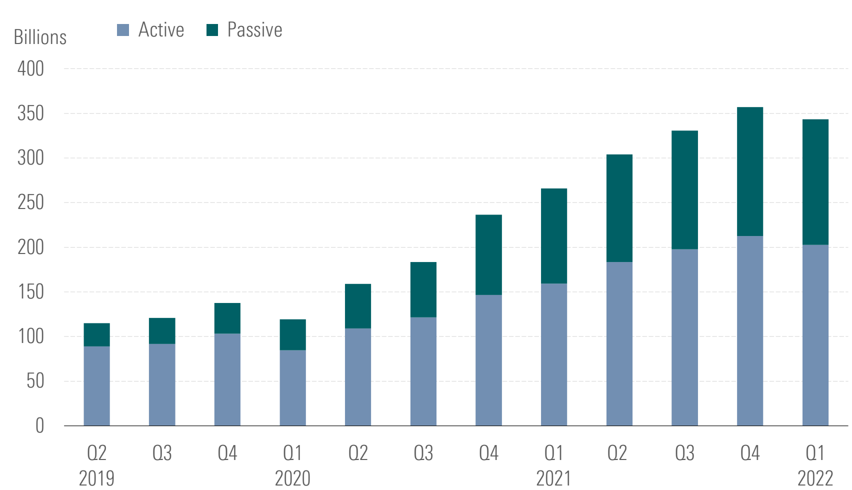
Source: Morningstar Direct, Manager Research. Data as of March 2022.

Assets

Assets in US sustainable funds declined amid a broader US market slowdown. They totaled USD 343 billion at the end of the first quarter, down 4% from the all-time record of USD 357 billion at the end of 2021. To put it in perspective, assets in the overall US market fell by 6% over the quarter to USD 26.5 trillion.

In the sustainable funds landscape, active funds retain the majority (59%) of assets, but their market share is steadily shrinking. Three years ago, active funds held 77% of all US sustainable assets.

Exhibit 18 US Sustainable Fund Assets (USD Billion)



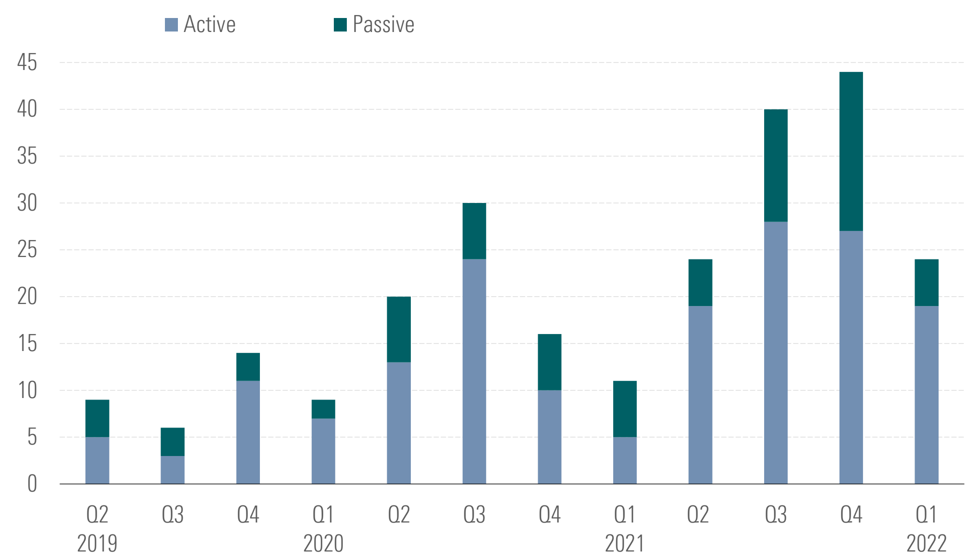
Source: Morningstar Direct, Manager Research. Data as of March 2022.

Launches

In response to higher investor demand for sustainable investments, asset managers have expanded their sustainable fund lineups. In the first quarter of 2022, 24 funds were launched in the US with sustainable mandates. Of those, 17 are equity funds, and 15 are ETFs.

Over the past few years, first-quarter new entrants have trailed the number of funds launched in the preceding quarter, and this year looks no different (in the fourth quarter of 2021, investors gained a record 44 new sustainable funds to choose from).

Exhibit 19 US Sustainable Fund Launches



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

Once again, most of the new sustainable funds available in the US are actively managed offerings. Five of the new funds focus on climate action, such as **Engine No. 1 Transform Climate ETF NETZ**, which targets companies that are either transitioning towards more sustainable business practices or that are developing technologies to help others transition, and **Goldman Sachs Bloomberg Clean Energy Equity ETF GCLN**, which seeks to invest in the clean energy transition including infrastructure improvements, renewable energy sources, and energy digitalization. (To read more about climate funds, see Investing in Times of Climate Change.)

Two of the new offerings focus on driving impact through municipal bonds: **BlackRock Impact Municipal Bond MPICX** and **Lord Abbett Sustainable Municipal Bond LISMX**. The former seeks to benefit undercapitalized or high social opportunity areas through projects related to mass transit, low-carbon public power issuers, and access to healthcare.

Exhibit 20 Largest New Sustainable Funds

Name	Inception Date	Fund AUM (USD Million)
iShares Paris-Aligned Climate MSCI USA ETF	08/02/2022	636
Engine No. 1 Transform Climate ETF	02/02/2022	92
BlackRock Impact Municipal Bond Fund	14/03/2022	50
SPDR Bloomberg SASB Emerging Markets ESG Select ETF	10/01/2022	27
SPDR Blmbrg SASB Developed Markets Ex US ESG Select ETF	10/01/2022	27
BNY Mellon Responsible Horizons Corporate Bond ETF	21/03/2022	25
OneAscent Core Plus Bond ETF	30/03/2022	20
Brookfield Global Renewables & Sustainable Infrastructure Fund	04/02/2022	18
Fidelity Sustainable High Yield ETF	15/02/2022	10
Goldman Sachs Bloomberg Clean Energy Equity ETF	08/02/2022	8

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

Repurposed Funds

Most of the new options available to investors were launched with sustainable mandates, but firms also occasionally change the investment strategies of existing funds to target sustainable outcomes. In the first quarter of 2022, just two funds were repurposed to adopt sustainable mandates. These funds also rebranded to make their sustainability focus clear in the fund name. The largest of these was **Nationwide BNY Mellon Core Plus Bond ESG**, with USD 674 million in assets. The fund seeks to invest in securities that score well on the firm's proprietary ESG framework and allocates a portion of the portfolio to impact bonds which direct the use of proceeds towards projects that achieve environmental or social progress.

Exhibit 21 US Repurposed Funds in Q1 2022

Name	Morningstar Category	Fund AUM (USD Million)
Nationwide BNY Mellon Core Plus Bond ESG	US Fund Intermediate Core-Plus Bond	674
Pioneer Global Sustainable Equity	US Fund World Large-Stock Blend	300

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

The new offerings and repurposed funds brought the total number of sustainable open-end funds and ETFs in the US to 555 at the end of the quarter.

Regulatory Updates

The SEC's Division of Corporate Finance proposed a new rule in March 2022 that would require public companies to report on climate-related risks, including the hard-to-track scope 3 emissions in their supply chains, if the latter are significant.[4] Currently, some firms report on their emissions and have established transition plans, but many do not. The proposed rule would require companies to report on how climate risks may affect their business as well as how they are governing climate-related risks. While this proposal is limited to public companies, not mutual funds, fund managers will benefit from

4 Scope 1 refers to a company's direct emissions, and scope 2 refers to emissions related to its power use.

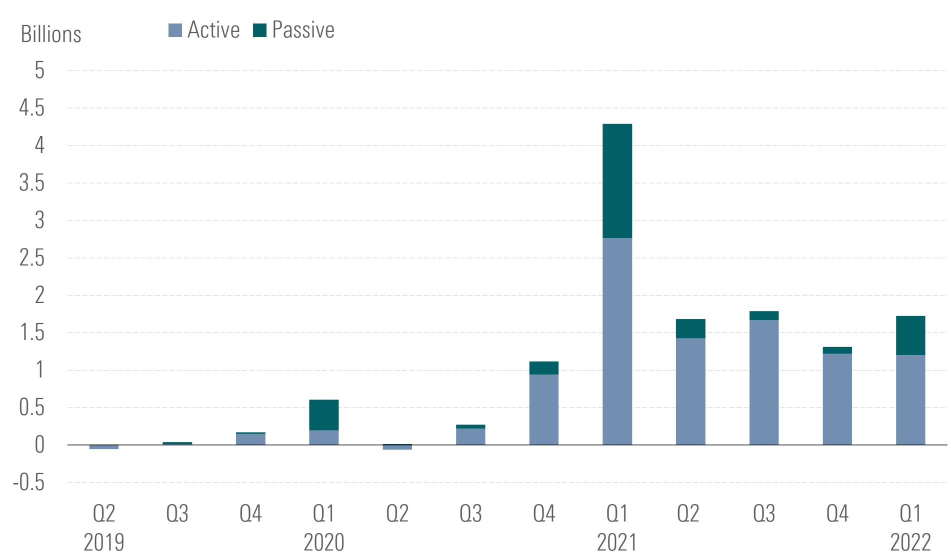
improved, standardized information about climate risk to inform investment decisions. This rule may also spur fund managers to improve disclosures to investors regarding climate risks and their process for mitigating those. This rule is a crucial step towards better management of the climate crisis in investment portfolios.

Canada

Flows

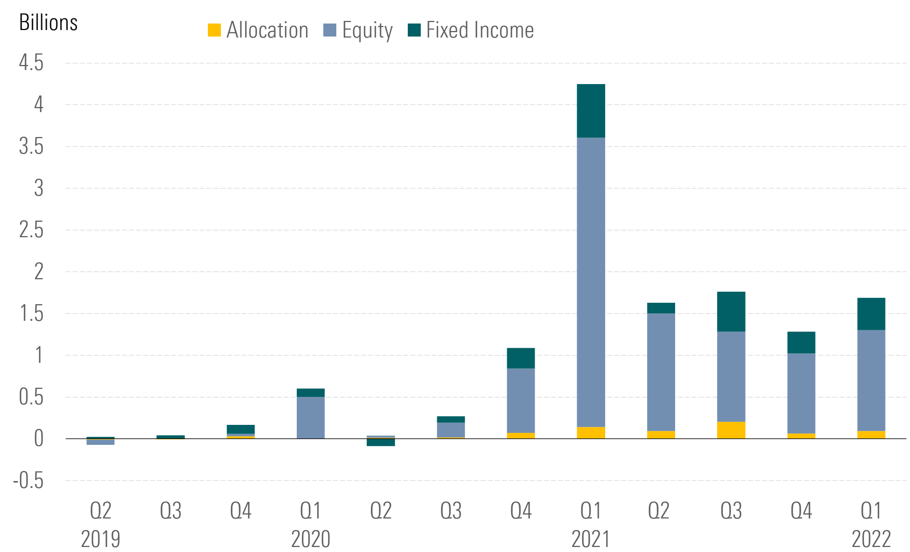
According to Morningstar's data, estimated asset flows into sustainable funds in the first quarter continued their upward trajectory, amassing roughly USD 1.7 billion. Flows in passively managed strategies continued to build momentum, with March 2022 seeing the largest flows since February 2021. We observe a continued preference for sustainable equity funds, largely reflective of product availability to investors. About 70% of inflows went into equity funds, 22% went into fixed-income funds, and the remainder went into allocation and alternative funds.

Exhibit 22 Canadian Sustainable Fund Flows (USD Billion)



Source: Morningstar Direct, Morningstar Research. Data as of March 2022

Exhibit 23 Canadian Sustainable Fund Flows by Asset Class (USD Billion)

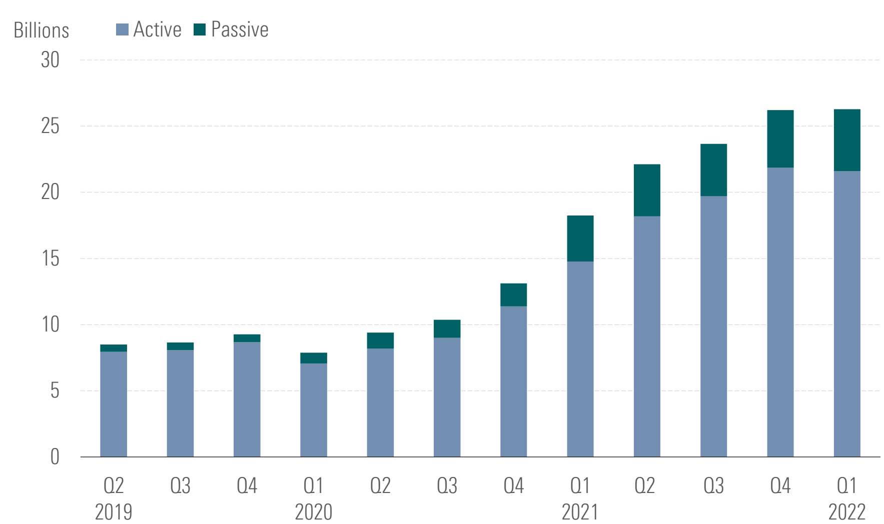


Source: Morningstar Direct, Morningstar Research. Data as of March 2022

Assets

In the first quarter, Canadian assets invested in sustainable funds saw muted growth (0.3%) compared with the third and fourth quarters of 2021, which saw a quarter-over-quarter growth of 7% and 11%, respectively. However, assets have substantially increased from a year ago. They grew to USD 26.3 billion at the end of March, representing a year-over-year growth rate of 44%.

Exhibit 24 Canadian Sustainable Fund Assets (USD Billion)



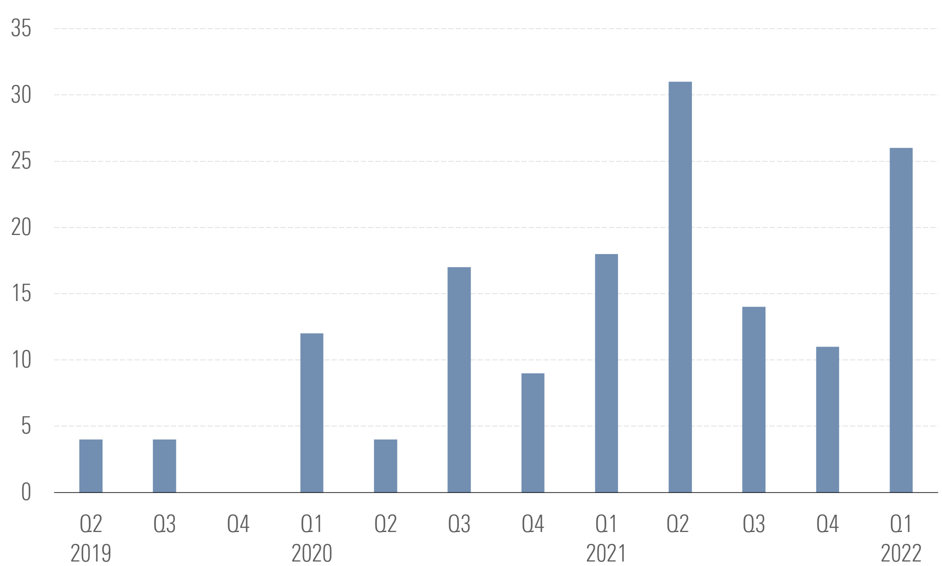
Source: Morningstar Direct, Manager Research. Data as of March 2022.

The distribution of assets invested in sustainable funds continues to lean precipitously towards equity strategies at 72%, fixed income at 21%, and the remainder to allocation and alternatives. The sustainable investment space is still concentrated around a handful of key dominant providers: NEI Investments, RBC, Mackenzie, BMO, IA Clarington, Desjardins, Franklin Templeton, and National Bank (Canada), Fidelity, and AGF investments. Together they represent 92% of current market share.

Launches

We continue to see accelerated growth in new sustainable products launched. In the first quarter of 2022, a near-record number of 26 new sustainable investments were brought to market. This is far more than the past two quarters combined (third- and fourth-quarter 2021). Despite a tumultuous start of the year, sustainable investments have conspicuously garnered interest from investors. In aggregate, first-quarter 2022 collected USD 376 million in new products launched, with **Wealthsimple NA Green Bd ETF** collecting USD 154 million alone. In comparison, the third and fourth quarters of 2021 brought USD 40 million and USD 207 million, respectively.

Exhibit 25 Canadian Sustainable Fund Launches



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

Regulatory Updates

Following its proposal late last year in requiring Canadian-listed issuers to begin reporting climate-related risks and greenhouse gas emissions, the Canadian Securities Administrators issued guidance in January under staff notice NI 81-334 providing clarity on what is expected of fund manufacturers when naming sustainable investments. The guidance specifically points out that funds with sustainability-related terms in their name should also disclose in prospectus documents how the fund will achieve those objectives. The guidance also highlights that fund companies should provide additional transparency when using third-party sustainability-related ratings (like Morningstar's Sustainability

Rating for Funds) in client-facing marketing material. Said guidance points to the disclosure of ratings methodology, the avoidance of "cherry-picking" ratings, and refraining from using said ratings in cases where a fund does not have a sustainable investment objective.

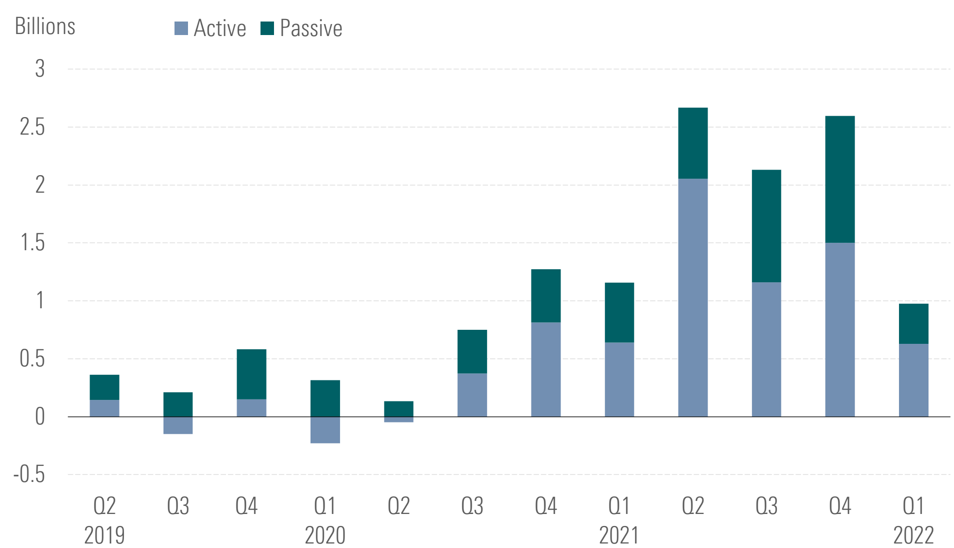
In mid-April, the Canadian Investment Funds Standards Committee released for public comment a second draft of its Responsible Investment Identification framework. Closely aligned with the CFA Institute's Global ESG Disclosure Standards for Investment Products, the framework complements recent regulatory guidance and offers the investing public a central location to find products that align with one or more of six sustainable investment approaches. Like the committee-run fund category system in Canada, the new framework, if approved, offers broad alignment of sustainable investing terms and approaches, and a basis for comparison amongst investment products.

Australia and New Zealand

Flows

The Australasian (Australia and New Zealand) sustainable funds universe attracted inflows of USD 975 million in the first quarter of 2022. This is 57% lower than the previous quarter's inflows, yet 2021 was an extraordinarily positive year for inflows.

Exhibit 26 Australian and New Zealand Sustainable Fund Flows (USD Billion)

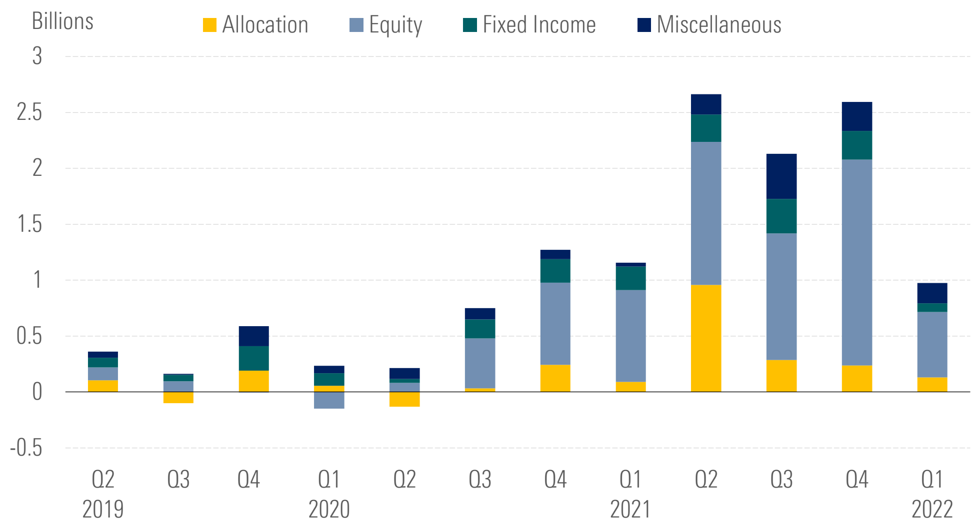


Source: Morningstar Direct, Manager Research. Data as of March 2022

Five fund houses took in most of the fund flows, with Dimensional (USD 243 million) atop the group, followed by Vanguard (USD 165 million), Australian Ethical (USD 156 million), BetaShares (USD 122 million), and Nanuk New World (USD 71 million). Nanuk's inclusion is new as the remaining four have consistently been in the top four houses for sustainable fund flows in Australasia. Schroders continued to experience net outflows of USD 49 million over the quarter, running against the broad trend of market inflows.

Equity managers captured most of the inflows over the quarter, attracting USD 586 million of new money, ahead of the USD 131 million accumulated by allocation strategies and the USD 75 million by fixed-income strategies.

Exhibit 27 Australian and New Zealand Sustainable Fund Flows by Asset Class (USD Billion)

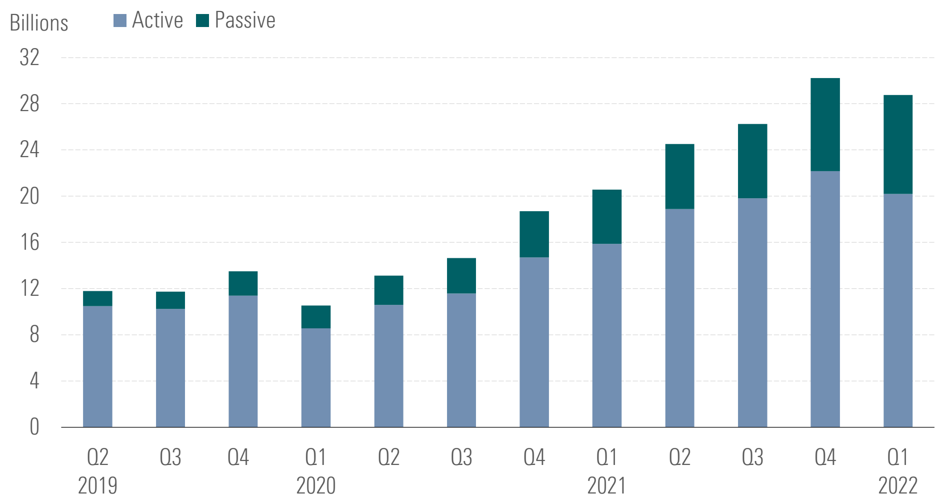


Source: Morningstar Direct, Manager Research. Data as of March 2022

Assets

Assets in Australasian sustainable funds declined by 4.8% in the first quarter 2022 from a record USD 30.2 billion at the end of 2021. However, this is driven by a period of challenging market returns.

Exhibit 28 Australian and New Zealand Sustainable Fund Assets (USD Billion)



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

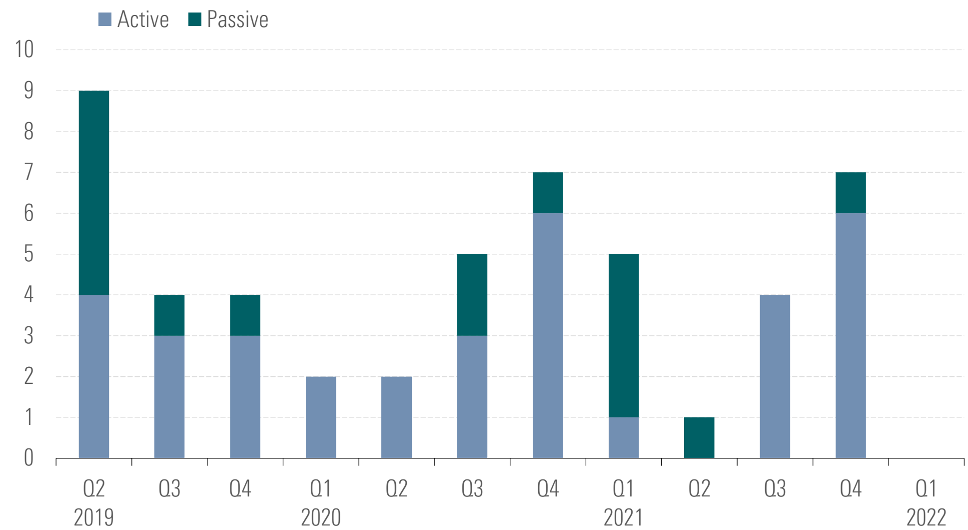
The Australasian sustainable funds market remains relatively concentrated, with the top 10 funds accounting for 62% of total sustainable fund assets. Last quarter, Vanguard overtook Australian Ethical as the largest provider of sustainable funds in Australia, with assets of USD 5.6 billion, versus USD 5.1 billion for the former.

Launches

There were no new sustainable funds launched in the first quarter of 2022. The sustainable funds universe does not contain the growing number of Australasian funds that now formally consider ESG factors in a nondeterminative way in their security selection (funds commonly known as ESG-integrated funds).

With no new strategies captured last quarter, we count 153 strategies in our Australasian sustainable fund universe.

Exhibit 29 Australian and New Zealand Sustainable Fund Launches



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

Regulatory Updates

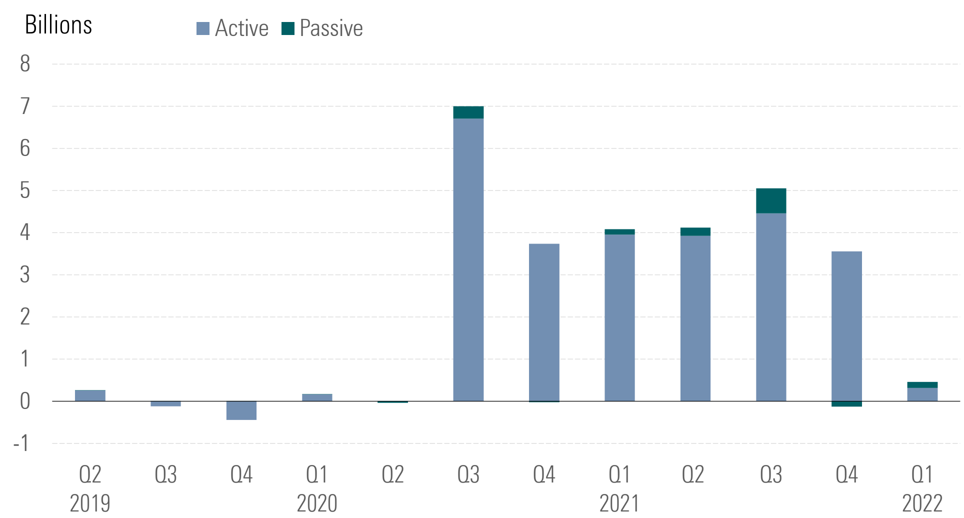
The Australian Securities and Investment Commission has identified-climate related disclosure for listed companies and greenwashing as part of their corporate governance priorities in 2022. For climate related disclosures they have stated "ASIC's core focus is to foster continue improvement in the standard of climate change governance practices; and to promote the provision of reliable and decision-useful climate-related disclosures by listed companies, to enable investors to make fully informed decisions." In relation to greenwashing, ASIC has confirmed that it remains an area of interest and they are conducting a review to determine if there is alignment between promotion of ESG products and their practices. They have encouraged boards to be on the lookout for greenwashing, and to determine whether their company's ESG disclosures are accurate.

Japan

Flows

The Japanese sustainable fund market recorded net inflows of USD 456 million in the first quarter of 2022. This represents a decline of 87% relative to the fourth quarter of 2022, against a backdrop of a decrease in new fund launches and lack of these funds driving net inflows during the quarter. Equity funds continued to be the main driver, contributing to about 87% of the net inflows. Nine out of the top 10 funds in terms of net inflows in the quarter were equity funds, eight of which are actively managed.

Exhibit 30 Japanese Sustainable Fund Flows (USD Billion)

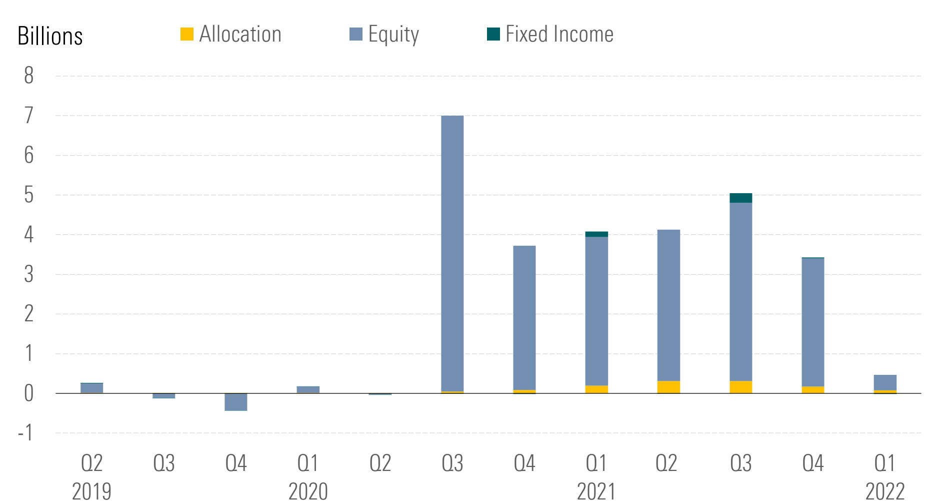


Source: Morningstar Direct, Manager Research. Data as March 2022.

SMTAM Carbon Neutral Related World Equity Strategy Fund—Asset Growth Type, which was launched in May 2021, recorded the largest net inflows with USD 127 million for the second quarter in a row.

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 31 Japanese Sustainable Fund Flows by Asset Class (USD Billion)

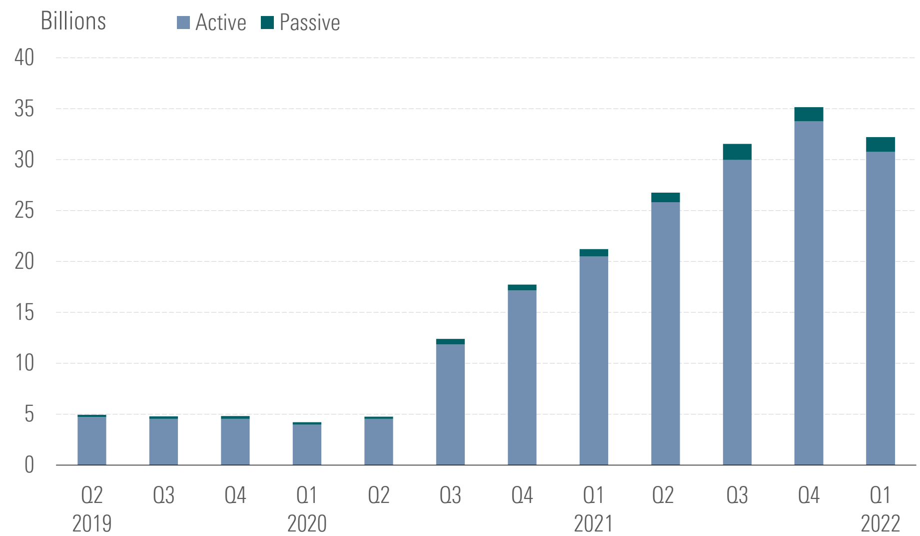


Source: Morningstar Direct, Manager Research. Data as March 2022.

Assets

Total assets in Japan-domiciled sustainable funds were USD 32 billion at the end of March 2022, down 8% from the record of USD 35 billion in the fourth quarter of 2022. With equity funds constituting an overwhelming majority (95%) of Japan-domiciled sustainable funds, a slowdown in global equity markets during the first quarter contributed to a decline in assets.

Exhibit 32 Japanese Sustainable Fund Assets (USD Billion)

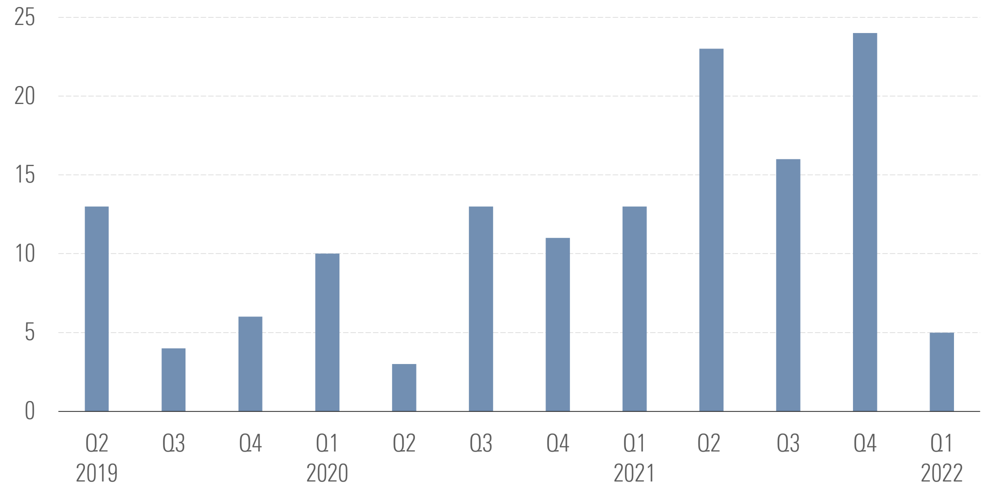


Source: Morningstar Direct, Manager Research. Data as March 2022.

Launches

Five new sustainable funds came to the Japanese market in first quarter 2022: two active funds and three index funds, a noticeable decrease compared with 24 in the previous quarter. Among the new launches, **MUKAM eMAXIS Neo Hydrogen Economy** recorded the largest net inflows (USD 4 million). This no-front-load fund aims to track the S&P Kensho Hydrogen Economy Index, which invests in companies focused on the hydrogen economy, such as production, storage, and transportation of hydrogen. Net inflows into newly launched funds in the quarter were USD 11 million in total, a slowdown compared with USD 355 million marked in the previous quarter.

Exhibit 33 Japanese Sustainable Fund Launches



Source: Morningstar Direct, Morningstar Research. Data as of March 2022.

Asia ex-Japan

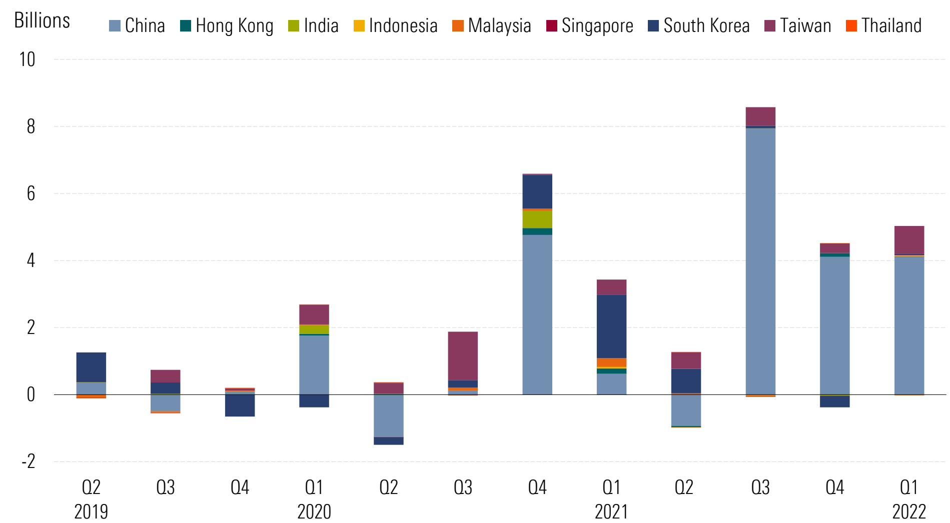
Since China's data was not available at the time of publication, we used fourth-quarter 2021 data as a proxy for a first-quarter 2022 estimation.

Flows

Excluding China, first-quarter 2022 net flows of USD 911 million into sustainable funds were significantly higher than the USD 34 million in net inflows in fourth-quarter 2021. Markets such as India and Thailand experienced net outflows over the quarter, while flows in Taiwan were far and away the highest of the region, reaching USD 842 million, followed by USD 812 million more than the second-highest, South Korea, with USD 30 million of inflows. In Hong Kong, sustainable fund flows dropped by USD 98 million from fourth-quarter 2021, the largest decrease in the region.

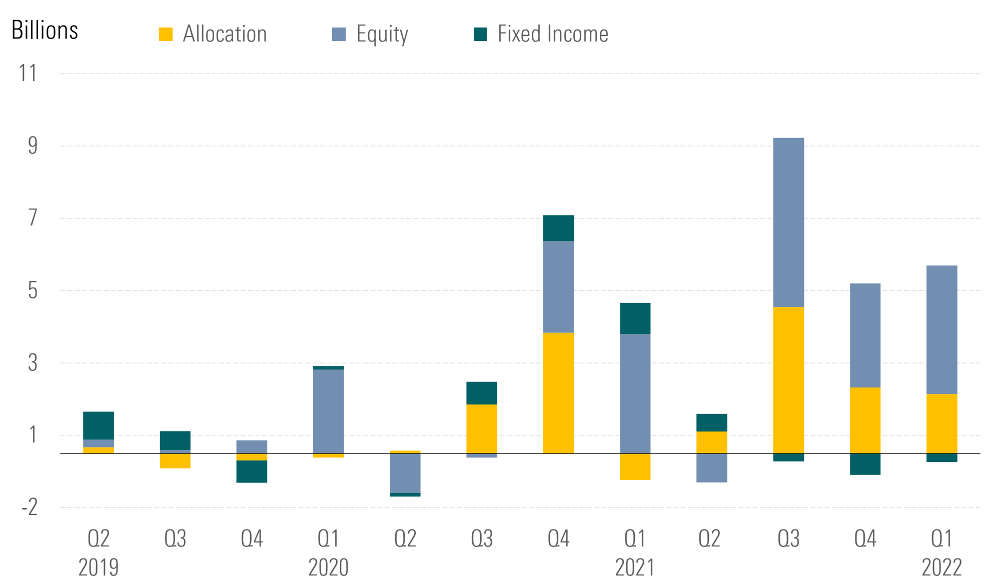
While South Korea saw net inflows in the first-quarter 2022, the country also saw large outflows from fixed-income funds. **KIM Credit Focus ESG Bond 1 Ce** and **Woori High Plus Short-term Superior ESG Bond 1 Ce** experienced the largest outflows, while equity funds **TIGER Innovator ESG30 and KODEX 200 ESG** registered the largest inflows, the former being a new launch this quarter.

Exhibit 34 Asia ex-Japan Sustainable Fund Flows (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of March 2022. China's data was not available at the time this report was published. The numbers in first-quarter 2022 use its fourth-quarter 2021 data as a proxy.

Exhibit 35 Asia ex-Japan Sustainable Fund Flows by Asset Class (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of March 2022. China's data was not available at the time this report was published. The numbers in first-quarter 2022 use its fourth-quarter 2021 data as a proxy.

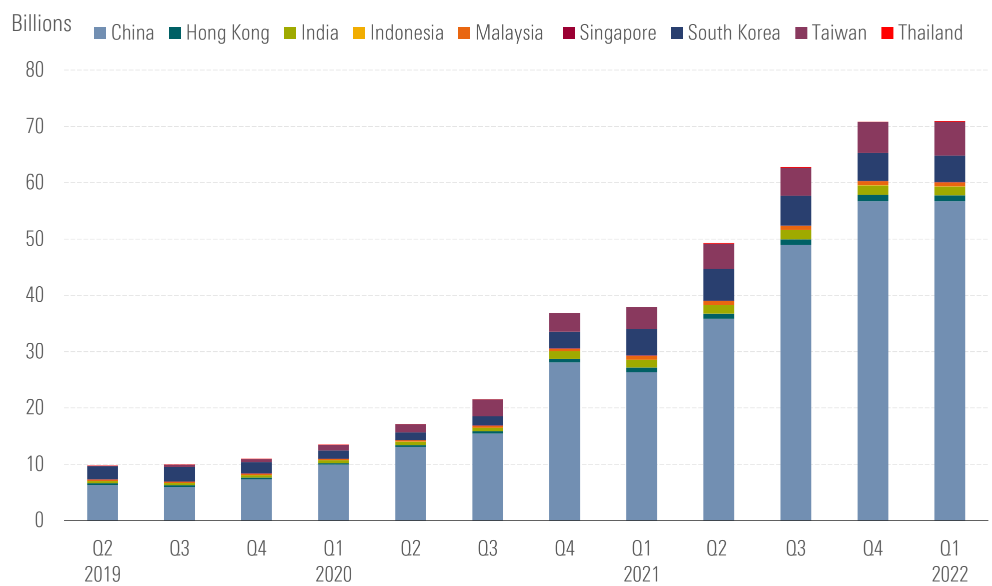
Assets

Total Asia ex-Japan sustainable fund assets held steady at USD 71 billion in first-quarter 2022, registering an increase of less than 1% 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 9% and 7% of the region's assets, respectively. However, South Korea's sustainable fund assets fell roughly 5% from the end of2021.

Following a quarter-over-quarter decline of 10% in assets, the fixed-income asset class represented 5% of Asia ex-Japan ESG assets in first-quarter 2022, while equities composed 58% and allocation funds made up the remaining 37%.

Passive ESG funds accounted for 22% of Asia ex-Japan sustainable fund assets in first-quarter 2022, which is a slight increase from 20% in first-quarter 2021.

Exhibit 36 Asia ex-Japan Sustainable Fund Assets (USD Billion)



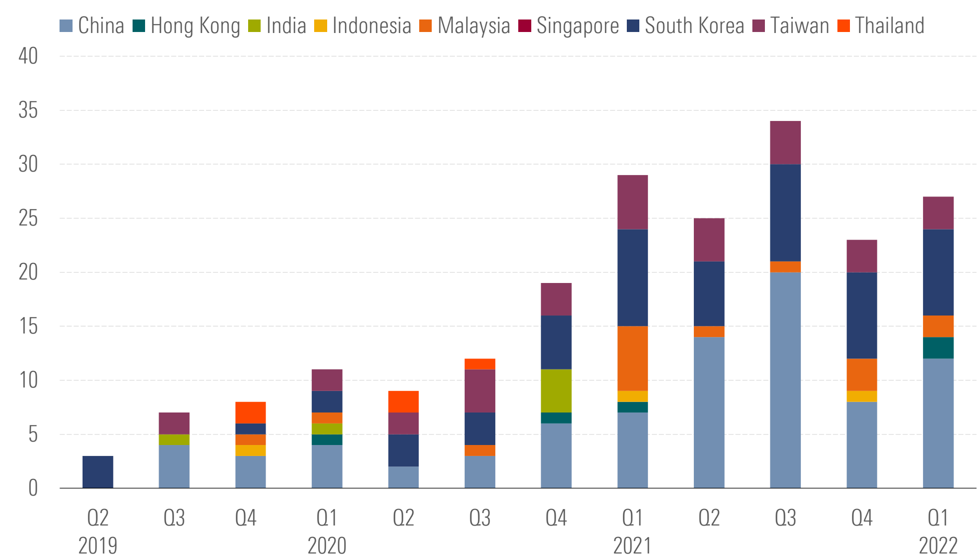
Source: Morningstar Direct, Manager Research. Data as of March 2022. China's data was not available at the time this report was published. The numbers in first-quarter 2022 use its fourth-quarter 2021 data as a proxy.

Launches

There were 27 new sustainable fund launches in Asia ex-Japan in the first quarter, composed of 12 newly launched funds in China, eight in South Korea, three in Taiwan, and two each in Malaysia and Hong Kong. Equity and allocation funds dominated the new launches, making up 13 and 12 each, respectively, and there were two fixed-income funds, Amundi Taiwan—**Global Investment Grade Green Bond** and **Kiwoom Heroes Short-term Bond ESG Active ETF**. Out of the 27 new launches, five were passive funds, including four ETFs and **Yingda CSI ESG 120 Strategy Index Fund**.

Climate-related fund launches continued to be popular in China, with five new clean energy-themed strategies and one electric-vehicle-related launch, **CCB Principal CNI NEV Battery ETF**. Outside of China, the Taiwan-domiciled **Cathay US ESG Fund** was the largest launch, having amassed over USD 108 million in assets by the end of February 2022. The second-largest launch was Hong Kong-domiciled **HSBC Global Sustainable Multi-Asset Income**. In South Korea, eight funds were incepted in the first quarter, including six equity funds, one allocation fund, and one bond fund. Among these, three are Morningstar-index-tracking KIM Sustainable US Wide Moat funds.

Exhibit 37 Asia ex-Japan Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of March 2022. China's data was not available at the time this report was published. The numbers in first-quarter 2022 use its fourth-quarter 2021 data as a proxy.

Regulatory Updates

The Asia ex-Japan region continued to see substantial growth in ESG considerations and guidelines from regulatory bodies. In February 2022, China's Ministry of Ecology and Environment introduced new ESG reporting requirements for domestic companies deemed to be major polluters or financiers of major polluters. In March 2022, Taiwan's Financial Supervisory Commission issued a notice outlining a new executive strategy with the goal of promoting sustainable development in the securities and futures industry, including governance framework improvements and enhancements of information disclosures. Earlier in the year, the FSC also announced new carbon emissions disclosure guidelines for Taiwanese-listed companies and new disclosure rules for overseas ESG funds listed domestically.

Elsewhere in Asia, the Monetary Authority of Singapore announced data collection improvements for its Project Greenprint common disclosure portal, as well as plans to issue new anti-greenwashing rules for ESG funds. The Securities and Exchange Board of India proposed a new regulatory framework for ESG ratings providers, and Hong Kong's Financial Reporting Council established the Sustainability and Climate Action Task Force to help with the creation of a climate change action roadmap aligned with Hong Kong's Climate Action Plan 2050.

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Quantitative analyst, Quantitative Research

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 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 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 rely heavily on the "Sustainable Investment–Overall" data point in Morningstar Direct. For Europe, the largest and fastest evolving ESG market, research analysts have, for the past two quarterly reviews, used natural-language-processing technology to facilitate the timely identification of new and repurposed funds that meet our criteria. As a result, the European sustainable fund universe as reported in this paper likely differs from the universe of European funds tagged as sustainable in the Morningstar Direct database.

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