

Why using ESG helps you build better portfolios

This document is for the exclusive use of investors acting on their own account and categorised either as “eligible counterparties” or “professional clients” within the meaning of markets in financial instruments directive 2014/65/EU

Welcome



Marlene Hassine Konqui
Head of ETF Research



Francois Millet
Head of Strategy,
ESG and Innovation



Serge Darolles
Professor of Finance
Paris Dauphine University

Why using ESG helps you build better portfolios	3
Q1: What's driving the rise in interest in ESG?	4
Q2: How much demand is there for active or passive ESG funds?	6
Q3: Do ESG investors have to compromise on performance?	8
Conclusion what are the key takeaways for investors?	11

Why using ESG helps you build better portfolios

Increasingly, investors are integrating ESG considerations into their portfolios. However, there's still a widespread belief that investing sustainably means giving up on potential returns. In this paper, we focus on the role of ESG in portfolio construction and whether adding an exposure to ESG can be as good for a portfolio as it is for the world around us.

In this paper, we examine the following key topics.

Q1: DRIVERS - *What is driving the rise in interest in ESG? How robust is the quality of publicly available ESG-related information and what are the trends in this area? Does it make sense to invest in ESG using a passive approach? Could the rising interest in ESG have an impact on the composition of benchmarks in the future?*

Q2: DEMAND - *How much demand is there for active or passive ESG funds? What do ETF flows tell us about ESG demand?*

Q3: PERFORMANCE - *Does an investment in ESG degrade a portfolio's performance? What kind of biases does a positive ESG screening strategy introduce? Are there factors that work better than others?*

To answer those questions, we use Lyxor expertise and highlight the findings of a recent academic study sponsored by the Lyxor Dauphine Research Academy and arrive at the following conclusions:

An ESG focus does not have to mean compromising on performance

- ▶ Development of ESG is driven both by bottom-up pressure from asset owners and by top-down policy initiatives. More and more investors are now focused on maximising ESG performance subject to risk-return constraints, arguably inverting the traditional investment paradigm of prioritising risk-adjusted returns.
- ▶ Cash flows into ESG funds are accelerating, both for active and passive funds. Passive vehicles, with their strong focus on cost, transparency and a data-driven approach, are entirely consistent with a focus on ESG goals.
- ▶ ESG investors do not have to compromise on performance. A positive screening strategy based on ESG scores can raise the ESG profile of both passive and active portfolios, without reducing risk-adjusted returns.

This is the third in a series of papers from the Lyxor Dauphine Research Academy on the evolution of the asset management industry. In the first paper, published in 2017, we looked at the impact of ETF on the underlying market. In the second paper, published in 2018, we investigated on the role passive funds have left for active funds.

Q1: What's driving the rise in interest in ESG?

Investors see socially responsible investment based on ESG criteria as a way to manage risks better and to generate more sustainable long-term returns.

Financial crises and individual company controversies have shown how harmful it can be to focus on the short term and to neglect shareholder stewardship and the screening of companies based on their governance, environmental and social practices.

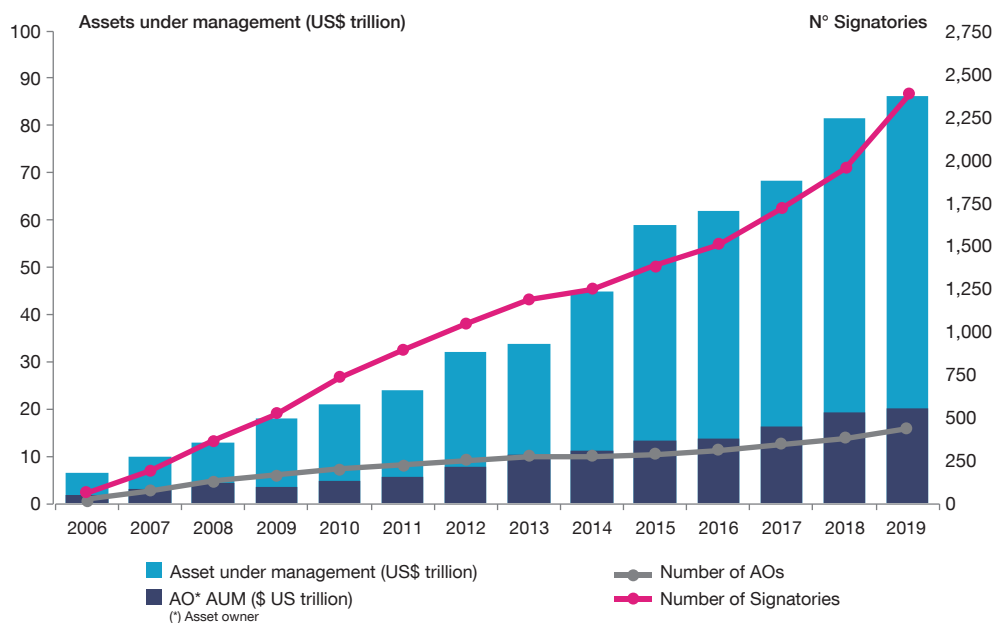
Most investors acknowledge that the devastating effect of climate change or the political and social risks resulting from increased levels of inequality are major threats to society and, ultimately, to financial stability. They understand that supporting the low carbon transition or enabling more sustainable societies is a condition to continue delivering long-term returns for the benefit of all stakeholders.

Investors are additionally being pushed by regulators, such as those in the European Union, who integrate the management and disclosure of ESG risks, alongside market and financial risks, in the fiduciary duty of investment managers and advisors.

The rising interest in ESG can be demonstrated by commitments to the United Nations' Principles for Responsible Investment (PRI), to which most of the world's largest asset managers are now signatories.

Around 2,370 investment institutions, with assets under management of \$86Trn, have demonstrated their commitment to the PRI. That's a huge increase since a decade ago.

PRI Signatory growth



Source: UN PRI, as at end of June 2019.

Important recent political initiatives on sustainability include the agreement reached at the 2015 Paris climate change conference ("COP21"), where 195 countries committed themselves to limit global warming to a maximum of 2 percent above pre-industrial levels.

In many countries, this commitment now underpins national legislations. In France, for example, Article 173 of the law on Energy Transition requires a wide range of investors to report on how they integrate environmental, social and governance factors into their investment policies and on how they are incorporating climate change considerations.

Some of the world's largest pension and sovereign wealth funds have made allocations to ESG-focused strategies during the last few years, while younger investors also prioritise sustainability in their investment allocations: the millennial generation in particular has a very high demand for ESG investment products¹.

How robust is publicly available ESG information?

Publicly available ESG information is becoming richer and more extensive, helping analysts assess the performance of companies according to environmental, social and governance criteria.

The scope of **mandatory ESG disclosure requirements** has steadily been widened in recent years.

For example, under the European Union's Non-Financial Reporting Directive, from January 2017 all listed EU companies with more than 500 employees have had to disclose in their annual reports a variety of information relating to environmental, social and employee matters, respect for human rights and corruption.

Voluntary ESG disclosure requirements, such as the Carbon Disclosure Project (CDP), the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), and the Science-Based Targets (SBT) initiative, are also attracting increased compliance. For example, over 7,000 companies with over \$3.3trn of purchasing power in their supply chains now provide voluntary reports to the CDP.

Meanwhile, **specialised ESG databases** run by governments, NGOs and academic institutions, as well as proprietary **ESG scoring and ratings systems operated by extra-financial agencies**, are also helping investors build a much more granular picture of companies' ESG performance.

Does it make sense to use a passive investment approach for ESG?

Although many ESG investors use an active stock selection approach, passive (index-based) investment approaches are well-suited for ESG. The indices underlying passive ESG strategies can be used to express a variety of different investment approaches, including ESG integration, convictions on sustainability or thematic goals.

Passive investment strategies have democratised access to the financial markets at a low cost, features that are entirely consistent with a focus on ESG goals. And both passive and ESG investment approaches are data-driven.

The overall shift to ESG indices has been massive. For example, MSCI estimates that \$180bn was allocated to its ESG indices between 2014 and Q2 2019.

A remarkable evolution in investment approach has been observed from some large asset owners. For example, institutions like Swiss Re in Switzerland² or AP4³ in Sweden have shifted their whole policy benchmark to ESG indices.

Lyxor expects the role of financial indices in the area of sustainable investing to increase further. Benchmarks are now being used by policymakers as instruments to orient investor choices and to redirect investment flows.

And rather than just serving as a way to measure ESG risks, a new generation of ESG benchmarks is being developed to have a measurable impact: such as helping to meet climate transition goals under the Paris COP21 framework.

1. A 2017 FactSet study of high net worth investors says that 90% of millennials want to direct their allocations to responsible investments in the next five years. See MSCI, 'Swipe Right to Invest: Millennials and ESG', November 2017.

2. https://www.swissre.com/media/news-releases/2018/nr_20180626_swissre_analysis_confirms_esg_benchmarks_make_economic_sense.html

3 <https://www.ap4.se/en/about-ap4/letter-from-the-ceo/>

Q2: How much demand is there for active or passive ESG funds?

Global trends

Worldwide, the Global Sustainable Investment Alliance reports that sustainable investment assets, including both actively and passively managed ESG funds and including ESG integration in traditional investment, reached more than \$31trn at the end of 2018, up 34 percent since 2016. This represents a 39 percent share of global professionally managed assets⁴.

Focusing exclusively on funds whose main objective is ESG related, the global ESG mutual fund industry at the end of June 2019 reached \$2trn, 6% of total assets.

ESG funds represent 39% of global managed assets.

ESG funds in Europe – active, passive or ETF?

Historically, many investors' approach to ESG investing has been active in nature. However, passively managed ESG funds now make up an increasing share of the total.

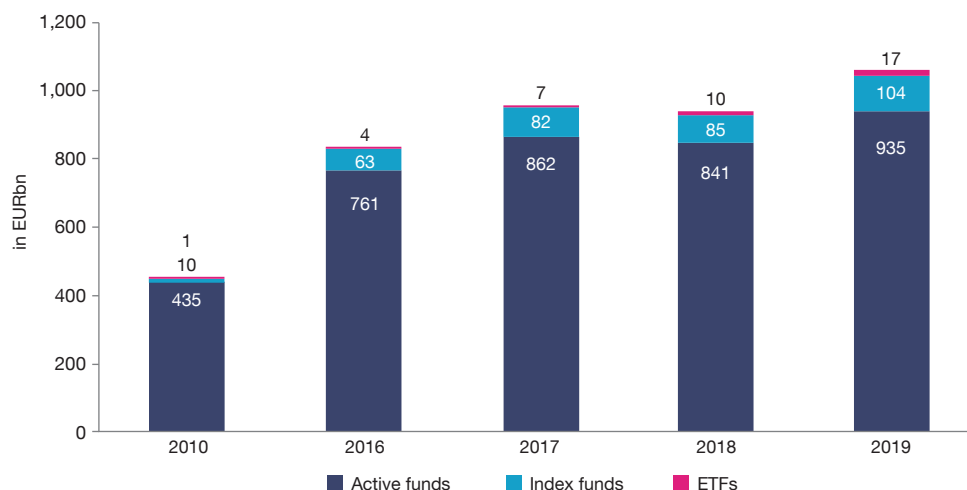
In Europe, for example, assets invested in ESG funds reached €1.1trn at the end of June 2019, based on data from Morningstar. This represented a 12 percent per annum growth rate over the previous 5 years, compared with an 8 percent growth rate for the overall funds industry.

The European fund total can be subdivided into €935bn for active investments in ESG, €104bn for ESG index funds and €17bn for ESG ETFs. Over all, this represents more than 10 percent of total assets under management in Europe, according to Morningstar.

However, while passive funds still have a minority share of overall European ESG fund investments, their growth rate is significantly above that of active funds. Passive ESG fund assets have grown at a rate of 33 percent per annum over the past 5 years, compared with 11 percent for active funds.

In Europe ESG fund assets reached €1.1trn at the end of June, 12% of all assets managed. It is split between 89% active funds and 11% passive funds.

Assets in European ESG funds by management style (€bn)



Source: Morningstar data from 01/01/2010 to 30/06/2019.

Passive funds have grown significantly, at 33% per annum over the past 5 years vs 11% of active funds.

European ESG fund flows

European ESG funds have gathered €306bn of inflows during the past 10 years (ending June 2019): €236bn for active ESG funds, €55bn for ESG index funds and €14bn for ESG ETFs.

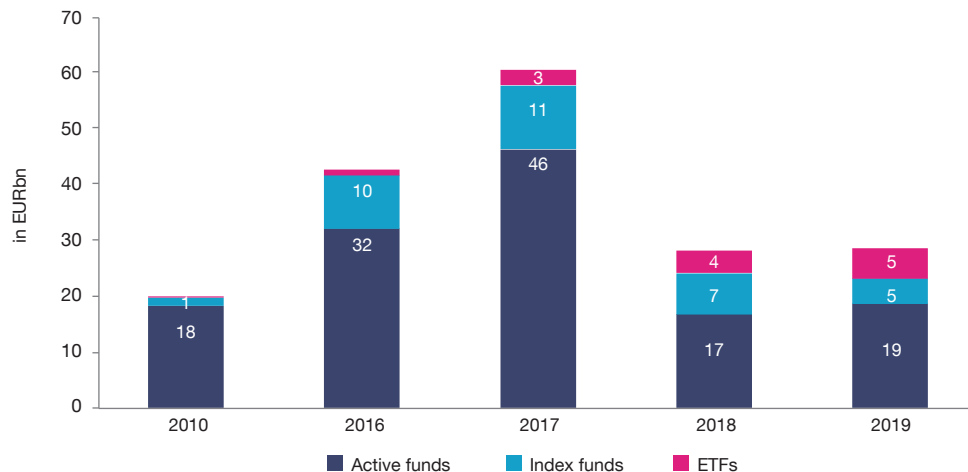
Flows into ESG funds were inconsistent until 2014, when inflows escalated quickly. Starting mid-2014, the annualised 5-year growth rate of net new assets was 90 percent for ESG ETFs, 33 percent for ESG index funds and 30 percent for active ESG funds.

4. Global assets under management totalled \$79.2trn in 2017, according to Boston Consulting Group.

2018 was not the best year for ESG inflows, with only €28bn in inflows, compared to the €50bn yearly average from 2014 to 2017. But so far in 2019, €29bn has already been collected by active and passive investments in ESG.

In summary, the trend of increasing flows into ESG funds is recent, but the growth rate is significant again after a pause in 2018.

Inflows into European ESG funds by management style (€bn)



Source: Morningstar data from 01/01/2010 to 30/06/2019.

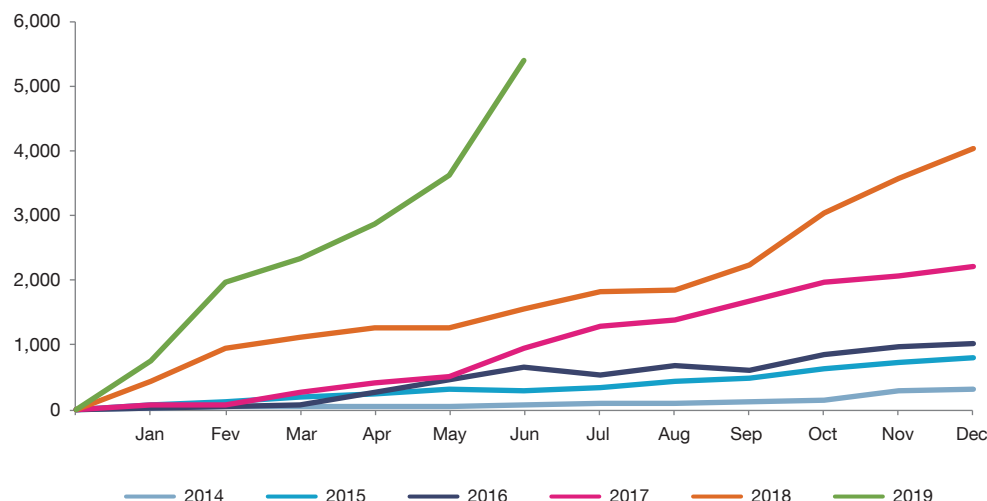
Flows have accelerated, with €29bn in H1 2019, more than the whole of 2018.

Focus: ESG ETF flows in Europe

Responsible investing also commands an increasing share of the European ETF market. In 2018, we saw €4bn of inflows into Europe-listed ESG ETFs, which is equivalent to 9 percent of all flows into the region's ETFs. The total net purchases were almost double 2017's inflows of €2.2bn.

So far in 2019, flows have increased even further: H1 inflows into ESG ETFs in Europe were 3 times higher than in the same period a year earlier. By the end of June 2019, ESG ETF net new assets reached €5bn, a record high in the European ETF market.

Cumulative net new assets invested in ESG ETFs in Europe (€m, by year)



Source: Lyxor ETF, Bloomberg, data from 01/01/2014 to 30/06/2019.

At the end of H1 2019, European ESG ETF flows reached a record high of €5bn.

Lyxor expects both active and passive flows into ESG funds in Europe to be sustained, supported by investors' increasing interest in ESG, as well as by regulation.

For example, in March 2018 the European Commission announced an action plan to finance sustainable growth. Among other considerations, this will compel all investors to include ESG criteria in their investment decisions.

Q3: Do ESG investors have to compromise on performance?

Instead of maximising financial performance from ESG criteria, more and more investors are now focused on maximising ESG performance subject to risk-return constraints.

But does investing sustainably necessarily mean giving up on potential returns? Some researchers have claimed in the past that excluding so-called sin stocks (typically, companies involved in alcohol, tobacco and gambling) from portfolios has exactly this effect.

The Lyxor Dauphine Research Academy sponsored Fabio Alessandrini and Eric Jondeau of the University of Lausanne to look at the link between ESG investing and broader investment performance. Their results are published in a new paper, called 'ESG Investing: From Sin Stocks to Smart Beta'.

What questions did the researchers study?

- ▶ Does an investment in ESG degrade a portfolio's performance?
- ▶ What kinds of biases does a positive ESG screening strategy introduce?
- ▶ Are there some factors that work better than others?

What conclusions did the researchers reach?

- ▶ ESG investors do not have to compromise on performance. A positive screening strategy based on ESG scores can raise the ESG profile of both passive and active traditional and smart beta portfolios, without reducing risk-adjusted returns.
- ▶ A screening strategy based on ESG scores, applied over the past 10 years, has led to substantial geographical and sectoral bets.

How did the researchers reach these conclusions?

- ▶ Using the ESG scores of firms belonging to the MSCI All Country World universe, Alessandrini and Jondeau measured the impact of exclusion strategies on both passive investment and smart beta strategies.
- ▶ They looked at the geographical and industry bets implied by ESG filtering and examined the effects of screening on portfolios' exposure to factors and on the performance of traditional and smart beta portfolios.

The researchers defined the stock universe and the ESG scoring approach

The researchers analysed a broad set of risk and return characteristics for up to 7000 global stocks from the MSCI All Country World Index over the period from January 2007 to December 2018.

Each firm was awarded a score from 0-10 in each of the three ESG 'pillars' or 'dimensions'—environmental, social and governance—as well as a composite ESG score.

These scores showed quite wide variations in different regions and over time.

They then looked at the effect of excluding stocks according to ESG criteria

Alessandrini and Jondeau then looked at the effect of excluding progressively more stocks from the starting universe, depending on their ESG scores.

They did this by reporting the performance statistics of value-weighted portfolios of global, US, European, Pacific, and Emerging country equities, with companies excluded at the following intervals:

- ▶ **No exclusions**
- ▶ **10 percent of stocks with the lowest overall ESG scores excluded**
- ▶ **25 percent of stocks with the lowest overall ESG scores excluded**
- ▶ **50 percent of stocks with the lowest overall ESG scores excluded**

Taking a portfolio of global stocks as an example, the researchers found (unsurprisingly) that a policy of progressively excluding the worst ESG performers led to an improvement in the average ESG score of the remaining portfolio constituents. However, the risk-return characteristics showed neither an improvement or a deterioration.

The researchers then looked at the effect of screening portfolio constituents according to their environmental, social or governance scores and arrived at a broadly similar conclusion: the improvement observed in the ESG profile of portfolios does not seem to happen at the expense of risk-adjusted performance.



The improvement observed in the ESG profile of portfolios does not seem to happen at the expense of risk-adjusted performance.



They analysed the geographical and industry bets implied by ESG filtering

Alessandrini and Jondeau deliberately used a bottom-up approach unconstrained by industry or by country. This differs from most current approaches by index providers that use industry-relative ratings, and global indices aggregating regions. This allows to highlight key biases resulting from an ESG selection.

We must take care to notice the geographical and industry bets that can arise from such a screening approach, say Alessandrini and Jondeau.

For example, the researchers say, when a progressively higher percentage of firms are excluded from the ESG portfolios, the overall weights of companies based in the US and emerging markets decrease, while more European firms are included.

This reflects the lower absolute ESG scores of firms in the US and emerging markets relative to those based in Europe and the Pacific region, say Alessandrini and Jondeau.

Put another way, the more aggressive the ESG screening approach, the larger the resulting bias towards European and Pacific region stocks, and against US and Emerging markets stocks.

Similarly, progressively excluding stocks with the lowest ESG scores leads to an underweighting of stocks in the financial and energy sectors and an overweighting of stocks in the information technology and industrial sectors, measured relative to the starting portfolio (the MSCI ACWI index).



A more aggressive approach to ESG scores in a global portfolio means: (1) overweighting Europe and underweighting the US and emerging markets; (2) overweighting the IT and industrial sectors and underweighting the financial and energy sectors.



Impact on portfolio performance of excluding firms with the lowest ESG scores, by region*

	ACWI	EM	US	Europe	Pacific
ESG	=	++	+	++	=

*measured by the evolution of the Sharpe ratio when excluding from between 0 to 50% of firms with the lowest ESG Scores: = Neutral impact, + positive impact, ++ very positive impact. Source: ESG Investing: From Sin Stocks to Smart Beta, Alessandrini, Jondeau, June 2019.

For example, excluding 50% of firms with the lowest ESG ratings from a European equity portfolio (represented by the MSCI Europe index) added 0.8% a year in returns over 10 years, while decreasing volatility by around 0.7%. This had the effect of increasing the Sharpe ratio by 0.05 points.

Impact of ESG screening on MSCI Europe index

	MSCI Europe	50% excluded
Annualised returns	3.63%	4.42%
Annualised volatility	18.93%	18.23%
Sharpe ratio	0.15	0.20

Source: ESG Investing: From Sin Stocks to Smart Beta Alessandrini, Jondeau, June 2019.

Thirdly, they examined the effect of ESG screening on portfolios' exposure to factors

The researchers also found that excluding more companies from portfolios according to their ESG scores results in two important factor biases: the average market capitalisation and the average price-to-book value ratio of the firms included in the portfolio usually increase.

Expressed in the language of factors, ESG screening tends to lead to a lower exposure to the size factor premium and to the value factor premium.

Generally speaking, becoming more aggressive on ESG scores means loading on large, profitable, and conservative companies, Alessandrini and Jondeau conclude.



A more aggressive approach to ESG scores in a global portfolio means loading on large, profitable, and conservative companies.



Finally, they examined the effect of ESG screening on smart beta portfolio performances

The researchers also examined the impact of using an ESG filter on the performance of risk factor portfolios. Their observations showed that, in most cases, ESG filtering results in an improvement in portfolio performance, even on a risk-adjusted basis. This is shown by an increase in the Sharpe ratio of most of the smart beta strategies (as shown in the table below).

Impact of excluding firms with lowest ESG score on factor portfolio performance*

	ACWI	EM	US	Europe	Pacific
Quality	+	+	+	+	-
Momentum	+	+	+	+	+
Value	+	-	+	+	+
Size	+	-	+	+	+
High yield	+	+	+	+	+
Low beta	+	+	+	+	+

*measured by the evolution in the Sharpe ratio when excluding from 0 to 50% of firms with the lowest ESG Scores. Scores: = Neutral impact, + positive impact, - negative impact. Source: ESG Investing: From Sin Stocks to Smart Beta, Alessandrini, Jondeau, June 2019.



A more aggressive approach to ESG scores in a global portfolio means an improvement in the performance of most risk factor portfolios.



For example, excluding 50% of firms with the lowest ESG ratings from a European equity size portfolio added 0.19% per annum of return over 10 years, while removing 0.9% of volatility, therefore increasing the Sharpe ratio by 0.05 points.

Impact of ESG screening on MSCI Europe size portfolio

	MSCI Europe 0% excluded	50% excluded
Annualised return	3.20%	4.39%
Annualised volatility	23.56%	22.65%
Sharpe ratio	0.11	0.16

Source: ESG Investing: From Sin Stocks to Smart Beta, Alessandrini, Jondeau, June 2019.

Conclusion

What are the key takeaways for investors?

ESG investing is on the rise worldwide, driven by top-down policy initiatives and bottom-up demand from investors of all sizes.

The global ESG mutual fund industry, focusing exclusively on funds whose main objective is ESG related, reached \$2trn at the end of June 2019, 6% of total assets.

In Europe, those assets reached €1.1trn at the end of June 2019, 12% of all assets. Although passive flows still represent a minority, they are growing quickly: 33% per annum over the past 5 years vs 11% of active funds.

Lyxor expects both active and passive flows into ESG funds in Europe to be sustained, supported by investors' increasing interest in ESG, as well as by regulation.

As the availability and reliability of ESG information improves, more and more index-based strategies are being created with embedded ESG characteristics. Lyxor views ETFs and ESG as a natural fit and expects this segment of Europe's ETF market to grow substantially.

A key question for investors is whether a preference for sustainable, socially responsible investing means giving up on opportunities for portfolio performance.

The project sponsored by this year's ETF Research Academy answers this question in the negative: based on an analysis of the past performance of a universe of stocks from the MSCI All Country World index, a policy of exclusion based on companies' ESG scores did not impact portfolio performance negatively. In some cases, it led to superior risk-adjusted returns compared to the starting universe.

However, ESG screening tends to result in pronounced geographical, sector and industry biases. It also tends to generate increased exposure to large, profitable, and conservative companies.

There is fertile ground for further research on the integration of smart beta and ESG, in particular with respect to the single ESG dimensions, and in building algorithms that optimise the ESG profile of portfolios while keeping exposures to various risk factors under control.

LYXOR'S VIEW

Lyxor expects both active and passive flows into ESG funds in Europe to be sustained.

Lyxor views ETFs and ESG as a natural fit and expects this segment of Europe's ETF market to grow substantially.

Improving the ESG profile of a portfolio does not happen at the expense of risk-adjusted performance. In some cases, it can even lead to superior risk-adjusted returns.

About Lyxor ETF

Lyxor has been running ETFs since 2001, longer than any other European provider. Our pioneering spirit helped shape the market as you know it today. Over the last 18 years, we've become one of Europe's three largest ETF managers. And we've built one of its most far-reaching ranges, which spans all asset classes, and includes some of the lowest cost, largest and most efficient* ETFs.

We now offer more than 220 ways to explore the markets. So, whether investors are seeking essential, low cost core index exposure, or reaching out for more tactical opportunities in specific sectors or markets, we have a product to match their needs. Staying true to our pioneering heritage, we continue to expand the frontiers of fixed income ETFs, and develop new solutions for ESG, Smart Beta or income investors.

Our aim from the start has been to create ETFs of the highest calibre that can be trusted in any market. In 2011, we introduced our ETF Quality Charter to ensure that every one of our 220+ funds meets the same exacting standards for tracking precision, product liquidity, risk management and transparency.

*Source: Lyxor International Asset Management. Efficiency data over one year as at 30/06/2019. Performance data based on the efficiency indicator created by Lyxor's research department in 2013. It examines 3 components of performance: tracking error, liquidity and spread purchase/sale. Each peer group includes the relevant Lyxor ETF share-class and the 4 largest ETF share-classes issued by other providers, representing market-share of at least 5% on the relative index. ETF sizes are considered as an average of AUM levels observed over the relevant time period. Detailed methodology may be found in the paper 'Measuring Performance of Exchange Traded Funds' by Marlène Hassine and Thierry Roncalli. Past performance is no guide to future returns.

Discover the Lyxor/Dauphine Research Academy

A NEW FRAMEWORK FOR THE ETF INDUSTRY



LYXOR DAUPHINE RESEARCH ACADEMY FOUNDED BY DAUPHINE & LYXOR

The idea for the Research Academy originally came about because of the lack of regular, high-quality academic research on passive management, especially in comparison with that produced on the active management segment. It was necessary to carry out in-depth analyses and hold discussions to tackle some of the issues facing the market, especially those linked to the world of ETFs and, ultimately, to provide some answers addressing investors' needs.

At Lyxor, we have a strong culture of innovation and a solid financial engineering track record. As one of the leaders within the European ETF market, it was only natural for Lyxor to get involved in these discussions, at the juncture between academic research and genuine investor concerns.

That's why in 2015 we created the Research Academy in partnership with the Paris-Dauphine University's House of Finance. We wanted to encourage top international researchers from the most renowned universities to work on subjects related to passive management. Since then, the Academy's subjects have been extended to cover broader topics surrounding portfolio construction.

The Academy's objective is to promote high-quality academic research on issues associated with changes in asset management. The idea behind the initiative was to establish links between universities and the asset management industry to provide concrete academic answers and offer a perspective on some of the real issues that investors face.

THIS DOCUMENT IS DIRECTED AT PROFESSIONAL INVESTORS ONLY

This document is for the exclusive use of investors acting on their own account and categorized either as "eligible counterparties" or "professional clients" within the meaning of Markets in Financial Instruments Directive 2014/65/EU. It is not directed at retail clients. In Switzerland, it is directed exclusively at qualified investors.

This material reflects the views and opinions of the individual authors at this date and in no way the official position or advices of any kind of these authors or of Lyxor International Asset Management and thus does not engage the responsibility of Lyxor International Asset Management nor of any of its officers or employees. This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

Find out more www.lyxoretf.com