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Global Sustainable Fund Flows: Q2 2023 in Review

Challenging market conditions continue to weigh on investor sentiment and flows into the space.

Morningstar Manager Research

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Corrections and Clarifications

Corrections issued June 26, 2023.

Key Takeaways

- ► Global sustainable funds attracted USD 18 billion of net new money in the second quarter of 2023, compared with over USD 31 billion in the previous quarter.
- Sticky inflation, rising interest rates, and recession fears continued to weigh on investor sentiment.
- Despite the challenging macro backdrop, European sustainable funds garnered USD 20 billion of net new money, although down from near USD 34 billion in the previous quarter, while investors pulled USD 635 million from U.S. sustainable funds, recovering slightly from USD 5 billion-plus losses in the two previous quarters.
- ► Despite the lower net inflows and helped by higher valuations, global sustainable fund assets inched higher and hit nearly USD 2.8 trillion at the end of June.
- Slowdown in product development continued. Europe saw the most significant reduction of new sustainable fund launches.

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 factors¹. (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 second quarter of 2023. A summary is provided in Exhibit 1.

¹ Note: 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 I Global Sustainable Fund Statistic	.5				
02 2023	Flows		Assets		Funds
Region	USD Billion	USD Billion	% Total	#	% Total
Europe	20.0	2,368	84	5,490	74
United States	-0.6	313	11	656	9
Asia ex-Japan	1.9	67	2	529	7
Australia/New Zealand	-1.7	27	1	199	3
Japan	-1.9	25	1	236	3
Canada	0.2	34	1	316	4
Total	18.0	2,834		7,426	

Exhibit 1 Global Sustainable Fund Statistics

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Sustainable Fund Inflows Slow

The global universe of sustainable funds attracted close to USD 18 billion of net new money in the second quarter of 2023. This inflow was lower than the revised USD 31 billion in the first quarter, against a continuously challenging backdrop of high inflation, rising interest rates, and uncertainty about the pace of the global economy.

The decrease was mirrored by a reduced quarterly organic growth rate. Calculated as net flows relative to total assets at the start of a period, global sustainable funds saw their organic growth rate decline to 0.7%, from the restated 1.2% in the previous quarter.

Yet, this is still better than the overall global fund universe, which returned to outflows of over USD 37 billion in the second quarter amid continued challenging macro conditions, including sticky high inflation, higher interest rates, and a looming recession. These redemptions contrast with the uptick inflows of USD 77 billion in the first quarter.

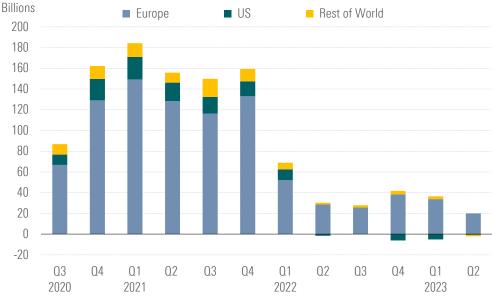


Exhibit 2 Quarterly Global Sustainable Fund Flows (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

The decelerated growth in sustainable fund inflows was felt across three geographies, while the rest of the world saw net outflows.

Europe, the biggest market for sustainable funds, attracted USD 20 billion of net new money in the second quarter, compared with USD 33.7 billion in the previous quarter. In Canada, net inflows slipped to USD 207 million from USD 963 million in the first quarter, while Asia ex-Japan saw USD 172 million of net new money invested in the space.

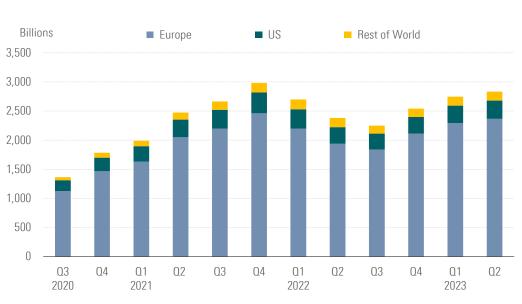
Meanwhile, on the outflows side, U.S.-domiciled sustainable funds shed USD 635 million, recovering slightly from the USD 5 billion-plus losses in the two previous quarters. Net withdrawals in Japan spiraled to almost USD 1.9 billion from the USD 961 million in outflows registered in the first quarter. Another geography experiencing notable net withdrawals was Australia and New Zealand, which bled USD 1.7 billion. But these large outflows were entirely attributed to one institutional client at Vanguard Australia that pulled its investment from the firm's ethically conscious funds.

Global Assets Slowly Climb Back Toward Historic High

Despite the lower net inflows, recovery of global sustainable fund assets extended into the second quarter of 2023 and hit nearly USD 2.8 trillion at the end of June (from the restated USD 2.7 trillion three months earlier), inching back toward the historic high of USD 3 trillion at the end of 2021. The 3.1% organic expansion was slightly higher than the overall global fund market growth of 2.9% in the three months through March 2023.

Europe continued to make up the lion's share of the sustainable fund landscape, with 84% 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 at the end of June 2023. Asia ex-Japan, of which China is the biggest sustainable market, with more than 72% of the region's asset base, ranks third in terms of sustainable fund market size.

Exhibit 3 Quarterly Global Sustainable Fund Assets (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of June 2023.

Global Fund Launches

An estimated 106 new sustainable funds hit the shelves globally in the second quarter, a continuation of the slowdown in product development activity since the beginning of 2022. 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.

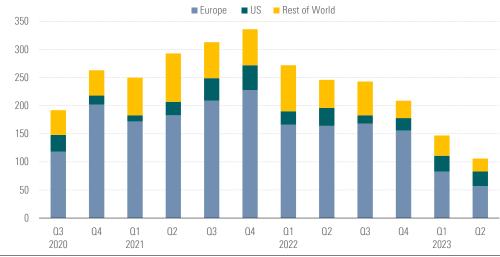


Exhibit 4 Global Sustainable Fund Launches per Quarter

Source: Morningstar Direct, Manager Research. Data as of June 2023.

The cooldown in new sustainable product development was entirely driven by a significant reduction of new sustainable fund launches in Europe, which slumped by almost 28%. In contrast, product development in the U.S. continued its momentum, and the rest of the world was mixed.

Quarterly Statistics per Domicile

Europe

Flows Decelerate, but Continue to Hold Up Against an Uncertain Macro Outlook After rebounding toward the end of 2022, net new money into European sustainable funds extended its deceleration into the second quarter of 2023 and reached just over USD 20 billion from the readjusted USD 33.7 billion in the first quarter. Passive strategies captured over three fourths (82%) of the net new capital.

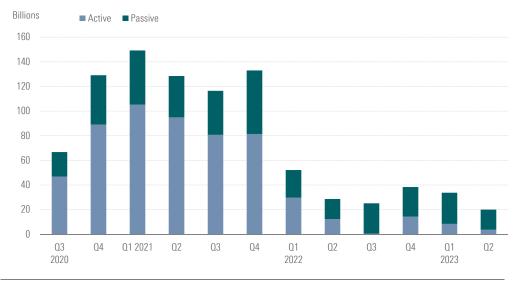


Exhibit 5 European Sustainable Fund Flows (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

The decline in net subscriptions was further confirmed when looking at organic growth rates. Calculated as net flows relative to total assets at the start of a period, the organic growth rate for the European sustainable fund universe in the first quarter fell to 0.9%, compared with 1.6% in the previous quarter.

But in comparison, the overall European fund market registered a negative organic growth of less than 0.01%, after experiencing a minor uptick of 0.74% in the first quarter, as conventional funds bled almost USD 19 billion, driven by an uncertain macroeconomic outlook, with high inflation and interest-rate hikes.

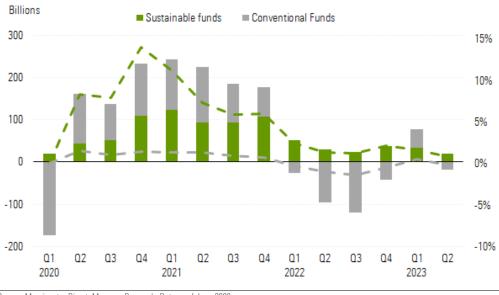


Exhibit 6.a European Sustainable Fund Flows Compared With Conventional Fund Flows (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

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

USD Billion	Sustainable Funds		Conventio	onventional Funds		Overall Fund Universe		
	01 2023	02 2023		01 2023	02 2023		01 2023	02 2023
Allocation	-0.6	-1.7		-8.7	-10.9		-9.3	-12.6
Alternative	0.0	0.2		-6.0	-6.4		-6.1	-6.2
Commodities	0.1	0		0.5	-3.0		0.6	-2.9
Convertibles	-0.2	-0.5		-1.8	-1.5		-2.0	-2.0
Equity	22.7	13.4		10.6	-28.3		33.3	-14.9
Fixed Income	13.1	8.8		48.4	31.8		61.5	40.6
Miscellaneous	-1.3	0		0.7	0.7		-0.6	0.8
Property	0.0	-0.2		-0.2	-1.4		-0.2	-1.6
Total	33.7	20.0		43.5	-19.0		77.2	1.1

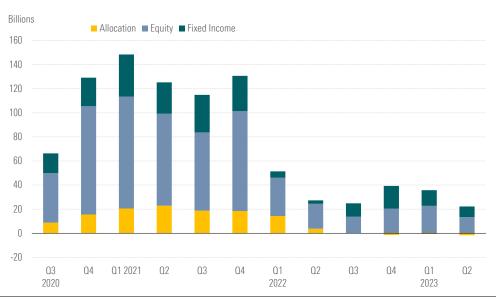
Source: Morningstar Direct, Manager Research. Data as of June 2023.

Sustainable equity funds remained the most favored, pocketing USD 13.4 billion in the last three months. While this inflow is lower than in the previous quarter, it is in striking contrast to the USD 28.3 billion in outflows registered by conventional equity funds.

Meanwhile, sustainable bond funds gathered only USD 8.8 billion, reduced by almost one third compared with the USD 13 billion restated for the first quarter. Conventional bond fund flows softened as well, to nearly USD 32 billion from the restated USD 48.4 billion in the first quarter. Several Morningstar bond categories experienced outflows in the second quarter. These were short-term-

maturity focused and inflation-linked bond categories. Although central banks are still on tightening mode, investors are already betting on a peak to rates and are shifting the focus from the short to the mid-to-long area of the yield curve to preempt a change of cycle toward a period of stability in interest rates and ultimately lower ones in the longer run.





Source: Morningstar Direct, Manager Research. Data as of June 2023.

Leaders and Laggards

Among the bestselling sustainable products in the second quarter of 2023, we continue to see a strong presence of passive products netting altogether almost USD 9.3 billion of net new money.

Goldman Sachs Enhanced Index Sustainable Global Equity Fund I NL tops the bestselling leaderboard, with inflows of USD 3.56 billion. This large subscription is attributed to one client switching to this fund from two other funds with similar strategies, which are featured in the table of the largest redemptions.

The passive strategy applies both sectoral exclusions and positive selection based on certain key environmental and governance aspects. In this way, it seeks to achieve lower carbon and waste intensities compared with the benchmark index.

Exhibit 8.a Top 10 Sustainable Fund Flows in Second-Quarter 2023

Fund Name	Net Flows (USD, Million)
Goldman Sachs Enhanced Index Sustainable Global Equity Fund I NL	3,561
BNP Paribas Easy JPM ESG EMU Government Bond IG	1,232
Xtrackers MSCI AC World ESG Screened ETF	1,117
Xtrackers MSCI World ESG ETF	1,026
Blackrock ACS US ESG Insights Equity Fund	939
iShares MSCI USA ESG Enhanced ETF	911
Blackrock ACS US Equity Tracker Fund	798
DNCA Invest Alpha Bonds	711
ASR Duurzaam Azië Aandelen Fonds	702
iShares € Corp Bond ESG Paris-Aligned Climate ETF	635

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Exhibit 8.b Bottom 10 Sustainable Fund Flows in Second-Quarter 2023

Fund Name	Net Flows (USD, Million)
Goldman Sachs Enhanced Index Sustainable Equity Fund A (NL)	-2,700
Royal London UK Core Equity Tilt Fund	-1,508
Amundi Ultra Short Term Bond SRI	-1,023
Credit Suisse Equity Japan ESG Blue	-775
Goldman Sachs Global Enhanced Index Sustainable Equity	-727
CT (Lux) Responsible Global Equity Fund	-725
Fidelity IX Sustainable UK Aggregate Bond	-634
BNP Paribas Sustainable Enhanced Bond 12M	-623
Lyxor MSCI Europe ESG Leaders (DR) ETF	-582
iShares ESG Overseas Corporate Bond Index Fund (UK)	-566

Source: Morningstar Direct, Manager Research. Data as of June 2023.

The outflow leaderboard contains the two Goldman Sachs ETFs from which the USD 3.56 billion mentioned previously was pulled. Goldman Sachs Enhanced Index Sustainable Equity Fund A and Goldman Sachs Global Enhanced Index Sustainable Equity follow the same strategies as the one mentioned above.

Similarly, the USD 1.5 billion withdrawal from **Royal London UK Core Equity Tilt Fund** was due to a client's reallocation to a global and a couple of regional accounts.

At the third place of the worst-sellers, **Amundi Ultra Short-Term Bond SRI further** bled over USD 1 billion after registering outflows of USD 465 million in the first quarter, despite offering more protection against rising interest rates. The fund uses a best-in-class approach, seeking to give priority to issuers that are sector-leading in terms of ESG criteria. The fund also applies the Amundi's exclusion policy to limit the potential exposure to controversial sectors. While the sharp increase in bond yields was painful for many bond investors in 2022, it has offered attractive valuations and a good cushion against price volatility,

providing a much healthier total return than cash assets. As interest rates continue rising, investors may rethink bonds with longer duration to benefit from prevailing higher yields over multiyear time horizons.

The table above continued to show a strong presence of fixed-income strategies (four out of 10). With the risk of prolonged monetary tightening and the prospect of a recession, investors continued to readjust their duration and geographical exposures.

The aggregate inflows among the top 10 best-selling firms netted almost USD 21 billion in the second quarter, a 25% contraction from the previous quarter. By and large, such a decrease was caused by the decelerated inflows into BlackRock's and Swisscanto's sustainable funds after their stellar performance since the end of 2022. In fact, net new money into the other firms in the leaderboard totaled USD 11.5 billion, commensurate with the previous quarter.

Exhibit 9.a Top 10 European Sustainable Fund Providers by Flows in Second-Quarter 2023

Firm	Net Flows (USD Million)
BlackRock (incl. iShares)	6,913
DWS (incl. Xtrackers)	2,859
Swisscanto	2,175
abrdn	1,682
JPMorgan	1,483
Natixis	1,329
Societe Generale	1,240
Nordea	1,053
ASR	937
Goldman Sachs (incl. NNIP)	915

Source: Morningstar Direct, Manager Research. Data as of June 2023.

DWS rose to the second place thanks to its two bestselling equity strategies, namely **Xtrackers MSCI AC World ESG Screened ETF** and **Xtrackers MSCI World ESG ETF**. The former tracks the MSCI ACWI Select ESG Screened Index, which not only applies sectoral and norm-based exclusions but also targets a minimum 30% reduction in carbon emission intensity relative to the parent index. The latter ETF tracks the MSCI World Low Carbon SRI Leaders Index, which integrates sectoral exclusion, a best-in-class ESG selection, as well as current and potential carbon emission risk assessment.

Dutch asset manager ASR appears as one of the new joiners in the leaderboard thanks to its young climate transition strategy, **ASR Duurzaam Azië Aandelen Fonds**, which was incepted in February 2023. Aligned with the Paris Agreement, "the fund aims to reduce carbon emissions and stimulate the energy transition by reducing the CO₂ intensity of the portfolio by 50% by 2030 and by 2050 being climate neutral."

At the other end of the spectrum, once again, Royal London topped the ranking of the outflows of sustainable fund managers, but this was due to a reallocation of capital from funds to a global and several regional accounts, as previously mentioned.

Exhibit 9.b Bottom 10 European Sustainable Fund Providers by Flows in Second-Quarter 2023

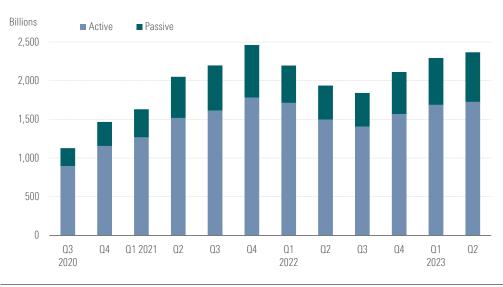
Firm	Net Flows (USD Million)
Royal London	-1,364
Credit Suisse	-1,320
Pictet	-1,031
UBS	-929
Columbia Threadneedle	-907
Amundi (incl. Lyxor)	-799
Danske Invest	-794
Carmignac	-788
CPR Asset Management	-696
Eurizon	-687

Source: Morningstar Direct, Manager Research. Data as of June 2023.

European Sustainable Funds Assets Edging Toward Historical High

Despite lower inflows, assets in European sustainable funds rose for the third-consecutive quarter and reached almost USD 2.4 trillion at the end of June 2023, up 3.2% from March 2023. This increase was supported by equity and bond market appreciation. Meanwhile, assets in the overall European fund universe inched ahead by just over 1%. As a result, the market share of sustainable funds in Europe rose to 22% from 18%.

Exhibit 10 European Sustainable Fund Assets (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of June 2023.

Sustainable funds should continue to gain ground as investor demand for strategies that align 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 which requires financial advisors to consider their clients' sustainability preferences, has the potential to accelerate adoption of sustainable investments among retail investors.

Launches

Slowdown in product development extended in the second quarter of 2023, with the number of newly launched sustainable funds reaching a historical low of 57, from the restated 83 in the first quarter. However, it is likely the second-quarter 2023 number will be restated in future reports as we identify more launches and as additional ones are reported to Morningstar.





Source: Morningstar Direct, Manager Research. Data as of June 2023.

The continuing decline in new products can be attributed partly to the overall market sentiment damped by the challenging macro backdrop. This is also reflected in the number of new conventional strategy launches, which remains low. But asset managers have also been more cautious in their development of new ESG and sustainable strategies because of greenwashing accusations and the ever-evolving regulatory environment. A clarification by ESMA in the summer 2022 led to over 300 Article 9 funds to be downgraded to Article 8 funds in the second part of last year, while waiting for further guidance on fund classification and how to interpret the definition of a "sustainable investment" provided by Article 2 No. 17 of the EU's Sustainable Finance Disclosure Regulation.

For more details on SFDR: Read SFDR Article 8 and Article 9 Funds: 02 2023 in Review

Once again, equity strategies dominated (40%) the ESG product development in the second quarter, but fixed income took up almost 37% of the new launches. While sharp selloffs led to an overall

performance deterioration for bonds in 2022, higher interest rates have made fixed income a more attractive asset class for investors.

The table below shows the 10 largest new fund launches in the second quarter, with bond strategies occupying over half of the list (six out of 10). The overwhelming majority of newly incepted funds distributed in Europe were classified as Article 8 under SFDR.

SFDR Fund Size (USD **Fund Name** Type Million) Goldman Sachs Green Bond R Cap USD Article 9 2339 LGT CP Multi-Assets Sustainable Strategy 3 Years Article 8 628 LGT CP Multi-Assets Sustainable Strategy 4 Years 321 Article 8 209 Arcano European Senior Floating Rate Fund - ESG Selection Article 8 ASR Euro Geldmarkt Fonds N/A 190 UBS Asian Investment Grade Bonds Sustainable (USD) Article 8 117 LGT CP Multi-Assets Sustainable Strategy 5 Years 97 Article 8 77 Autofocus Transition Climat Juillet 2023 Article 8 Legal & General ESG Global High Yield Bond Index Fund 48 Article 8 Allspring Climate Transition Global High Yield Fund Article 8 40

Exhibit 11.b Top 10 European Sustainable Fund Launches

Source: Morningstar Direct, Manager Research. Data as of June 2023.

While broad sustainable and ESG offerings continued to account for most of the product development in the last three months, climate remained by far the most popular theme represented among new product launches. Eighteen new climate-related funds came to market in the last quarter.

These new climate fund launches were mostly climate transition and green bond strategies, as per Morningstar's own classification². Examples include **Goldman Sachs Green Bond R Cap USD** and **BND Green Bond Indexfonds**. The latter tracks the Bloomberg Barclays MSCI Global Green Bond Index. Eligible green bonds fulfill much of the criteria articulated in the Green Bond Principles.

Along with improving yield and duration profiles, the influx of green bond fund launches reflects the increased investors' appetite for sustainable securities that offer transparency over the use of proceeds and enhances credit risk assessment.

While not listed above, Neuberger Berman launched a Paris-aligned bond strategy, **Neuberger Berman Climate Transition Multi-Asset Credit Fund**, which aims to reduce the portfolio's scope 1, 2, and 3

² Bioy, H., & Wang, B. 2022. "COP27: Investing in Times of Climate Change."

greenhouse gas emission, equating to a 20% reduction by 2025, 50% by 2030 relative to a 2019 baseline, and a subsequent decline to net zero by 2050.

Furthermore, among the new launches, we see several strategies that target other sustainable themes, including food insecurity, nutrition, as well as social fairness and inclusion. For example, CIRCA5000 launched a **Sustainable Food & Biodiversity ETF**, which focuses on the leading pioneers of Agriculture 4.0—from vertical farming to plant-based proteins and precision agriculture to forestry management. Together with another four impact index ETFs launched by CIRCA5000 in the second quarter, the Article 9 strategy collaborates with Impak Analytics and BITA to ensure that only the highest impact companies are selected for each fund.

Regulatory Update

Regulators are continually refining their rules to combat greenwashing and ensure greater transparency in sustainable finance. For market participants, the ever-changing regulatory landscape demands caution and dedicated resources.

The EU Is Pressing Ahead With Its Sustainable Finance Strategy

On 13 June 2023, the European Commission proposed to expand its EU Taxonomy beyond climaterelated activities to encompass biodiversity, water, pollution, and the circular economy. The new criteria include a total of 35 activities across eight economic sectors. The EC also took the opportunity to introduce to the existing climate criteria two new activities spanning six sectors. However, key sectors such as agrifood and mining are not yet covered. By 2026, financial institutions will be expected to factor in mandatory taxonomy-alignment reporting. The proposed criteria should allow them to showcase even greater alignment figures.

That same day, the EC published a proposal to regulate ESG rating providers. Among other requirements, the proposal sets requirements for the management of potential conflicts of interest and transparency of methodologies. It also contains an obligation for EU entities and non-EU entities wishing to provide ESG ratings in the EU to be respectively authorized and endorsed by the European Securities and Markets Authority.

In parallel, the EC, which is about to finalize standards under the Corporate Sustainability Reporting Directive mandating disclosure of ESG information, issued a four- week consultation. The proposed standards, which are set to apply from Jan. 1, 2024, contain significant revisions to the draft standards recommended by the European Financial Reporting Advisory Group in November 2022, including additional phase-ins and making most disclosure requirements subject to materiality assessments. The proposal, which does not mandate disclosure against SFDR Principal Adverse Impacts, was criticized by investors who highlighted that it would "reduce financial markets participants' ability to meet their own mandatory reporting obligations."

On the supervision front, the ESAs (ESMA, European Banking Authority, and European Insurance and Occupational Pensions Authority) have published their progress reports to the European Commission on

greenwashing in the financial sector. In the reports, the ESAs propose a common high-level understanding of greenwashing and already provide sector-specific assessments for key sectors under ESMA's remit such as issuers, investment managers, benchmark administrators, and investment service providers. The ESAs will publish their final reports on greenwashing in May 2024 and will propose recommendations on possible change to EU rules.

On 6 July 2023, ESMA announced that it was launching a common supervisory action with EU national competent authorities on sustainability-related disclosures and the integration of sustainability risks. The goal is to assess the compliance with SFDR, the taxonomy regulation, and relevant implementing measures. In 2023 and until third-quarter 2024, the NCAs will undertake their supervisory activities and share knowledge and experiences through ESMA to foster convergence in how they supervise sustainability-related disclosures and sustainability risk integration in asset managers.

Finally, ESMA has opened, until 16 September 2023, call for evidence to assess the integration of sustainability preferences in the suitability assessment and product governance arrangement introduced less than a year ago on 2 August 2022. The consideration of sustainability preferences of clients revolves around the three data points: taxonomy-alignment, PAI, and Sustainable Investment percentage.

For more details on SFDR: Read SFDR Article 8 and Article 9 Funds: 02 2023 in Review

Meanwhile, in the U.K., the Financial Conduct Authority has made the decision to delay the publication of the sustainable disclosure regime until fourth-quarter 2023. This delay allows for crucial stakeholder feedback to be incorporated. The proposed regime includes mandatory labels for funds using ESG-related terms: focus, improvers, and impact.

United States

Investors pulled USD 635 million from sustainable funds in the second quarter, easing slightly from USD 5 billion-plus losses in the two previous quarters but marking the third-consecutive quarter of outflows nonetheless.³ In total, investors have withdrawn USD 11.4 billion from these funds over the past year. Market volatility and global macroeconomic pressures, including persistent inflation, climbing interest rates, and fears of recession, have contributed to this retreat. Another possible factor continuing to weigh on investor demand for ESG products is the political backlash against sustainable investing in the U.S.

³ In the U.S., funds of funds are included in the count of funds but excluded from flows and assets calculations.

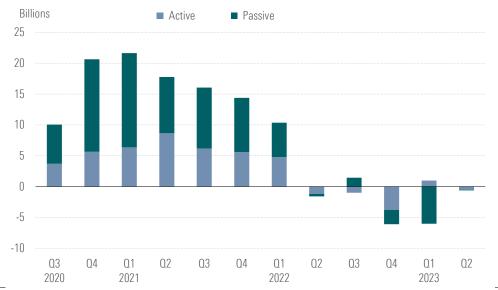


Exhibit 12 U.S. Sustainable Fund Flows (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

The weak demand for sustainable funds in the last three months was a notable departure from the total universe of U.S. open-end and exchange-traded funds, which saw USD 20 billion in net inflows during the same period, down from their typical USD 100 billion-plus quarterly haul but positive nonetheless.

Consequently, for the third quarter in more than five years, the U.S. sustainable funds segment 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 second quarter, sustainable funds contracted by a modest 0.21% compared with a tiny 0.08% growth in the overall U.S. funds landscape.

Sustainable actively managed funds accounted for most of the second quarter's outflows, shedding USD 528 million during the period. Except for 2023's first quarter, actively managed funds have suffered outflows in every quarter since the first quarter of 2022.

Meanwhile, passive funds shed roughly USD 100 million in the second quarter of 2023, easing up from significant outflows in the first quarter of 2023. The top four funds in terms of quarterly outflows were all passive equity strategies.

Leaders and Laggards

Passive fund providers BlackRock and DWS both launched climate-focused ETFs during the second quarter, and they quickly catapulted to the top two spots in terms of second-quarter flows. IShares Climate Conscious & Transition MSCI USA ETF USCL and Xtrackers MSCI USA Climate Action Equity ETF USCA track indexes that lean into companies that are well-positioned for the transition to a lowcarbon economy or that are actively engaging in the climate transition, relative to peers.

Exhibit 13.a Top 10 Sustainable Fund Flows

Fund Name	Net Flows (USD Million)	
iShares Climate Conscious & Transition MSCI USA ETF	2,169	
Xtrackers MSCI USA Climate Action Equity ETF	2,005	
iShares Paris-Aligned Climate MSCI USA ETF	451	
Brown Advisory Sustainable Growth	249	
iShares ESG U.S. Aggregate Bond ETF	213	
Calvert Core Bond	187	
iShares ESG Aware MSCI EAFE ETF	158	
Nationwide Global Sustainable Equity	148	
First Trust NASDAQ Clean Edge Smart Grid Infrastructure Index	127	
Xtrackers S&P 500 ESG ETF	108	

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Two more climate-focused funds landed among the top flow-getters: **iShares Paris-Aligned Climate MSCI USA ETF** PABU and **First Trust Nasdaq Clean Edge Smart Grid Infrastructure Index** GRID. Just one fund—**iShares ESG U.S. Aggregate Bond ETF** EAGG—has landed among the top 10 for each of the past four quarters.

Passive Equity Funds Dragged on Quarterly Flows

Exhibit 13.b Bottom 10 Sustainable Fund Flows

The quarter's four biggest losers were all passively managed, dominated by **iShares ESG MSCI USA Leaders ETF** SUSL and **Xtrackers MSCI USA ESG Leaders Equity ETF** USSG, each of which shed more than USD 2 billion during the period. Investors continued to pull money from iShares ESG Aware MSCI USA ETF, although outflows softened relative to the first quarter. Formerly the largest U.S. sustainable fund (at the end of 2022), this fund has dropped to third place in terms of assets because of persistent outflows.

Fund Name	Net Flows (USD Million)
iShares ESG MSCI USA Leaders ETF	-2,258
Xtrackers MSCI USA ESG Leaders Equity ETF	-2,114
iShares ESG Aware MSCI USA ETF	-679
iShares Global Clean Energy ETF	-279
Parnassus Mid Cap	-259
Parnassus Core Equity	-233
Pioneer	-197
Domini Impact International Equity	-185
Invesco Floating Rate ESG	-172
BlackRock Impact Mortgage	-164

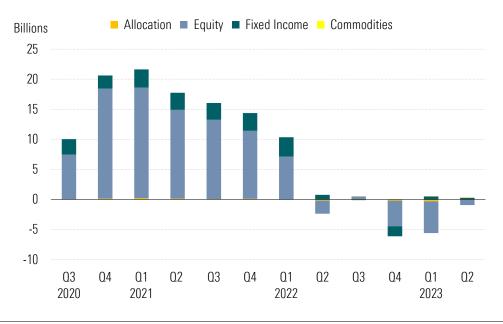
Source: Morningstar Direct, Manager Research. Data as of June 2023.

Some of the funds in the bottom 10 have sustained outflows over multiple quarters. Three of these funds — Parnassus Core Equity PRBLX, Parnassus Mid-Cap PARMX, and iShares MSCI USA ESG Leaders ETF ESGU — were among the 10 funds with the worst outflows in 2022. This marks the seventh-consecutive quarter for outflows from Parnassus Core Equity, though it remains the largest U.S. sustainable fund to this day. Parnassus attributes a portion of the fund's outflows to the launch of a less expensive collective investment trust and the subsequent conversion of investors from one vehicle to the other. Our data includes only open-end and exchange-traded funds.

Investors Stuck With Sustainable Bond Funds

During the second quarter of 2023, sustainable bond funds collected a humble USD 288 million, their second-consecutive quarter of inflows. Aside from iShares ESG U.S. Aggregate Bond ETF, which has landed among the top 10 flow recipients for each of the past four quarters, the top bond funds in demand came from ESG specialist Calvert. **Calvert Core Bond** CLDAX, **Calvert Ultra-Short Duration Income** CULAX, and **Calvert Bond** CSIBX each netted more than USD 75 million during the period, led by Calvert Core Bond's USD 186.5 million intake.



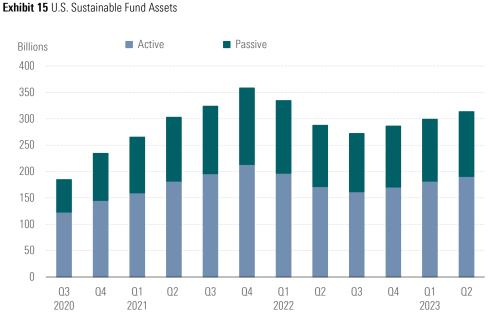


Source: Morningstar Direct, Manager Research. Data as of June 2023.

Meanwhile, sustainable equity funds shed USD 838 million during the quarter; this was less than in previous periods but their third-consecutive quarter of outflows nevertheless. Passive funds from BlackRock and Xtrackers drove this narrative. Most of the hardest-hit equity funds focus on mitigating ESG risks within broadly diversified portfolios rather than investing in climate solutions or specific sectors of the market.

Assets in U.S. Sustainable Funds Rose as Markets Appreciated

Despite outflows from sustainable funds, rising equity and bond markets drove assets in these funds to more than USD 313 billion, their highest point since the first quarter of 2022. This represents a 13% decline from the all-time record of USD 358 billion at the end of 2021 but a 15% increase from the recent low of USD 272 billion in 2022's third quarter. By comparison, assets in the broader U.S. market also peaked at the end of 2021 and slid by 11% through to the end of June 2023.



Source: Morningstar Direct, Manager Research. Data as of June 2023.

Despite Turbulent Demand, Product Development Held Steady

Some asset managers continue to see prospects for growth. During the second quarter, 26 new sustainable funds came to market, down from the record 44 in 2021's fourth quarter but up from the latter half of 2022.

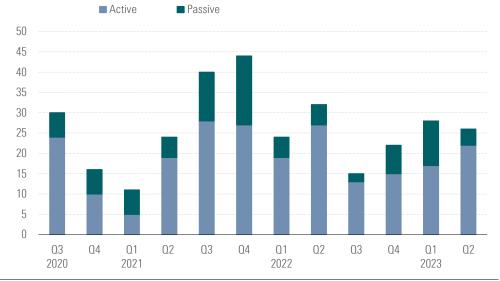


Exhibit 16.a U.S. Sustainable Fund Launches

Source: Morningstar Direct, Manager Research. Data as of June 2023.

More than half of the new launches came from Fidelity, which launched its sustainable target-date strategy in addition to some stand-alone funds in May. Fidelity's target-date strategy marks the fourth such option available to U.S. investors, following the Natixis Sustainable Future series from 2017, the BlackRock LifePath ESG Index series in 2020, and the Putnam Sustainable Retirement series from first-quarter 2023. The future of ESG investing in the U.S. target-date landscape has been on unsteady footing since 2020, when the U.S. Department of Labor all but banned ESG strategies from serving as the qualified default investment alternative, or QDIA, in defined-contribution plans. When President Joe Biden entered office in 2021, the tone from the DOL turned more favorable, but the debate is far from over.

New Climate-Focused Funds Took Center Stage

Four of the second quarter's largest new U.S. sustainable funds were climate-focused offerings. Following iShares Climate Conscious & Transition MSCI USA ETF and Xtrackers MSCI USA Climate Action Equity ETF, which jumped to the top of the flows table in their first live quarters, was **Touchstone Climate Transition ETF** HEAT. The fund invests in companies that provide solutions to climate change, leaders of the transition to a lower-carbon economy, and companies that contribute to climate change adaptation.

Exhibit 16.b Largest New Sustainable Funds

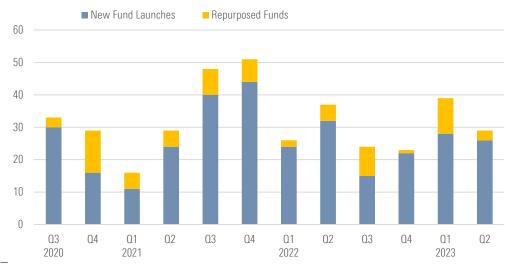
Fund AUM (USD Million)	
2,245	
2,213	
12	
10	
9	
7	
5	
5	
5	
4	
_	

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Three Bond Funds Received a Sustainable Refresh

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 second quarter of 2023, three fixed-income funds were repurposed to adopt sustainable mandates.

Exhibit 16.c New U.S. Sustainable Funds



Source: Morningstar Direct, Manager Research. Data as of June 2023.

Nuveen and Federated Hermes both expanded their sustainable offerings with one refreshed strategy each. The third repurposed fund comes from a new entrant: **Community Development** CDCDX adjusted its mandate to focus on impact investments with the goal of benefiting low-income households and achieving positive social and environmental outcomes.

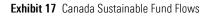
The new offerings and repurposed funds brought the total number of sustainable open-end and exchange-traded funds in the U.S. to 656 at the end of the quarter.

Canada

Flows

Canadian sustainable funds and ETFs collected USD 207 million in the second quarter of 2023, down from almost USD 1 billion in the previous quarter.⁴ The net inflows were attributed to active strategies as passive registered small outflows.

Calculated as net flows relative to total assets at the start of a period, the Canadian sustainable funds segment saw its organic growth rate decline sharply in the second quarter to 0.6% from 3.2% in the previous quarter. This aligns with the broader trend seen across various markets in the second quarter as investors witnessed accelerated outflows in the Canadian market during this time.





Source: Morningstar Direct, Manager Research. Data as of June 2023. Fourth-quarter 2022 flows were revised down to USD 316 million from USD 500 million.

4 In Canada, funds of funds are included in the count of funds but excluded from flows and asset calculations.

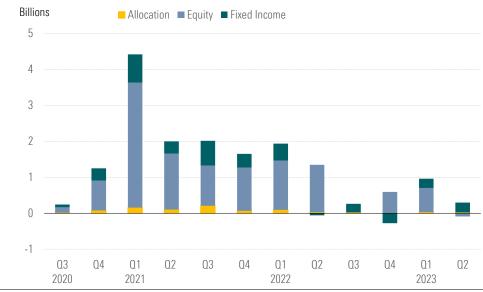


Exhibit 18 Canada Sustainable Flows by Asset Class

Source: Morningstar Direct, Manager Research. Data as of June 2023. Fourth-quarter 2022 flows were revised down to USD 316 million from USD 500 million.

Investors poured USD 270 million into sustainable fixed-income funds in the second quarter, their second-consecutive period of net inflows as investors sought to benefit from increasing bond yields. Meanwhile, equity funds experienced outflows.

The top 10 funds by net inflows experienced a significant increase in deposits, with an estimated USD 993 million invested during the quarter. Among these top funds, NBI products attracted the largest portion of net new money, with **NBI Sustainable Canadian Bond ETF** NSCB collecting USD 302 million during the period.

Assets

Assets invested in Canadian sustainable funds continued to increase in the second quarter. Sustainable funds stood at a record USD 33.7 billion at the end of June, representing a 4% increase relative to the previous quarter and 1.5% higher than the previous record of USD 33.2 billion set in 2022's first quarter. Assets in actively managed sustainable funds increased by 4.2% over the quarter, while the increase in passive strategies was smaller at 3.2%.

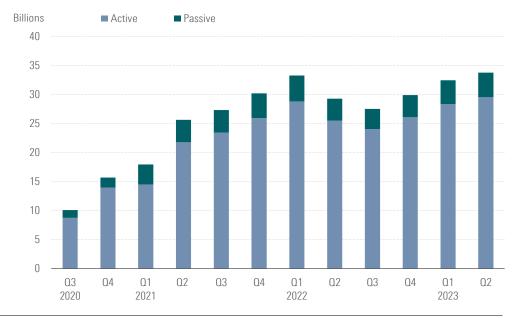


Exhibit 19 Canada Sustainable Fund Assets

Source: Morningstar Direct, Manager Research. Data as of June 2023.

The distribution of funds across asset classes remained unchanged, with a greater percentage of assets allocated to equities (71%), followed by fixed income (23%) and the remainder to allocation funds.

New Launches

Sustainable product development in Canada held steady compared with the previous quarter, although it decreased compared with a year ago. According to Morningstar data as of this writing, the first and second quarter of 2023 saw the launch of six new products each. While Invesco dominated the first quarter of 2023 with most product launches, Desjardins Investments stood at the top with three new funds in the second quarter. However, the appetite for product launches has been relatively lower for both sustainable and traditional investment products in the past year.

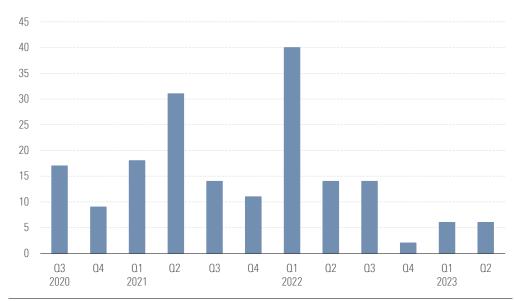


Exhibit 20 Canada Sustainable Fund Launches

Source: Morningstar Direct, Manager Research. Data as of June 2023. Includes funds of funds. Totals revised through first-quarter 2022 (inclusive).

Regulatory Update

There were two notable regulatory developments in Canada last quarter. First, in April, the Canadian Securities Administrators opened a 90-day public comment period on a proposed amendment to corporate governance disclosure rules and policies surrounding the nomination process, board renewal, and diversity. The proposal seeks to consider diversity, equity, and inclusion criteria beyond strictly gender, as it is defined currently. Second, the Canadian Sustainability Standards Board reached quorum with five new member appointments from western and eastern provinces as well as from Canada's resource-based sectors. CSSB will partner with the International Sustainability Standards Board to support the implementation of global standards in Canada, ensuring that key Canadian concerns are addressed.

Australia and New Zealand

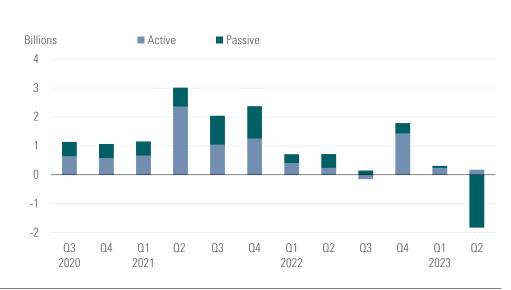
Flows

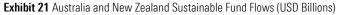
The Australasian (Australia and New Zealand) sustainable funds universe bled USD 1.66 billion in the second quarter of 2023, driven by passive strategies that saw redemptions of USD 1.83 billion.

Vanguard was responsible for the entirety of these outflows, its ethically conscious international shares funds taking the biggest hit across AUD and NZD share classes, with redemptions of USD 1.32 billion. Significant outflows also occurred in its ethically conscious global aggregate bond hedged in NZD (USD 390 million) and its ethically conscious Australian Shares strategy (USD 142 million). These large withdrawals were entirely attributed to one institutional client who moved its investment from the Ethically Conscious funds into mandates managed by another firm. Institutional redemptions at

Vanguard are the direct result of the firm's strategy to withdraw from offering segregated mandates and to scale back from the institutional investor segment to focus on serving individual investors, either directly or through the financial intermediaries that support them.

Meanwhile, flows into Australasian active sustainable funds, while positive, were muted in the second quarter, with only USD 173 million in net new money.





Source: Morningstar Direct, Manager Research. Data as of June 2023.

To provide context, the broader market saw outflows of USD 6.04 billion. Market conditions have been challenging, with persistent inflation, rising interest rates, and recession fears. Furthermore, elevated energy prices have affected sustainable fund returns relative to their conventional peers as the former tend to either not hold energy companies or underweight them.

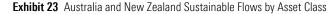


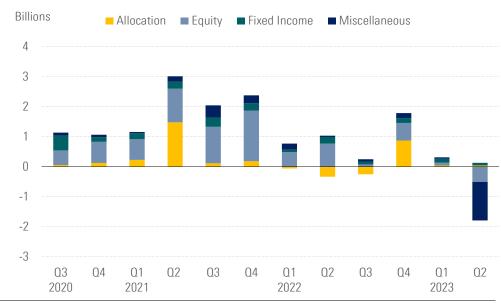
Exhibit 22 Australian and New Zealand Sustainable Fund Flows Compared With the Broader Market (USD Billions)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Flows by Category

In the Australasia region, fixed-income strategies attracted positive, albeit small, flows (USD 85 million). Equity and miscellaneous funds registered significant outflows of USD 502 million and USD 1.28 billion, entirely explained by Vanguard fund redemptions.

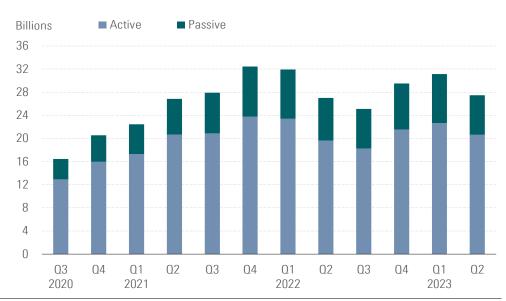


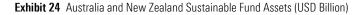


Source: Morningstar Direct, Manager Research. Data as of June 2023.

Assets

Market challenges coupled with the outflows from Vanguard funds did affect the size of assets in Australasian sustainable funds, which were down by more than USD 3.7 billion in the second quarter compared with the previous quarter. The total size of Australasian sustainable investments is estimated to be USD 27.5 billion.





The Australian sustainable funds market remains quite concentrated, with the top 10 funds accounting for approximately 70% of total assets in sustainable funds.

The top six fund houses by sustainable fund assets are listed in Exhibit 25. Australian Ethical has increased its market share following its merger with Christian Super. DFA continues to steadily grow its market share and now sits in second place, replacing index giant Vanguard, which, after its huge second-quarter outflows, fell by two ranks and landed behind BetaShares. Vanguard's sustainable fund assets in Australia almost halved in the last three months, falling to USD 2 billion at the end of June from USD 3.6 billion at the end of March.

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Exhibit 25 Top Australian and New Zealand Fund Houses

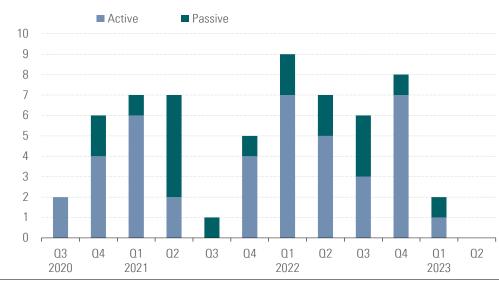
Sustaniable FUM Market Share	% Market Share
Australian Ethical Investment Ltd	20.3%
DFA Australia Limited	11.9%
BetaShares Capital Ltd	10.9%
Vanguard Investments Australia Ltd	7.9%
Mercer Investments (Australia) Limited	5.8%
Pendal Institutional Limited	5.4%

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Launches

There were no new sustainable funds launched in the second quarter of 2023. Launches so far this year are significantly lower than the previous year. This can be only partly attributable to the challenging market conditions. As of the end of June 2023, we counted 199 strategies in our Australasian sustainable fund universe.

Exhibit 26 Australia and New Zealand Sustainable Fund Launches



Source: Morningstar Direct, Manager Research. Data as of June 2023.

Regulatory Update

Australia plans to incorporate sustainable reporting into Australia's financial reporting and disclosure standards. Australia is likely to adopt International Sustainability Standards Board disclosure

requirements⁵ from 2024 via a staged approach. This should aid in the transparency and comparability between companies particularly in relation to their climate-related progress and net-zero ambitions. Improved reporting transparency and disclosures should help provide investors with increased confidence in assessing the risk and opportunities of ESG factors.

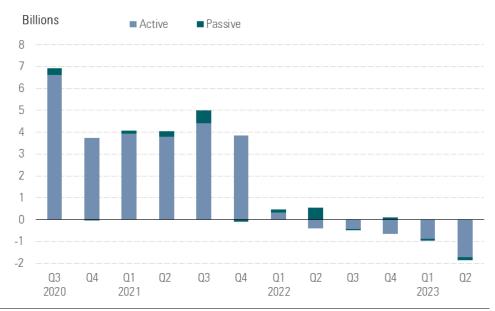
Japan

Flows

Investors pulled USD 1.9 billion from Japanese sustainable funds in 2023's second quarter. This withdrawal is nearly double the previous record low set in the first quarter of 2023. The second quarter's retreat also marks the fourth-consecutive quarter of net outflows from sustainable funds.

Actively managed funds accounted for more than 90% of the quarter's outflows and marked their fifthconsecutive quarter of withdrawals. Notably, 30% of the outflows could be attributed to just two funds—AMOne Global ESG High Quality Growth Equity Fund Unhedged and SMDS Innovative Decarbonization Strategy Fund—which shed USD 408 million and USD 153 million, respectively.

Exhibit 27 Japan Sustainable Fund Flows (USD Billion)



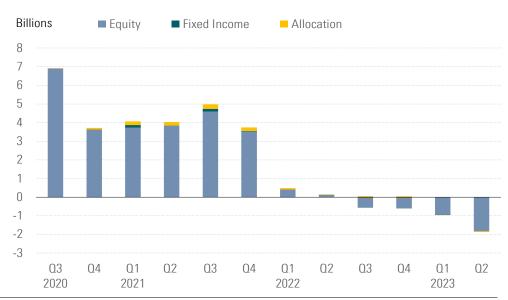
Source: Morningstar Direct, Manager Research. Data as of June 2023.

⁵ On June 26, IFRS' International Sustainability Standards Board published its long-awaited standards on sustainability and climate disclosure. The ISSB climate standard includes the same reporting pillars as the Taskforce on Climate-related Financial Disclosures, (that is, governance, strategy, risk management, and metrics and targets) and requires issuers to disclose material qualitative and quantitative information about climate-related risks and opportunities. Issuers are also expected to report on their transition plans, climate resiliency assessments, and, if material, scope 1, 2, and 3 emissions based on the Greenhouse Gas Protocol Corporate Standard. Read what the ISSB standards mean for investors in our new blog.

It should be noted that there is a possibility of double-counting at the global level. We include Japandomiciled 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.

Equity funds lost USD 1.8 million during the period, representing more than 97% of the quarter's outflows. Of the 20 funds worst hit by withdrawals, 19 were equity funds. This contrasts with the performance of the Japanese equity market, which is experiencing a significant rally in 2023. Key market indexes such as the Nikkei 225 and the Topix 1000 have gone up by 28% and 23%, respectively, in base currency terms in the first half of the year and are trading at multiyear highs. International investors have been enticed back to the Japanese stock market in the wake of the Tokyo Stock Exchange's guidance earlier this year to listed companies to improve their corporate value. In particular, companies with a price/book ratio of below 1 have been requested to come up with structural plans to drive the ratio above it so that the value of their shares outweighs that of their assets.

Exhibit 28 Japan Sustainable Fund Flows by Asset Class (USD Billion)



Source: Morningstar Direct, Manager Research. Data as of June 2023.

Assets

Total assets in Japan-domiciled sustainable funds slid to USD 24.9 billion in the second quarter, a 3% decline from the end of March. Despite persistent outflows from actively managed funds, these strategies retain the majority (93%) of sustainable fund assets.

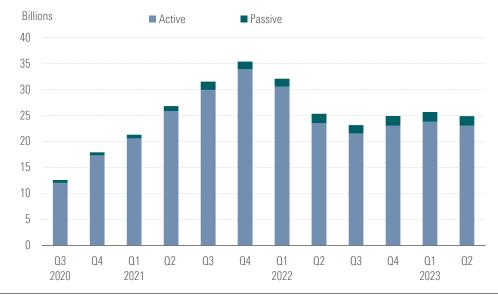


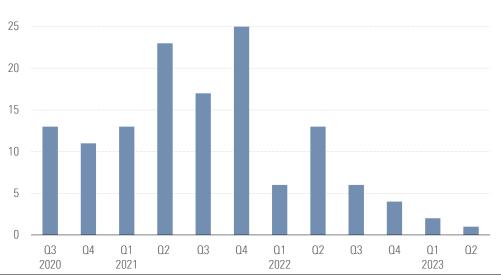
Exhibit 29 Japan Sustainable Fund Assets (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Launches

Just one new sustainable fund launched in the second quarter of 2023, the lowest level of new product development in more than three years. Daiwa World Water Resources Related Equity Fund launched on April 3 and collected USD 21 million by the end of June.





Source: Morningstar Direct, Manager Research. Data as of June 2023.

Asia ex-Japan

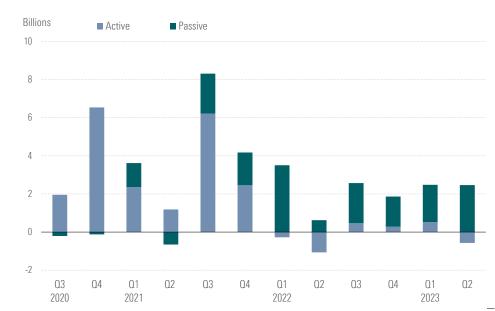
We used the most-recent data available within the past quarter for funds whose full quarterly data was unavailable at the time of publication. Because China's data was not available at the time of publication, we used first-quarter 2023 data as a proxy for second-quarter 2023 data in every exhibit of this section.

Flows

Excluding China, the Asia ex-Japan region recorded net inflows of roughly USD 172 million over the second quarter. The region's inflows were driven by Taiwan-domiciled sustainable funds, which experienced the highest inflows at USD 307 million. South Korea-domiciled sustainable funds saw inflows of USD 20 million, bucking a trend of outflows over the previous consecutive four quarters. Inflows from passive funds offset outflows from active funds in the country, and the top five funds with the largest inflows were all ETFs. Four of these are equity funds—SOL Secondary Battery Materials & Equipment, TIGER Secondary Cell, KODEX Secondary Battery Industry, and KBSTAR Secondary Cell Active—and one invests in bonds: KODEX ESG Korea Total Bond Market Active.

India-domiciled sustainable funds, which all sit in the equity asset class, saw USD 66 million in outflows during the quarter and have consistently experienced outflows over the past year. The MSCI India ESG Leaders Index's 7.9% gain lagged the MSCI India Index's 12.2% return over the past quarter, and the former trailed the latter by 7.5 percentage points over the past year ended June 2023. Meanwhile, Singapore and Hong Kong shed USD 45 million and USD 22 million, respectively, in second-quarter 2023.





Source: Morningstar Direct, Manager Research. Data as of June 2023.

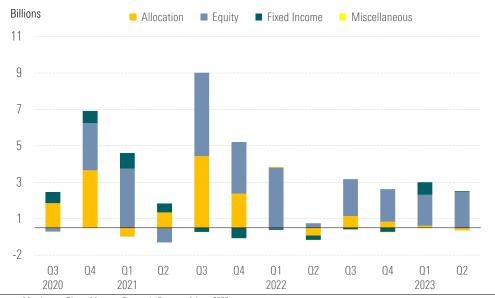


Exhibit 32 Asia ex-Japan Sustainable Fund Flows by Asset Class (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Assets

Total assets in sustainable funds across Asia ex-Japan remained relatively flat, growing by just 0.5% since the end of March. Outside of China (for which data was not available at the time of publication), Taiwan and South Korea continued to lead the pack, accounting for 18.2% and 11.1% of the region's sustainable fund assets, respectively. Assets in Hong Kong-domiciled funds dropped by 7.1% over the quarter, driven in part by poor equity market performance relative to the rest of the region. In South Korea, sustainable assets grew to USD 7.4 billion in the second quarter, with passive and active funds splitting the pot evenly.

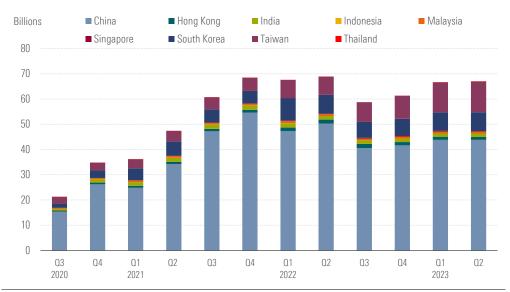


Exhibit 33 Asia ex-Japan Sustainable Fund Assets (USD Billion)

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Following a quarter-over-quarter increase of 1.5%, equities represented 71.1% of Asia ex-Japan sustainable fund assets at the end of June, while allocation and fixed-income funds comprised 23.0% and 5.7%, respectively. Sustainable passive funds continued to be a popular option for investors, with inflows of USD 2.5 billion over the quarter versus outflows of USD 568 million for active funds, and assets in passive strategies rose to 46.2% of sustainable assets from 45.2% in first-quarter 2023.

Launches

From April through June 2023, 16 new sustainable funds were launched across the region: 11 in China, three in South Korea, and one each from Hong Kong and Malaysia. Equity funds dominated with 11 new offerings. Only one sustainable fixed-income fund launched during the quarter — China Southern ESG Pure Bond, which aims to outperform its composite benchmark, 80% ChinaBond ESG Select Credit Bond Index, 20% CSI Aggregate Bond Index, by investing at least 80% of noncash assets in bonds selected via ESG methods. Malaysia-domiciled RHB i-Sustainable Future Technology was launched in May 2023 and seeks exposure to technology-related companies whose products and services have a positive impact on the environment or society.

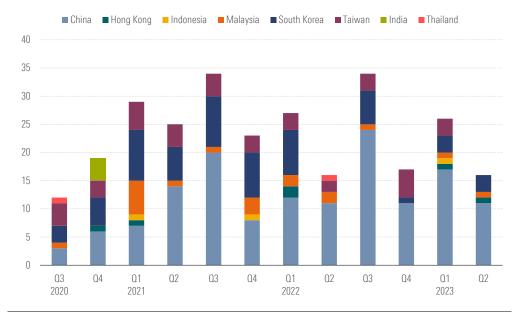


Exhibit 34 Asia ex-Japan Sustainable Fund Launches

Source: Morningstar Direct, Manager Research. Data as of June 2023.

Regulatory Update

The Asia ex-Japan regulatory landscape underwent further changes in second-quarter 2023. In April, Hong Kong Exchanges and Clearing proposed new climate-related disclosures aligned with the International Sustainability Standards Board Climate Standard that will become mandatory in 2024 and subject HKEX-listed companies to the most stringent ESG disclosure requirements in the region. In May 2023, the Investment Management Association of Singapore, in collaboration with Singapore Green Finance Center, announced new sustainable finance training for asset managers to bolster the capabilities of industry participants.

In APAC, several jurisdictions are proposing local taxonomies and disclosure requirements. In the Association of Southeast Asian Nations, or ASEAN, region, the ASEAN Taxonomy for Sustainable Finance Version 2 has been published, offering a multitiered approach that allows for varying levels of adoption. Singapore's green finance industry task force, convened by the Monetary Authority of Singapore, has released its final consultation on the Green and Transition Taxonomy. This marks a significant step toward establishing a robust framework for sustainable finance in the country. Meanwhile, the Hong Kong Monetary Authority has published a discussion paper seeking market feedback on the "prototype of a green classification framework for Hong Kong." This initiative aims to gather insights from stakeholders to shape a comprehensive green classification framework tailored to Hong Kong's unique context. In India, the Securities and Exchange Board of India has introduced the BRSR Core, a framework for assurance and ESG disclosures for the value chain of listed entities. This is a significant step toward promoting transparency and accountability in the business sector. It includes new KPIs relevant to the Indian/emerging-markets context, such as job creation in small towns, openness of business, and gross wages paid to women. In parallel, SEBI has adopted the first-ever ESG rating regulation.

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 situations 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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Corrections and Clarifications

- On Page 17, Exhibits 13a and 13b have been transposed.
- On Page 18, Exhibit 14 was corrected to show the correct region.
- On Page 22, footnote 4 was added.
- On Page 22, Exhibit 17's caption added information about fourth-quarter 2022 flows.
- On Page 23, Exhibit 18's caption added information about fourth-quarter 2022 flows.

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