Morgan Stanley

INSTITUTE FOR SUSTAINABLE INVESTING



Key Findings

2022 was a year of extraordinary market conditions with losses in almost every sector and asset class. Against this turbulent backdrop, global sustainable funds (-19%) slightly underperformed traditional funds (-16%) for the first time since 2018. Much of this underperformance was likely driven by market factors, as equity markets rotated towards value over growth, and shorter-dated bonds outperformed in fixed income. Both factors impacted sustainable funds considerably due to their more growth-oriented focus on long-term opportunities.

Despite this, demand for sustainable funds remained strong, evidenced by positive inflows throughout the year (\$115 billion), in contrast to steady outflows in traditional funds. By year end, sustainable funds' assets under management (AUM) totalled nearly \$2.8 trillion, continuing to grow as a proportion of overall AUM (7%, growing steadily from 4% five years ago). Despite short-term fluctuations, sustainable funds appear to be holding steady as patient capital for investors targeting longer-term horizons.

SUMMARY

- Extraordinary Market Conditions Drive Sustainable Funds' Slight Underperformance >
 - Equities:
 Wider Market Shift to
 Value Styles Drives Modest
 Underperformance >
 - Fixed Income:
 Shorter-Duration Funds
 Outperformed, Disadvantaging
 Sustainable Funds >
- ☑ Investor Demand for Sustainable Funds Remains Strong >
- Conclusion >



METHODOLOGY

This report is part of the Morgan Stanley Institute for Sustainable Investing's 'Sustainable Reality' series, which assesses the historical performance of sustainable funds against traditional funds over a specific timeframe using Morningstar data. This report analyzes performance for calendar year 2022.

The universe of funds included in this analysis are closed-end funds, exchange-traded funds and open-end funds, taking the oldest share class, excluding feeder funds, funds of funds and money market funds. In total, this analysis covered approximately 96,000 funds globally.

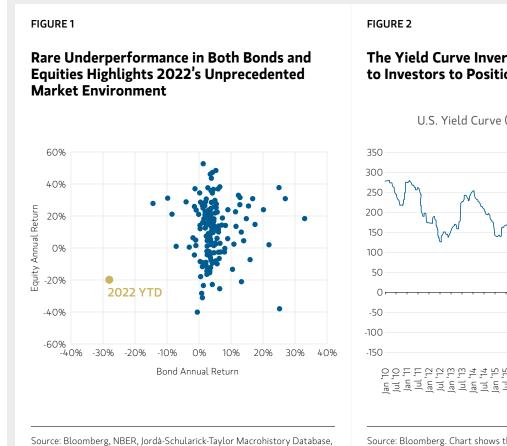
Morningstar classifies funds as sustainable if "...in the prospectus or other regulatory filings it is described as focusing on sustainability, impact investing, or environmental, social or governance (ESG) factors. Funds must claim to have a sustainability objective, and/or use binding ESG criteria for their investment selection. Funds that employ only limited exclusions or only consider ESG factors in a non-binding way are not considered to be a sustainable investment product."

This analysis takes each fund's classification as of December in each year; Traditional funds are those classified as Not Sustainable by Morningstar. Morningstar's Sustainable classification can differ from the newer, and still broad, European Sustainable Finance Disclosure Regulation (SFDR) Article 8 and Article 9 definitions; over 99% of Article 9 funds are also classified as Sustainable by Morningstar although this only applies for around 30% of Article 8 funds.

Morningstar's calculation of total return is expressed in percentage terms and is determined each month by taking the change in monthly net asset value (NAV), reinvesting all income and capital-gains distributions during that month, and dividing by the starting net asset value. This analysis builds on the 2019 and 2020 Sustainable Reality reports, now looking at global performance rather than just U.S.

Extraordinary Market Conditions Drive Sustainable Funds' Slight Underperformance

In 2022, the market faced a difficult year as the enormous fiscal and monetary policy support which markets have enjoyed for over a decade first ended, then reversed. A rapid rise in interest rates helped prompt declines in both bonds and equities, a phenomenon Morgan Stanley Global Strategy Research found has not been seen in over 150 years¹ (Figure 1). Additionally, the yield curve inverted, a highly unusual situation that is typically perceived as a leading indicator of a looming recession and a signal for investors to position defensively (Figure 2).



Morgan Stanley Research; Note: Data back to 1871. Bond return is return on long-maturity UST. As of November 9, 2022.

The Yield Curve Inverted in 2022, a Signal to Investors to Position Defensively

U.S. Yield Curve (10-Year Minus 2-Year)



Source: Bloomberg. Chart shows the 10-year U.S. Treasury yield, minus the 2-year U.S. Treasury yield.

Morgan Stanley Research, "The Year of Yield: 2023 Global Strategy Outlook" https://ny.matrix.ms.com/eqr/article/webapp/e02b5a66-4b2b-11ed-a8e6-8e6a277a4f11?ch=rpint&sch=ar

As a result, value outperformed growth across the equity markets.

Value funds were the outperformers across the market cap spectrum as interest rates and inflation rose. This partly reversed the long run of growth stocks outperforming, the prevailing market conditions since the 2008 financial crisis. Large, mid and small traditional value funds were all down around 11%—well ahead of both blended funds and growth funds, as well as traditional funds overall. Our European Equity Strategy Research colleagues showed that 2022 was the best year for value stocks since 2002.² In fixed income, macroeconomic conditions favored high over low credit quality, and short over long duration.

This market shift impacted sustainable funds due to their bias towards growth in equities, and longer duration in fixed income.

Because many sustainability themes focus on long term opportunities, sustainable equity funds have naturally skewed away from value. In fixed income, sustainable funds have skewed towards medium credit quality and longer duration.

FIGURE 3

Market Conditions Meant That Value Funds Significantly Outperformed Growth Funds in 2022



Source: Morgan Stanley Institute for Sustainable Investing analysis of Morningstar data

What Do We Mean by 'Value' and 'Growth'?

Broadly, equity funds can be categorized as taking a value approach to stock selection, or a growth approach (many funds also blend the two). Value funds look for stocks trading cheaply, (often paying relatively higher dividends), accepting that this may mean comparatively lower growth. Growth funds prioritize long term potential, accepting that stocks may be more expensive, with low or no dividend. Blended funds seek to balance the two approaches.

Macroeconomic conditions typically favor either growth or value: low interest rates and low inflation generally favors growth, as the market incentivizes waiting for long term outcomes. Higher interest rates and higher inflation conversely favor value. Some sectors also naturally skew to value or growth styles. For example, technology stocks account for over 20% of growth fund holdings and under 10% of value funds. Energy stocks, on the other hand, account for around 10% of value fund holdings and less than 3% of growth funds.

² Morgan Stanley Research, European Equity Strategy Presentation https://ny.matrix.ms.com/eqr/article/webapp/rf/renditionpdf/MSResearch/Content/ Articles/2023-01-18/ArticlePages/ARBAGLIETT20230118151123.dwp

For the first time since 2018, sustainable equity and fixed income funds saw a modest underperformance compared to traditional funds.

In 2022, sustainable funds were down -19%, slightly underperforming traditional funds' return of -16% (Figure 4). By asset class (Figure 5), equity funds saw the steepest drop in returns (-20.5%), although the sustainable underperformance

compared to traditional funds was narrower (-1.5%). Fixed income saw lower absolute declines (-15.7%) but a greater relative underperformance (-4.8%). By region (Figure 6), sustainable funds underperformed traditional funds across the board, though underperformance was most prominent in Asia and less pronounced in Europe.

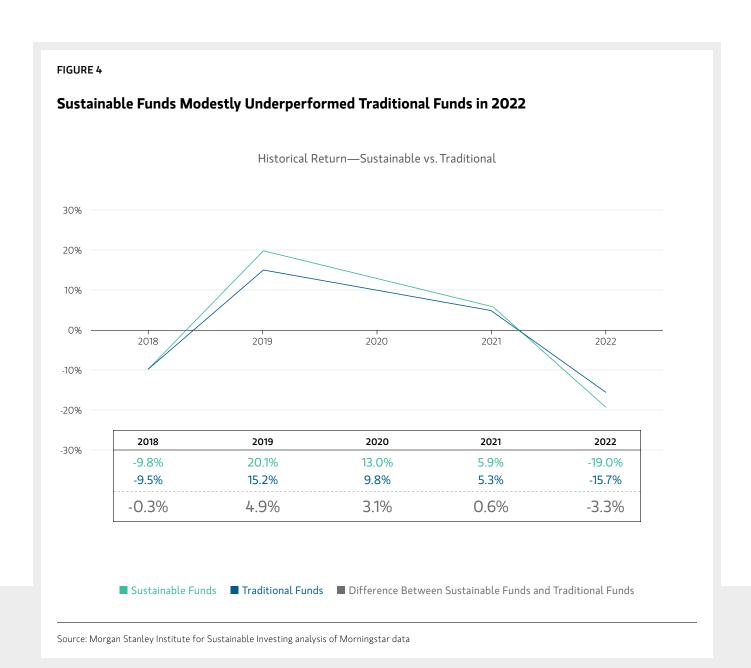
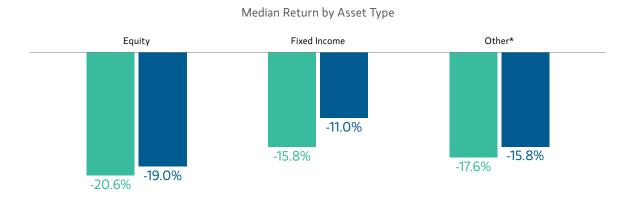


FIGURE 5

Equity Funds Declined the Most in 2022, Although the Relative Underperformance of Sustainable Funds Was Greater in Fixed Income

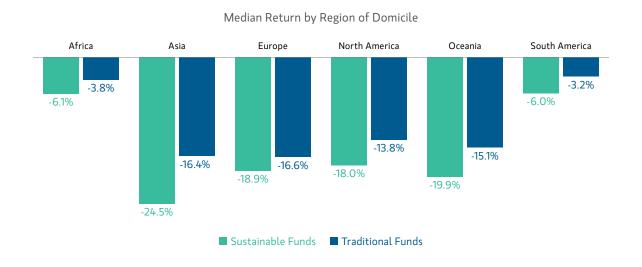


■ Sustainable Funds ■ Traditional Funds

Source: Morgan Stanley Institute for Sustainable Investing analysis of Morningstar data. *"Other" includes multi-asset, property, commodities, and alternative fund types.

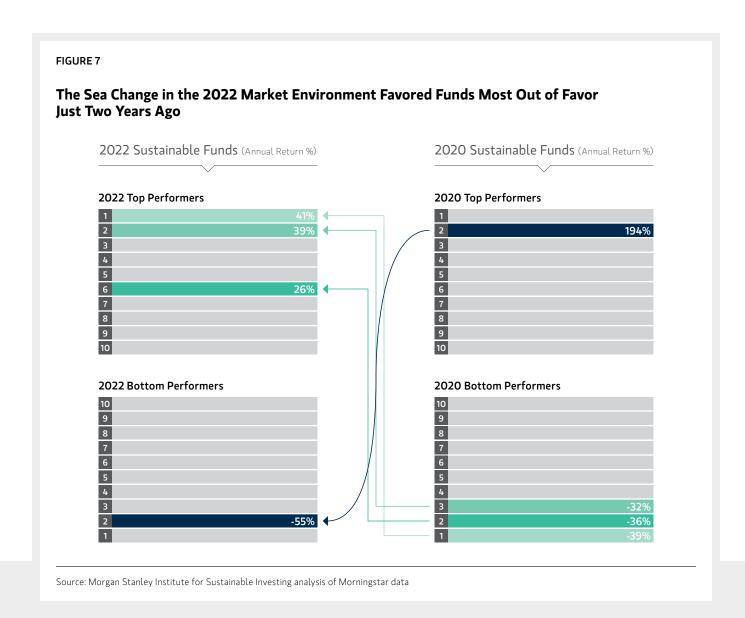
FIGURE 6

Sustainable Funds Underperformed in All Regions, but Saw Better Performance in Europe



Many of the best performing sustainable funds in 2022 were in fact laggards in 2020—and vice versa—highlighting the degree to which 2022 was a paradigm shifting year in the capital markets. To illustrate, Figure 7 shows the movement between leaders and laggards over the course of two years. The sustainable fund with the highest returns in 2022 was in fact the worst performing fund in 2020; the second worst fund in 2022 was the second best in 2020. Traditional funds saw a similar pattern.³

It's important to note that the top 10 sustainable performers in 2022 tilted toward value-style funds, including three energy funds, two natural resources funds and four South American country funds (of which, two equity and two fixed income), while the 10 worst performing funds were largely growth-oriented equity funds, including three technology sector funds and two hydrogen funds.



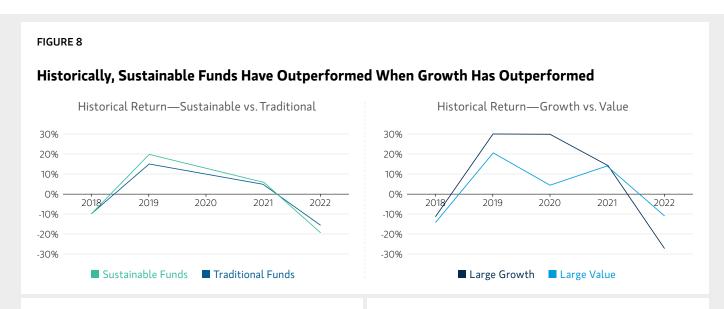
³ Morningstar, "2022's Best and Worst Performing Funds" https://www.morningstar.co.uk/uk/news/230527/2022s-best-and-worst-performing-funds.aspx

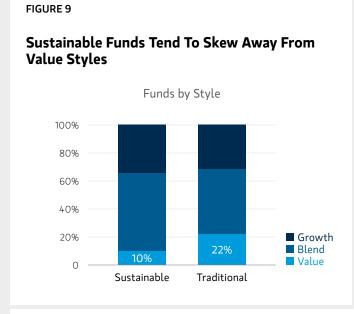
EQUITIES

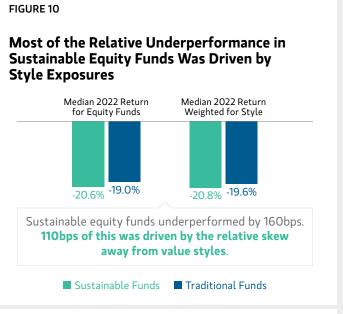
Wider Market Shift to Value Styles Drives Modest Underperformance

As discussed, 2022 saw macroeconomic factors drive a shift back to value styles after five years of growth styles outperforming (Figure 8). This wider market move likely drove the relative underperformance of sustainable equity funds as sustainable funds have historically skewed away from value compared to traditional equity funds. According to Morningstar, just 10% of

funds categorized as sustainable have a value focus compared to 22% of traditional funds (Figure 9). When weighting for the different style exposures, the Institute estimates that as much as 110bps* of the ~150bps underperformance of sustainable funds compared to traditional equity funds was driven by sustainable funds' relatively lower exposure to value-style holdings (Figure 10).





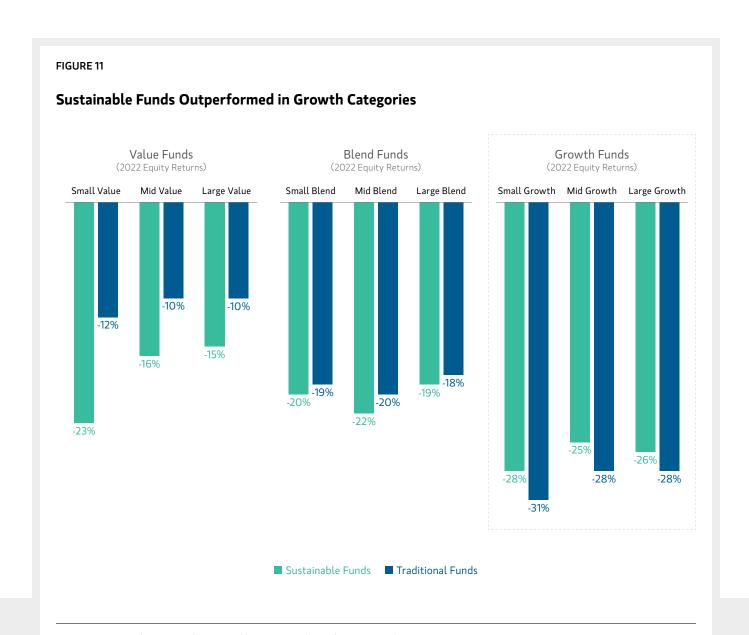


^{*}Basis points

Sustainable Funds Outperform in Mid- and Large-Cap Growth Categories

While all categories of growth funds underperformed the market, down between 25% and 30%, sustainable growth-oriented funds did outperform traditional funds, particularly in the mid- and

large-cap categories. Most of the worst-performing funds were technology sector funds. Sustainable growth funds' broader focus may have provided some offset here.



Source: Morgan Stanley Institute for Sustainable Investing analysis of Morningstar data.

Morningstar categorizes equity funds by market capitalization focus, from small to large, and style, value/blended/growth. Returns are median returns.

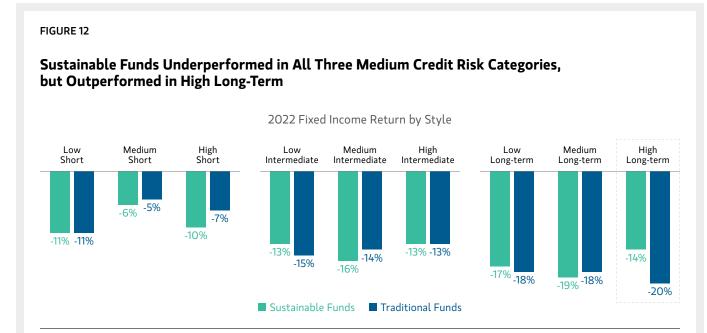
FIXED INCOME

Shorter-Duration Funds Outperformed, Disadvantaging Sustainable Funds

Overall, the best performing fixed income funds were in Morningstar's limited interest rate sensitivity category* (shorter duration), which reflects the broader market response to increasing rates in 2022. Within this category, the top performing funds were at the high end of the credit quality spectrum, also consistent with macroeconomic conditions favoring more defensive positioning.

Sustainable fixed income funds were down -16% in 2022 compared to traditional funds' -11%. Looking at the categories in more detail (see Figure 12), sustainable funds were notable underperformers in all three Medium credit risk categories. In the High Long-term category, sustainable funds significantly outperformed traditional.

As with equity funds, sustainable fixed income funds are distributed differently across fixed income styles compared to traditional funds. Here, sustainable funds skew to longer durations, and to the lower end of investment grade ratings. Again, weighting for the different style exposures, Institute analysis suggests that around 190bps of the 490bps relative underperformance was due to the longer duration and medium credit quality skew. Our colleagues in Fixed Income Research also note that green bonds tend to skew heavily towards utilities and financials, both notable underperformers in 2022.4



Source: Morgan Stanley Institute for Sustainable Investing analysis of Morningstar data.

Morningstar categorizes fixed income funds by interest rate sensitivity, from limited to extensive, and by credit risk, from low to high. Low is <BBB rated, medium is BBB to AA, high is AA and above. Returns are median returns.

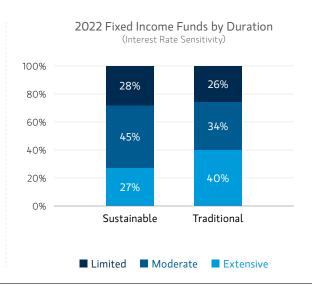
^{*}This model is based on the two pillars of fixed income performance: interest-rate sensitivity and credit quality. The three duration groups are short, intermediate, and long-term, and the three credit quality groups are high (AA rated and higher), medium (BBB to AA rated), and low quality (<BB, all high-yield bonds). These groupings display a portfolio's effective duration and credit quality to provide an overall representation of the fund's risk, given the length and quality of bonds in its portfolio. Nine possible combinations exist, ranging from short duration/high quality for the safest funds to long duration/low quality for the riskiest.

⁴ Morgan Stanley Research, Monthly Bond Intel https://ny.matrix.ms.com/eqr/article/webapp/60c14d00-8b7f-11ed-a417-e7087daecda3?ch=rpint&sch=sr&sr=1

FIGURE 13

Sustainable Funds Over-Index to Lower Investment Grade Credit Quality and Higher Interest Rate Sensitivity, Both Areas Underperformed in 2022 Due to Macroeconomic Moves





Source: Morgan Stanley Institute for Sustainable Investing analysis of Morningstar data.

Morningstar categorizes fixed income funds by interest rate sensitivity, from limited to extensive, and by credit risk, from low to high. Low is <BBB rated, medium is BBB to AA, high is AA and above.

FIGURE 14

Relative Performance in Fixed Income Was Also Partly Driven by Fund Style



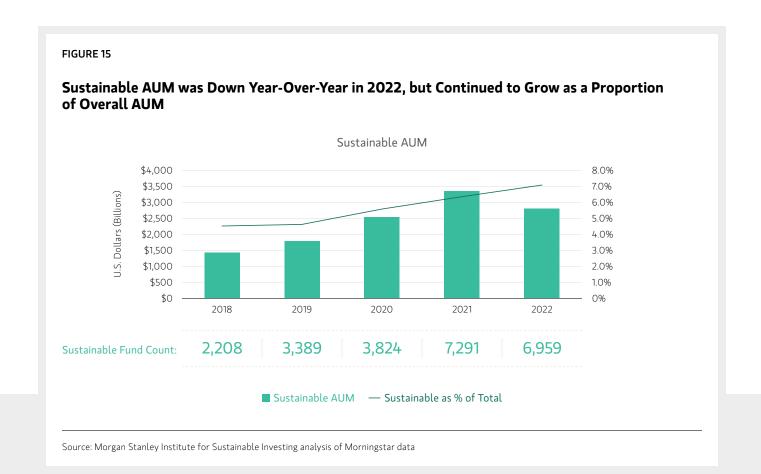
Investor Demand for Sustainable Funds Remains Strong

Despite challenging market conditions, investor interest and demand in sustainable fund opportunities remained strong in 2022. Sustainable funds' assets under management (AUM) as a proportion of total AUM continued to grow throughout the year, reaching record levels (~7%). Sustainable funds also saw net positive inflows, cumulatively \$115 billion by year-end, while traditional funds saw persistent outflows.

2022 Sustainable AUM Reached Record Levels, Accounting for ~7% of Overall AUM

At the end of 2022, sustainable funds' AUM was just under \$2.8 trillion, off the peak 2021 peak, but still higher than the ~\$2.5 trillion level in 2020. While the dollar level of AUM

declined in 2022, the proportion of overall AUM in sustainable funds increased slightly, now around 7% of total AUM (Figure 15).

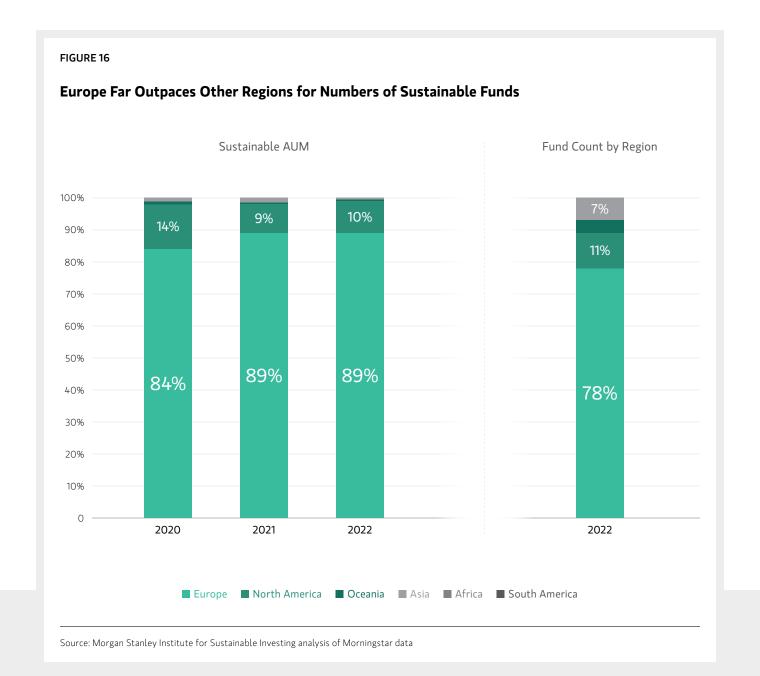


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Regionally, Europe continues to outpace other geographies in terms of sustainable AUM and fund counts, with 89% of sustainable AUM domiciled in Europe. North America is next with around 10%, and all other regions make up <2% of total sustainable AUM. By fund count (Figure 16), Europe is home to more than two-thirds of the world's sustainable funds, followed by North America (11%) and Asia (7%).



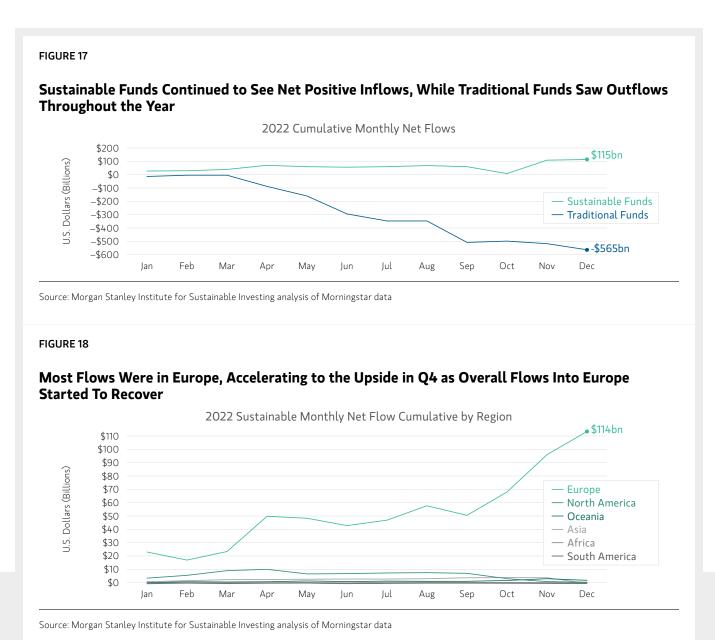
of sustainable AUM is domiciled in Europe, outpacing other regions in terms of sustainable AUM and fund counts.



Sustainable Funds Saw Positive Inflows, Reflecting Strong Demand

Sustainable funds continued to see net positive inflows in 2022—cumulatively \$115 billion for the year, or around 3% of 2021 year-end AUM. This reflects continued strong demand from asset owners, a trend also found in the Institute's 2022 asset owner and asset manager survey. Traditional funds saw outflows throughout 2022, totaling -\$565 billion, or around -2% of 2021 year-end AUM.

By region, almost all flows were in Europe, with net inflows of \$114 billion for the year. North America's proportion of global sustainable AUM increased slightly by year-end from 9% to 10%. Sustainable AUM globally remains well above prior levels even with the performance-driven decline in 2022.



STATE OF PLAY

2022 Performance and Demand for EU SFDR's Article 8 and 9 Funds

The EU's Sustainable Finance Disclosure Regulation (SFDR) sets out mandatory ESG disclosure requirements for asset managers with the goal of creating more transparency into sustainable investment strategies. According to the SFDR's classification system, which went into full effect on January 1, 2023, a fund will either be classified as an Article 6 (funds without a sustainability scope), Article 8 (funds that promote environmental or social characteristics) or Article 9 (funds that have sustainable investment as their primary objective).

The Institute looks at the state of play for funds classified under Article 8 and Article 9 at the end of 2022.

PERFORMANCE

Article 8 funds were down -18% in 2022, slightly better than the wider sustainable universe at -19%. Article 9 funds, however, performed slightly worse at -21% (Figure 19).

ΔΗΜ

In total, Article 8 and 9 funds accounted for \$5.7 billion in AUM at the end of 2022, of which \$5.3 billion was labeled Article 8. This is larger than the whole Morningstar sustainable AUM, as only around 30% of Article 8 funds currently fit the Morningstar 'Sustainable' category. Almost all Article 9 funds are classified as 'Sustainable' by Morningstar. During Q4 2022 and into January 2023, Morningstar notes that over 300 predominantly passive funds, representing around \$190bn in AUM (40% of total Article 9 AUM), were downgraded to Article 8 from Article 9, as managers reviewed fund classifications ahead of the new regulatory standards. This reclassification is partly captured in the AUM data in Figure 20, although Morningstar anticipates that reclassifications may continue in 2023.

FLOWS

Article 9 funds saw significant inflows in 2022 (cumulatively >\$20 billion), while Article 8 funds saw outflows until the end of Q3 (cumulatively -\$149 billion). This trend reversed for Article 8 funds in Q4, leaving cumulative outflows at just -\$24.8 billion for the full year. This aligns with similar patterns in overall flows for Europe throughout the year.



Article 8 and Article 9 Fund Performance was in Line with the Wider Sustainable Universe

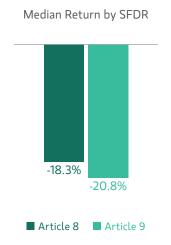
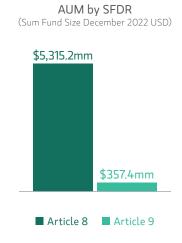


FIGURE 20

Article 8 and Article 9 Funds Accounted for \$5.7 Billion in AUM



Conclusion

2022 saw sustainable funds underperforming traditional funds due to market preference for value over growth in equity markets, and shorter dated bonds in fixed income. Despite this, demand for sustainable funds remained strong, with positive inflows throughout the year. Overall, sustainable funds appear to be holding steady as patient capital for investors targeting longer-term horizons.

Looking ahead, while sustainable funds have historically skewed toward long-term growth opportunities, there are still several ways for sustainable funds to offer attractive strategies should investors continue shifting toward value. To start, there are many existing sustainable value funds focusing on financial services, energy, utilities and healthcare, as well as country- or region-specific funds.

Secondly, sustainable funds' historical skew away from value is naturally evolving as new sustainable solutions like renewable energy or clean technology become more material in the short-term for companies' earnings, and therefore funds' investment horizons. Renewables, for example, are expected to overtake coal as the largest source of global electricity production in early 2025,⁵ making clear that clean energy is no longer just a long-term investment opportunity.

Additionally, as our Sustainability Research colleagues have recently highlighted, sustainable funds are increasingly open to considering companies' "rate of change" towards sustainability goals. As investors "embrace the improvers," the potential universe of companies and industries broadens, so the growth vs. value weighting in equities, and the longer-dated skew in fixed income, may also shift for sustainable funds. Therefore, sustainable funds can offer attractive options even in a market that is favoring value-style, shorter dated investments.

⁵ IEA report "Renewables 2022", https://www.iea.org/reports/renewables-2022

⁶ Morgan Stanley, "ESG Investors Should Watch for Companies Showing Improvement", https://www.morganstanley.com/ideas/sustainability-metrics-esg-improvers

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An investment in an exchange-traded fund involves risks similar to those of investing in a broadly based portfolio of equity securities traded on exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock prices. The investment return and principal value of ETF investments will fluctuate, so that an investor's ETF shares, if or when sold, may be worth more or less than the original cost.

Investors should carefully consider the investment objectives and risks as well as charges and expenses of a mutual fund/exchange-traded fund before investing. To obtain a prospectus, contact your Financial Advisor or visit the fund company's website. The prospectus contains this and other information about the mutual fund/exchange-traded fund. Read the prospectus carefully before investing.

Because of their narrow focus, sector investments tend to be more volatile than investments that diversify across many sectors and companies.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment. Companies paying dividends can reduce or stop pay-outs at any time.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally, the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Debt instruments issued by U.S. corporate and municipal issuers that provide a return in the form of fixed periodic payments and eventual return of principal at maturity. Fixed income investments are advantageous in a time of low inflation, but do not protect investors in a time of rising inflation. Interest income on government securities is subject to federal income taxes, but exempt from taxes at the state and local level.

Bond funds and bond holdings have the same interest rate, inflation and credit risks that are associated with the underlying bonds owned by the funds. The return of principal in bond funds, and in funds with significant bond holdings, is not guaranteed.

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