

Demystifying ESG

Separating narrative from data

What investors need to know when investing
using ESG criteria

Table of contents

Management Summary	4
At a glance: All claims and answers	6
Claim 1: ESG ratings primarily focus on environmental factors	8
Claim 2: Different ESG rating agencies generally arrive at the same conclusions through their ESG assessments	12
Claim 3: A wide range of ESG ETFs are now available	18
Claim 4: Traditional equity ETFs always have significantly weaker ESG characteristics than products specifically marketed as ESG	21
Claim 5: ESG equity ETFs are significantly more expensive than traditional products	33
Claim 6: ESG equity ETFs enable investors to achieve higher returns compared with traditional investments	35
Claim 7: By investing in ESG equity ETFs, investors are making a positive contribution to the climate	41
Conclusions	45
Bibliography	46

Management summary

Sustainable investing has gained momentum over recent years, with the term ESG (Environmental, Social and Governance) now firmly embedded into investment considerations. This shift is clearly reflected in the substantial growth in assets allocated to ESG strategies.

It comes as no surprise, therefore, that many investors are considering whether ESG investments should form part of their own portfolios. However, it is important to recognise that the rise in ESG assets has not been driven solely by increased client demand. Financial institutions themselves have played a meaningful role by actively promoting ESG solutions and, in some cases, reclassifying existing strategies under an ESG label. Naturally, providers tend to emphasise the potential benefits of these approaches.

Given this backdrop, it can be challenging for investors to distinguish between well-founded claims and marketing narratives. In this fact check, the independent experts at Lumin have carefully assessed seven commonly cited arguments around ESG investing. These are statements that may initially sound compelling, but merit closer examination.

In particular, the following key conclusions can be drawn:

- Within ESG ratings, the environmental dimension (E) traditionally plays a less prominent role, while the social (S) and governance (G) dimensions tend to carry greater weight (see Claim 1).
- Different ESG rating agencies often assess the same company in varying ways. This can have a significant impact on security selection within an investment fund (see Claim 2).
- Although the range of ESG Exchange Traded Funds (ETFs) has increased significantly, it can still be challenging to construct a portfolio using exclusively ESG products (see Claim 3).
- ESG ETFs may exhibit stronger, similar, or weaker ESG characteristics compared with traditional counterparts (see Claim 4).
- Compared with traditional products, ESG ETFs may involve either cost advantages or disadvantages (see Claim 5).
- Investors in ESG equity ETFs should be prepared for performance that diverges from the broader market. These differences can work either to their advantage or disadvantage (see Claim 6).
- Whether investing in an ESG equity ETF has a meaningful positive impact on the climate remains highly questionable (see Claim 7).

This analysis primarily examined the ESG characteristics of low-cost equity Exchange Traded Funds (ETFs). This fact check not only provides answers, but also sets out clear conclusions. It concludes with several thought-provoking considerations designed to help investors interested in sustainability and ESG investing engage with the topic in a more informed and critical manner.

Important information

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At a glance:

All claims and answers

Claim 1: ESG ratings primarily focus on environmental factors

ESG ratings assess companies across the three dimensions of Environment, Social and Governance. The weighting of these three components can vary depending on the company and the rating agency. Lumin's analysis shows that the environmental component is typically the least heavily weighted dimension. For example, in the UK equity market represented by the FTSE 100, MSCI ESG ratings assign a weighting of around 20 percent to environmental factors, while the social and governance dimensions each account for roughly 40 percent. The claim that ESG ratings primarily focus on environmental aspects is therefore difficult to substantiate. Before investing in ESG solutions, investors should carefully review which ESG ratings are being used, what those ratings actually measure, and how the individual dimensions are weighted.

Claim 2: Different ESG rating agencies generally arrive at the same conclusions through their ESG assessments

There are now many different ESG rating agencies in the market, each applying its own methodology. While ratings from different providers may align in some cases, they often diverge and in certain instances the differences can be substantial. The claim that ESG rating agencies generally arrive at the same conclusions does not hold up to scrutiny. Investors should be particularly aware of this when ESG ratings are used for security selection within their portfolios. Using ratings from a different provider can materially influence the final list of holdings. It is also important for investors to understand what an ESG rating is intended to measure or represent – for example whether it reflects a financial risk perspective or a broader environmental and social impact perspective. This underlying approach should be aligned with the investor's own objectives.

Claim 3: A wide range of ESG ETFs are now available

It is true that a significant number of ESG ETFs are now available. However, depending on the investment

strategy, it can still be challenging to build a portfolio using ESG ETFs exclusively. Investors may also consider ESG mutual funds as an alternative. In addition, some traditional ETFs can exhibit strong ESG characteristics even if they are not explicitly labelled as ESG products. With the growing range of products and the diversity of ESG approaches, the overall complexity has mounted significantly. As always, investors should only allocate capital to products they fully understand. This includes taking a close look at the underlying index methodology in order to assess whether the applied ESG approach aligns with their own preferences and to understand the potential implications for risk and return.

Claim 4: Traditional equity ETFs always have significantly weaker ESG characteristics than products specifically marketed as ESG

Sustainably marketed products generally tend to exhibit stronger ESG characteristics than traditional equity ETFs within the same category. However, depending on the ESG criteria applied, the investment region and the index methodology used, the improvement in ESG characteristics may be marginal or, in some cases, may even deteriorate. It is also possible that a traditional ETF focused on one equity region does not necessarily have weaker ESG characteristics than a sustainably marketed ETF focused on a different region. The claim that traditional equity ETFs always have significantly poorer ESG characteristics than ESG products does not hold up to scrutiny. When selecting products, investors should not rely solely on the fund's label. Instead, they should assess and compare the underlying ESG characteristics in detail. It is also advisable to review these characteristics regularly, as they may change materially over time.

Claim 5: ESG equity ETFs are significantly more expensive than traditional products

In the past, ESG equity ETFs often carried a cost disadvantage compared with traditional equity ETFs. Today, this is less frequently the case. The broad claim that ESG equity ETFs are significantly more expensive than conventional products is therefore inaccurate.

Depending on the index and the product provider, fee differences may work either in favour of or against ESG ETFs. Investors are therefore advised to review and compare costs carefully before investing.

Claim 6: ESG equity ETFs enable investors to achieve higher returns compared with traditional investments

By investing in ESG equity ETFs, investors deviate from the overall market composition in different ways based on specific ESG criteria or strategies. These deviations can lead to either outperformance or underperformance relative to the broader market. It is therefore true that ESG equity ETFs can generate excess returns. However, it is equally true that they can result in negative performance deviations. The magnitude of these differences depends on the index selected and the methodology applied. A careful, product-specific assessment is therefore essential. Investors should also remain cautious if they are promised “at least equivalent returns” when investing in ESG products. Such assurances may overlook the structural differences in index construction and portfolio composition.

Claim 7: By investing in ESG equity ETFs, investors are making a positive contribution to the climate

Academic literature does provide theoretical explanations and narratives suggesting that investing in an ESG equity ETF could have a positive impact on the climate – for example, by influencing corporate behaviour. However, whether and to what extent such positive effects materialise in practice remains unclear and is difficult to measure or verify. Current empirical research indicates that any meaningful positive impact is most likely to be achieved through active ownership and engagement by the fund provider. For other potential channels of impact, there is limited evidence. This does not necessarily mean that no positive effect exists, but it does suggest that the magnitude of such an effect is uncertain. At present, the most balanced answer to the question of whether investing in an ESG equity ETF delivers a positive impact, such as for the climate, would be “in some cases, perhaps to a limited extent.” Investors should therefore apply a healthy degree of scrutiny when financial institutions promote investment products on the basis of delivering a positive impact.

Claim 1:

ESG ratings primarily focus on environmental factors

The term ESG has become well established. ESG stands for Environment, Social and Governance. This makes it clear that ESG is not solely concerned with environmental issues, but rather places sustainability within a broader context. ESG ratings are a widely used method for assessing a company's ESG characteristics. They are produced by specialised rating agencies and applied at the company level. As there are many different rating providers, ESG ratings can vary both in their methodology and in their underlying assessments, as discussed in Claim 2.

The three ESG dimensions are not weighted equally in the final overall rating. Instead, their relative importance varies depending on the company. The weighting generally reflects which ESG factors, viewed in terms of potential risks or opportunities, are considered capable of materially influencing the company's financial position. This assessment is driven primarily by the industry in which the company operates. Depending on the specific circumstances, additional ESG criteria may also be included if they are not already covered by the standard industry classification. It is also important to note that both the criteria assessed and their respective weightings can differ across ESG rating agencies.

Using MSCI ESG, one of the world's leading rating agencies, as an example, it can be illustrated that various themes and criteria may be relevant within each of the three dimensions: Environment, Social and Governance (see Fig. 1). In total, there are ten themes, which consist of 33 individual key issues. Of these, six are universally applicable and are automatically incorporated into the assessment process for all companies, regardless of their business model (white). The remaining 27 key issues may be relevant depending on the company (grey). The environmental dimension includes areas such as climate change, natural capital, pollution and waste, as well as environmental opportunities.

Whether and to what extent the 27 additional key issues are considered in an ESG rating depends on the company being assessed. In addition to the six

governance-related key issues that are always evaluated, typically a further three to eight key issues from the environmental and social dimensions are analysed. The specific key issues applied are reviewed regularly by the rating agencies and may therefore change over time.

Figure 1 illustrates the criteria applied to two companies from different industries: Shell from the integrated oil and gas sector, and AstraZeneca from the pharmaceuticals sector. It shows that largely different criteria are applied within the environmental and social dimensions. For example, in the case of Shell, three key issues from the environmental dimension are assessed. Whereas for AstraZeneca, only toxic emissions and waste are considered material. The picture is reversed in the social dimension: three key issues are deemed relevant for AstraZeneca, compared with two for Shell. In the final ESG rating, the environmental dimension is weighted at 41 percent for Shell and 9 percent for AstraZeneca. The social dimension accounts for 26 percent for Shell and 58 percent for AstraZeneca, while governance is weighted at 33 percent for both companies.

Lumin analysed the MSCI ESG weightings of the individual dimensions for 95^A companies from the FTSE 100 (see Fig. 2 on page 10). Within the environmental dimension (dark blue area), the highest weighting observed in the ESG rating is around 55 percent (see marker A in Fig. 2). However, only three companies reach such a high value. For the remaining companies, the environmental weighting declines rapidly. For 70 of the 95 companies analysed, environment is the lowest-weighted dimension. For 76 companies, the environmental dimension accounts for less than one third of the overall ESG rating. For almost one quarter of the companies, the environmental dimension is weighted at only 5 percent (see marker B in Fig. 2 on page 10).

It is also notable that the weighting of the governance dimension never falls below 33 percent. This is because MSCI ESG prescribes a minimum weighting for governance at this level. No comparable minimum

A At the time of publication, only 95 stocks in the FTSE 100 have both an MSCI ESG rating and a Morningstar/Sustainalytics rating.

Figure 1: Overview of the themes and key issues used by MSCI ESG

MSCI ESG defines 10 different themes and 33 distinct key issues.

Environmental			
Climate Change	Natural Capital	Pollution & Waste	Environmental Opportunities
Carbon Emissions▲	Water Stress	Toxic Emission & Waste▲★	Opportunities in Clean Tech
Product Carbon Footprint	Biodiversity & Land Use▲	Packaging Material & Waste	Opportunities in Green Building
Financing Environmental Impact	Raw Material Sourcing	Electronic Waste	Opportunities in Renewable Energy
Climate Change Vulnerability			
Social			
Human Capital	Product Liability	Stakeholder Opposition	Social Opportunities
Labor Management	Product Safety & Quality★	Controversial Sourcing	Access to Finance
Health & Safety▲	Chemical Safety	Community Relations▲	Access to Health Care★
Human Capital Development★	Consumer Financial Protection		Opportunities in Nutrition and Health
Supply Chain Labor Standards	Privacy & Data Security		
	Responsible Investment		
Governance			
Corporate Governance	Corporate Behavior		
Board▲★	Business Ethics▲★		
Pay▲★	Tax Transparency▲★		
Ownership & Control▲★			
Accounting▲★			

- Theme
- Key issues firm dependent
- Key issues for every firm

▲ Shell
★ Astra Zeneca

Source: MSCI ESG

weighting applies to the environmental or social dimensions.

Lumin's analysis shows that, on average across all these companies, the environmental dimension carries a weighting of around 20 percent. This means that the environmental component is only half as significant as the other two dimensions, each of which contributes approximately 40 percent to the overall ESG rating on average. According to MSCI ESG, the environmental dimension therefore has the smallest influence on the financial profile of companies on average.

This weighting pattern is not only evident for companies in the FTSE 100 but, according to Fig. 3, applies to a very similar extent to companies in the S&P 500 (USA) and the Stoxx Europe 600 (Europe).

As previously mentioned, different ESG rating agencies may assign different weightings to the environmental, social and governance dimensions. Figure 4 on page 11 illustrates this using 15 selected companies from the FTSE and shows how the weightings can vary between providers.

It demonstrates how the weightings assigned by two ESG rating agencies can differ. To illustrate this, five companies with a high environmental weighting, five with a medium weighting and five with a low weighting according to MSCI ESG, are selected and compared with the corresponding weightings assigned by Morningstar/Sustainalytics. This comparison shows that the differences in weightings range from 0 percentage points in the case of Persimmon to 23 percentage points in the case of Tesco.

In addition to these company-level analyses, Lumin also examined the weightings of the three ESG dimensions for various equity indices.

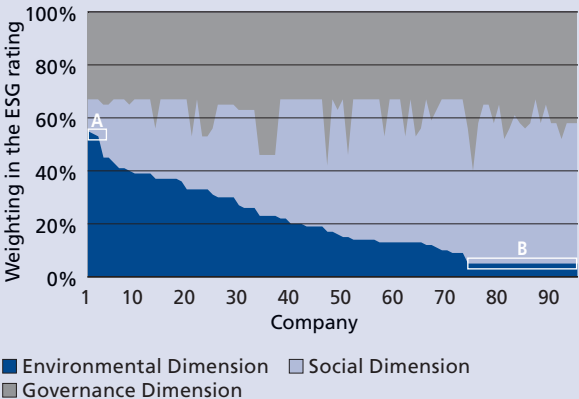
At the index level, the overall ESG rating is calculated as the market capitalisation-weighted average of the ESG ratings of its constituent securities. The weightings of the individual dimensions at index level depend on two factors: first, the dimension weightings of the underlying securities, which are largely driven by sector and sub-sector composition, and second, the weight

of those securities within the index. Figure 5 on page 11 presents the dimension weightings for selected equity indices using MSCI ESG as the rating provider. Consistent with the single-company analysis, a similar pattern emerges.

It becomes clear that a comparatively high environmental weighting of around 45 percent, as seen in the MSCI World Utilities Index, is rather unusual. At the other end of the scale is the healthcare sector. In the MSCI World Health Care Index, the environmental dimension accounts for just over 5 percent of the overall ESG rating. A similar pattern can also be observed in sustainability-themed indices. In the Global Clean Energy Index, which invests in companies involved in the production of clean energy, the environmental dimension carries a relatively higher weighting of around 40 percent. By contrast, an index designed to align with the Paris climate goals shows a different outcome. In the MSCI World Climate Paris Aligned Index, the environmental dimension represents just under 20 percent of the final ESG rating. This is because the index often excludes companies from sectors with high environmental weightings due to elevated CO₂ emissions. As a result, the remaining constituents tend to come from sectors for which MSCI ESG assigns a comparatively lower environmental weighting.

Figure 2: Distribution of the weightings of the E, S and G dimensions according to MSCI ESG for UK securities

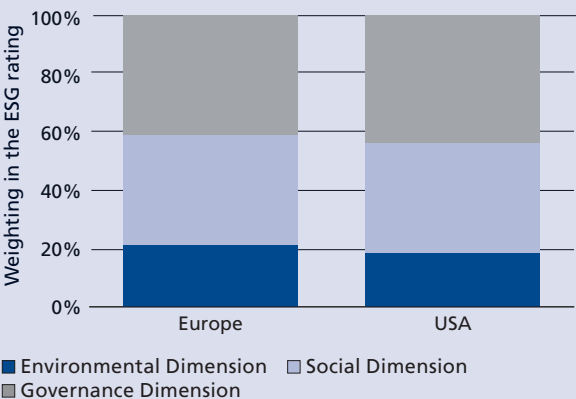
The environmental, social, and governance dimensions are weighted differently for UK securities.



Source: VZ, MSCI ESG as at 31 December 2025

Figure 3: Average weightings of the E, S, and G dimensions according to MSCI ESG for U.S. and European securities

On average, the environmental dimension is weighted less heavily than the other two dimensions.



Source: VZ, MSCI ESG as at 31 December 2025

The country indices shown also illustrate that the environmental dimension, with a weighting of around 20 percent, represents the least significant of the three dimensions. It can therefore also be concluded for these indices that the environmental dimension tends to carry a lower weighting in the ESG rating compared with the other two dimensions.

Conclusion

ESG ratings assess the three sustainability dimensions: Environment, Social and Governance. The weighting of these three components within an ESG rating can vary depending on the company and the rating agency. Lumin’s analysis shows that the environmental dimension is typically assigned the lowest weighting. In the UK equity market (FTSE 100), for example, the environmental component accounts for around 20 percent according to MSCI ESG ratings, while the social and governance dimensions each represent approximately 40 percent. The claim that ESG ratings primarily focus on environmental aspects is therefore difficult to substantiate. Before investing in ESG investment solutions, investors should carefully examine which ESG ratings are being used, what those ratings actually measure, and how the individual dimensions are weighted.

Figure 4: Weighting of the environmental dimension across different ESG rating agencies

A comparison of the environmental weightings of MSCI ESG and Morningstar/Sustainalytics for selected UK companies (all weightings in percent).

Companies	Environmental Weight		Difference*
	MSCI ESG	Sustainalytics	
Mondi	55	35	20
Croda International	53	39	14
Unilever	43	25	18
Shell	41	37	4
BP	41	33	8
Associated British Foods	33	35	2
Persimmon	30	30	0
InterContinental Hotels Group	27	17	10
Howden Joinery Group	23	26	3
Burberry Group	22	22	0
HSBC Holdings	13	10	3
Tesco	10	33	23
AstraZeneca	9	13	4
Schroders	5	9	4
Vodafone Group	5	12	7

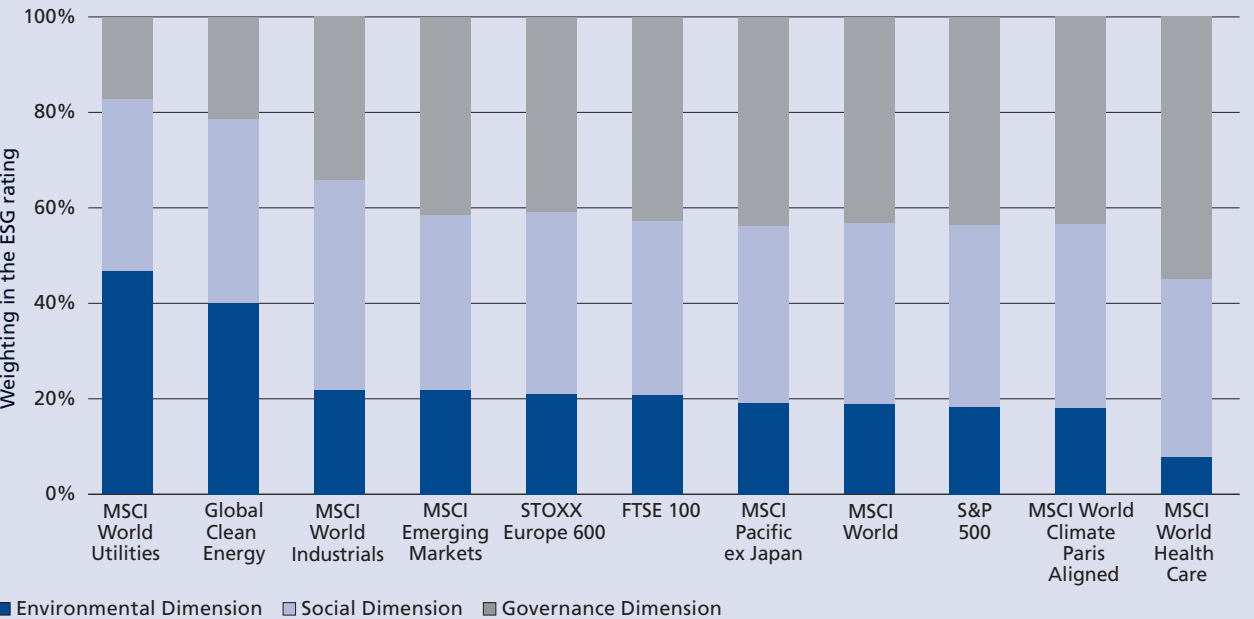
* (in percentage points)

- Five companies with high Environmental weight
- ▒ Five companies with medium Environmental weight
- Five companies with low Environmental weight

Source: VZ, MSCI ESG, Morningstar/Sustainalytics as at 31 December 2025

Figure 5: Distribution of E, S and G dimension weightings across selected indices

Different indices assign varying weightings to the individual dimensions.



Source: VZ, MSCI ESG as at 31 December 2025

Claim 2:

Different ESG rating agencies generally arrive at the same conclusions through their ESG assessments

There are more than 100 different ESG rating agencies worldwide that assess companies or sovereign issuers. However, there are no uniform standards, which means that each agency applies its own approach and methodology. As a result, ESG ratings for the same company can differ depending on which agency conducts the assessment.

Academic studies have quantified the differences between ESG ratings and highlight their relatively low correlation of around 0.5, for example, when compared with credit ratings.¹ This comparatively weak relationship is attributed to three main factors (see Fig. 6).²

Figure 6: Different criteria, measurement methodologies, and weightings lead to differing ESG ratings

Factor 1: Different selection of criteria

Factor 2: Different measurement methodologies

Factor 3: Different weightings

Factor 1: Different selection of criteria

ESG rating agencies may apply different criteria when constructing their ESG ratings. For example, one agency may consider a company's CO₂ emissions to be a relevant consideration, while another may choose not to include this criterion in its assessment. According to research, this factor can explain around 38 percent of the divergence between ESG ratings.

Factor 2: Different measurement methodologies

Another reason for differing ESG assessments across rating agencies lies in the use of different measurement approaches. Even where agencies agree on the relevance of a particular criterion, they may assess and measure it using different metrics. For example, two ESG rating agencies may both consider workforce management to be material, but evaluate it differently.

One agency might measure this through employee turnover, while another may incorporate the number of labour-related legal cases into its assessment. Differences can also arise in the measurement of CO₂ emissions. One ESG rating agency may calculate emissions based on Scope 1 and Scope 2 only, while another may include Scope 3 emissions as well. Scope 1 refers to direct emissions generated by the company itself, such as those arising from production processes. Scope 2 covers indirect greenhouse gas emissions from the generation of purchased energy, such as electricity. Scope 3 includes additional indirect emissions that occur along the company's value chain, for example in the production of purchased goods or through the use of sold products.

Variations in measurement methodologies are the primary driver of divergence between ESG ratings, explaining approximately 56 percent of the variation.

Some studies also identify limited transparency in ESG data reporting as an additional reason for differences in ESG ratings.³ If a company does not clearly disclose a data point required for the ESG assessment, such as Scope 3 CO₂ emissions, the rating agency is forced either to estimate the figure or to exclude it. Different approaches and estimation methodologies can therefore further increase the divergence between ESG ratings.

Factor 3: Different weightings

The criteria used in ESG assessments may be considered of differing importance. As a result, they are incorporated into the final ESG rating with varying weightings. For example, one ESG rating agency may regard CO₂ emissions as highly material, assign them a significant weighting, and therefore give them a greater influence on the overall ESG rating.

Another ESG rating provider may measure CO₂ emissions using the same methodology but may not consider them to be equally material. As a result, the weighting assigned to this factor may be lower. Overall, differing

weightings account for the remaining 6 percent of the divergence between ESG ratings.⁴

An important consideration that can significantly influence these three factors is the objective or perspective underlying the ESG rating. Broadly speaking, two categories can be distinguished (see Fig. 7). On the one hand, there are ESG ratings that aim to capture financially material risks and opportunities arising from ESG factors (arrow number 1). The primary focus here is not on measuring a company's impact on the environment or society, but rather on identifying and evaluating risks and opportunities that could potentially affect its financial performance or asset values. On the other hand, there are ESG ratings designed to quantify a company's impact on the environment and society. The objective of this impact-oriented approach is therefore to assess a company's behaviour and its influence on environmental and social outcomes. In Fig. 7, this perspective is illustrated by arrow number 2.

There are also ESG ratings that attempt to incorporate both perspectives, often referred to as a double materiality approach. In practice, however, ESG ratings that focus on the financial perspective (arrow 1) are the most widely used. These include leading global providers such as MSCI ESG and Morningstar/Sustainalytics.

Another reason for differing ESG ratings is that some rating agencies adopt a relative approach, while others

apply an absolute methodology when determining the final ESG rating. Under a relative approach, the ESG rating reflects how well or poorly a company performs compared with other companies within a predefined peer group, for example, within the same industry. As a result, a company with generally weak ESG characteristics in absolute terms could still receive a strong ESG rating if it performs well relative to its direct peers.^B By contrast, under an absolute approach, the ESG rating is not determined in comparison with a peer group but is assessed against fixed or independent criteria.

The extent to which ESG ratings differ in practice, and the implications this may have for a portfolio, is illustrated using the ESG ratings of MSCI ESG and Morningstar/Sustainalytics for UK companies. The analysis includes those companies within the FTSE 100 for which both an MSCI ESG rating and a Morningstar/Sustainalytics rating are available. At the time of publication, this applies to 95 of the 100 companies in the index. The distribution of these companies across the respective ESG rating categories already reveals noticeable differences (see Fig. 8 and 9).

The figures show that the two ESG rating providers use different rating categories and, therefore, potentially convey different qualitative assessments through their ESG ratings. MSCI ESG uses seven letter-based ratings, which for simplicity can be grouped into three broader categories: “Laggards”, “Average” and “Leaders.”

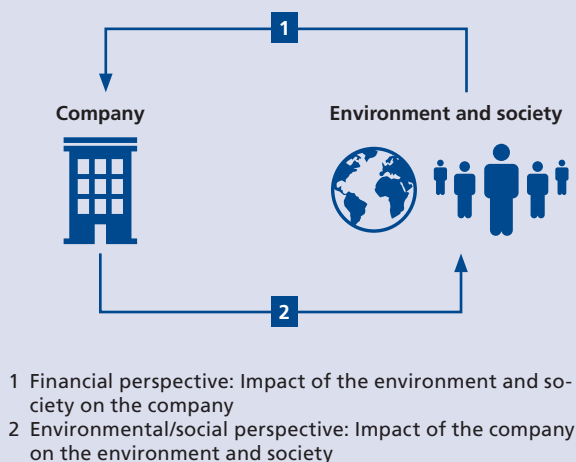
Morningstar/Sustainalytics, by contrast, uses five categories: “Severe Risk”, “High Risk”, “Medium Risk”, “Low Risk” and “Negligible Risk.” This framework assesses the financially material risk that may arise for companies as a result of ESG factors.

While MSCI ESG assigns its highest rating of “AAA” in 36 cases (see the bar on the far right in Fig. 8), Morningstar/Sustainalytics awards its top category of “Negligible Risk” in only nine cases (see the bar on the far right in Fig. 9).

The reverse pattern can be observed at the lower end of the rating scale. According to MSCI ESG, only one company receives a very weak ESG rating of “CCC” or “B”, whereas Morningstar/Sustainalytics classifies

Figure 7: Illustration of the two different approaches to ESG ratings

Financial and environmental/social perspectives in ESG ratings.



^B MSCI ESG assigns companies both an absolute and a relative rating. The better-known letter rating published by MSCI ESG is derived from the relative assessment.

three companies as presenting “Severe Risk” or “High Risk.” The extent to which individual ESG ratings, and the rankings derived from them, can differ at the company level is illustrated in Fig. 10 and 11.

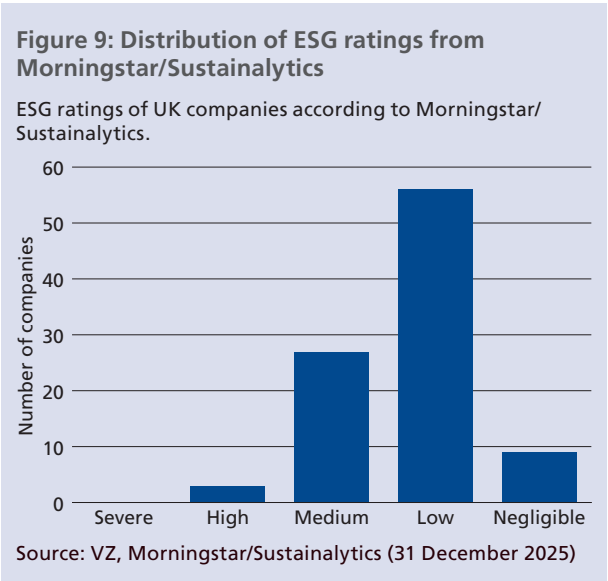
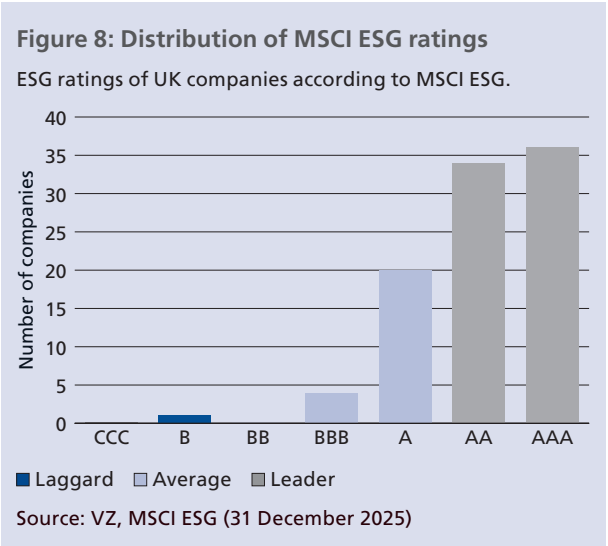
The companies were ranked according to their ESG ratings from MSCI ESG and Morningstar/Sustainalytics in order to assign each company a corresponding position. Figure 10 shows the companies with the largest ranking differences, while Figure 11 presents those with the smallest differences. As the analysed universe comprises 95 companies, the maximum possible ranking difference would be 94, if a company were ranked first by one provider and last by the other. In practice, the largest observed ranking gap is 90, in the case of Smiths Group. MSCI ESG assigns Smiths

Group an ESG rating of “AAA”, its highest rating, corresponding to rank 1 within its framework. By contrast, Morningstar/Sustainalytics classifies the same company as having comparatively high ESG risk. With a rating in the “Medium Risk” category, the company is ranked 91st according to Morningstar/Sustainalytics.

The two ESG rating agencies also differ significantly in their assessments of other companies. For example, the ranking gap for the information services provider Experian amounts to 75 places. In this case, MSCI ESG assigns the company a rating of “A”, classifying it as average, while Morningstar/Sustainalytics assesses it as presenting “Negligible Risk.” As a result, Experian ranks 2nd according to Morningstar/Sustainalytics, but only 77th according to MSCI ESG. Despite these sometimes substantial differences, there are also cases in which ESG rating agencies arrive at broadly similar conclusions. In the case of Melrose Industries, which is ranked near the bottom by both rating agencies, the ranking difference is zero. For Kingfisher, which is placed near the top by both providers, the difference amounts to seven positions.

For completeness, Figure 12 illustrates the ESG rating differences for all 95 companies. To simplify the presentation, the companies were assigned to one of five groups based on the rankings derived from their ESG ratings. Each company was allocated one group according to MSCI ESG and one group according to Morningstar/Sustainalytics. Group 1 (dark green) includes the companies with the strongest rankings, meaning those with the best ESG ratings. Group 5 (dark red) comprises the companies with the weakest rankings, or those with the lowest ESG ratings. This colour coding makes it easier to identify differences in ESG assessments. If a company appears in the same colour under both providers, it belongs to the same group according to MSCI ESG and Morningstar/Sustainalytics, indicating a broadly similar ESG evaluation.

An example of this is the first company listed in Figure 12, 3i Group. According to both providers, it falls into Group 1 and is therefore assessed by both as having a relatively strong ESG rating.



However, similar assessments, where companies are assigned to the same group by both providers, apply to only 32 of the 95 companies analysed. This represents roughly one-third of the sample. In all other cases, the ESG providers tend to differ in their evaluations. In just under 15 percent of cases, the differences are particularly pronounced, with a gap of three or even four groups between the two assessments. Here, one ESG rating agency classifies a company as having strong ESG characteristics, while the other takes a markedly different view and assesses the company as having comparatively weak ESG characteristics.

If ESG ratings are incorporated into the investment process for security selection, markedly different portfolios may result depending on which ESG rating provider is used. Figure 13 presents two portfolios, each comprising the 25 companies with the best ESG ratings; in the left column according to MSCI ESG and in the right column Morningstar/Sustainalytics.

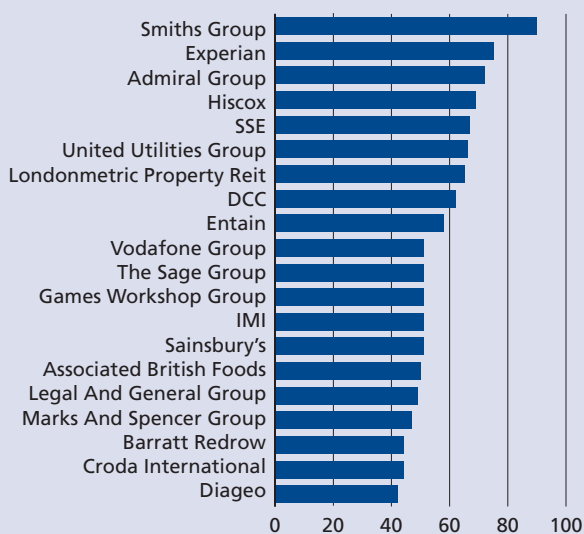
When comparing the two portfolios, the overlap is relatively small. Only ten companies would be included in both portfolios, as highlighted in the figure. In other words, the portfolios are only around two-fifths identical and differ by approximately three-fifths, solely

because different ESG ratings were applied. A similar conclusion is reached when focusing not on the highest-rated companies, but instead on excluding those with the weakest ESG ratings. When comparing the 25 excluded companies in Figure 14, the overlap is again limited, as indicated in blue.

Only in eleven cases are the same companies excluded. This again demonstrates that the use of ESG ratings can have a significant impact on portfolio construction. In fewer than half of the cases the same companies would be excluded based on ESG ratings from both agencies.

Figure 10: Companies with the largest ranking differences according to ESG ratings for MSCI ESG and Morningstar/Sustainalytics

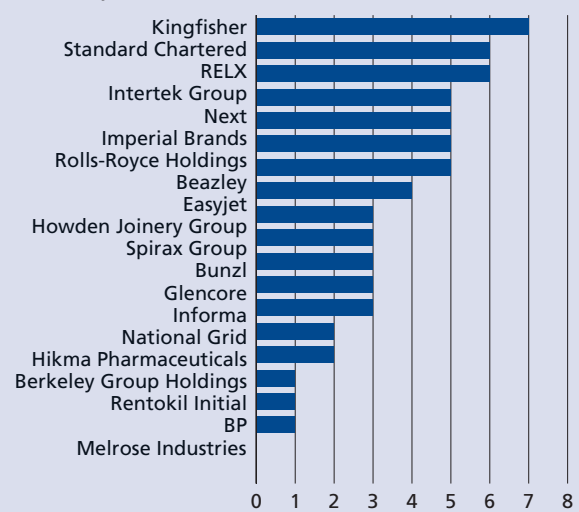
The rankings derived from ESG ratings can differ significantly depending on the rating agency.



Source: VZ, MSCI ESG, Morningstar/Sustainalytics, Dec 2025

Figure 11: Companies with the smallest ranking differences according to the ESG ratings of MSCI ESG and Morningstar/Sustainalytics

Some companies occupy a similar ranking based on their ESG ratings according to both MSCI ESG and Morningstar/Sustainalytics.



Source: VZ, MSCI ESG, Morningstar/Sustainalytics, Dec 2025

Figure 12: Differences in ESG ratings between MSCI ESG and Morningstar/Sustainalytics across five groups

The categorisation of companies based on ESG ratings can depend strongly on which rating agency's ESG ratings are used.

Firm	Rank MSCI ESG	Rank MS/ Sustainalytics	Group Difference	Firm	Rank MSCI ESG	Rank MS/ Sustainalytics	Group Difference
3i Group	1	10	0	Severn Trent	50	76	1
Burberry Group	1	16	0	Standard Chartered	56	62	1
Convatec Group	1	11	0	Tesco	40	61	1
Informa	1	3	0	Weir Group	52	66	1
Kingfisher	1	8	0	BT Group	72	44	1
Mondi	1	13	0	Coca-Cola Europacific Partners	69	47	1
RELX	1	7	0	Coca-Cola HBC	69	49	1
Ashtead Group	37	26	0	InterContinental Hotels Group	59	48	1
Berkeley Group Holdings	20	21	0	Antofagasta	72	84	1
Diploma	30	37	0	BAE Systems	65	81	1
Howdens Joinery Group	24	27	0	Centrica	72	85	1
Intertek Group	33	38	0	Anglo American	87	67	1
National Grid	20	22	0	British American Tobacco	80	71	1
Beazley	47	51	0	International Airlines Group SA	90	63	1
Bunzl	56	53	0	Rio Tinto	94	69	1
EasyJet	52	55	0	Diageo	1	43	2
NEXT	47	42	0	Legal & General Group	1	50	2
Reckitt Benckiser Group	56	39	0	St. James's Place	1	40	2
Rentokil initial	40	41	0	The Sage Group	1	52	2
Compass Group	72	64	0	Croda International	33	77	2
M&G	61	75	0	Sainsbury's	23	74	2
Smith & Nephew	72	65	0	Schroders	32	60	2
Babcock International Group	77	93	0	Whitbread	37	58	1
BP	93	94	0	Barclays	40	15	2
Fresnillo	95	88	0	Associated British Foods	40	90	2
Glencore	92	89	0	Marks & Spencer Group	40	87	2
Hikma Pharmaceuticals	84	83	0	GlaxoSmithKline	65	29	2
Imperial Brands	91	86	0	Halma	64	23	2
Melrose Industries	80	80	0	HSBC Holdings	63	28	2
Rolls-Royce Holdings	87	92	0	Metlen Energy & Metals	65	33	2
Shell	86	95	0	AstraZeneca	87	57	2
Spirax Group	82	79	0	Persimmon	77	54	2
Auto Trader Group	1	36	1	Admiral Group	1	73	3
Aviva	1	30	1	Entain	1	59	3
London Stock Exchange Group	1	32	1	Hiscox Ltd	1	70	3
British Land REIT	35	9	1	SSE	1	68	3
Land Securities Group REIT	24	4	1	DCC	20	82	3
Pearson	37	6	1	IMI	27	78	3
Phoenix Group Holdings	27	12	1	Barratt Redrow	61	17	3
SEGRO REIT	24	1	1	Haleon	59	18	3
ICG	31	45	1	United Utilities Group	71	5	3
Rightmove	27	56	1	Vodafone Group	65	14	3
Unilever	35	46	1	Games Workshop Group	82	31	3
Lloyds Banking Group	40	20	1	Smiths Group	1	91	4
Endeavour Mining	52	35	1	Experian	77	2	4
JD Sports Fashion	47	24	1	LondonMetric Property REIT	84	19	4
NatWest Group	40	25	1				
Prudential	50	34	1				
Airtel Africa	52	72	1				

■ Group 1: Ranks 1 to 19
■ Group 3: Ranks 39 to 57
■ Group 5: Ranks 77 to 95
■ Group 2: Ranks 20 to 38
■ Group 4: Ranks 58 to 76

Companies with MSCI ESG ratings equal to 1 have achieved a maximum possible ESG rating.

Source: VZ, MSCI ESG, Morningstar/Sustainalytics as at 31 December 2025

Figure 13: The 25 highest-rated companies according to MSCI ESG and Morningstar/Sustainalytics

When selecting the highest-rated companies based on ESG ratings, the result depends largely on which provider's ESG ratings are used.

MSCI ESG	Morningstar Sustainalytics
3i Group	3i Group
Admiral Group	Barclays
Auto Trader Group	Barratt Redrow
Aviva	Berkeley Group Holdings
Berkeley Group Holdings	British Land REIT
Burberry Group	Burberry Group
Convatec Group	Convatec Group
DCC	Experian
Diageo	Haleon
Entain	Halma
Hiscox Ltd	Informa
Informa	JD Sports Fashion
Kingfisher	Kingfisher
Land Securities Group REIT	Land Securities Group REIT
Legal & General Group	Lloyds Banking Group
London Stock Exchange Group	LondonMetric Property REIT
Mondi	Mondi
National Grid	National Grid
RELX	NatWest Group
Sainsbury's	Pearson
SEGRO REIT	Phoenix Group Holdings
Smiths Group	RELX
SSE	SEGRO REIT
St. James's Place	United Utilities Group
The Sage Group	Vodafone Group

- ☒ Among the top 25 in both ESG ratings
- ☐ Among the top 25 in one ESG rating

Source: VZ, MSCI ESG, Morningstar/Sustainalytics as at 31 December 2025

Figure 14: The 25 lowest-rated companies according to MSCI ESG and Morningstar/Sustainalytics

Depending on which agency's ESG ratings are used to exclude low rated companies, different companies may be excluded.

MSCI ESG	Morningstar Sustainalytics
Anglo American	Admiral Group
Antofagasta	Airtel Africa
AstraZeneca	Antofagasta
Babcock International Group	Associated British Foods
BP	Babcock International Group
British American Tobacco	BAE Systems
BT Group	BP
Centrica	British American Tobacco
Compass Group	Centrica
Experian	Croda International
Fresnillo	DCC
Games Workshop Group	Fresnillo
Glencore	Glencore
Hikma Pharmaceuticals	Hikma Pharmaceuticals
Imperial Brands	IMI
International Airlines Group SA	Imperial Brands
LondonMetric Property REIT	M&G
Melrose Industries	Marks & Spencer Group
Persimmon	Melrose Industries
Rio Tinto	Rolls-Royce Holdings
Rolls-Royce Holdings	Sainsbury's
Shell	Severn Trent
Smith & Nephew	Shell
Spirax Group	Smiths Group
United Utilities Group	Spirax Group

- ☐ Among the bottom 25 in both ESG ratings
- ☐ Among the bottom 25 in one ESG rating

Source: VZ, MSCI ESG, Morningstar/Sustainalytics as at 31 December 2025

Conclusion

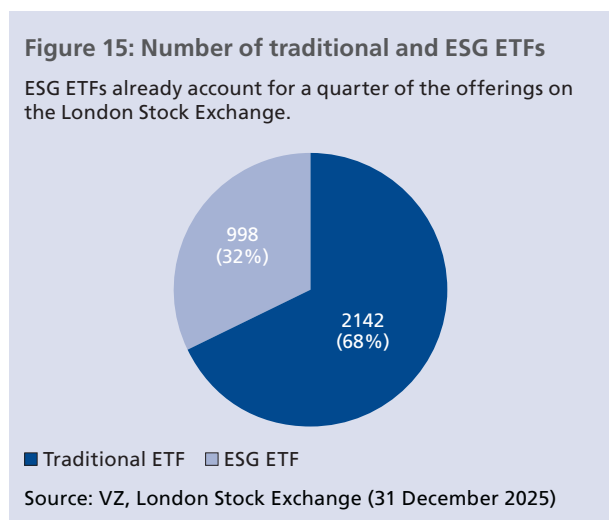
There are now many different ESG rating agencies, each applying its own methodology and approach. While ESG ratings from different providers may align in some cases, they often diverge, and in certain instances the differences can be substantial. The claim that different ESG rating agencies generally arrive at the same conclusion is therefore difficult to substantiate. Investors should be particularly mindful of this when ESG ratings are used for security selection within their portfolios. Using ratings from a different provider can have a significant impact on the final composition of a portfolio. It is also important for investors to understand what an ESG rating is intended to measure or represent, for example whether it reflects a financial risk perspective or a

broader environmental and social impact perspective. This underlying approach should be aligned with the investor's own objectives and preferences.

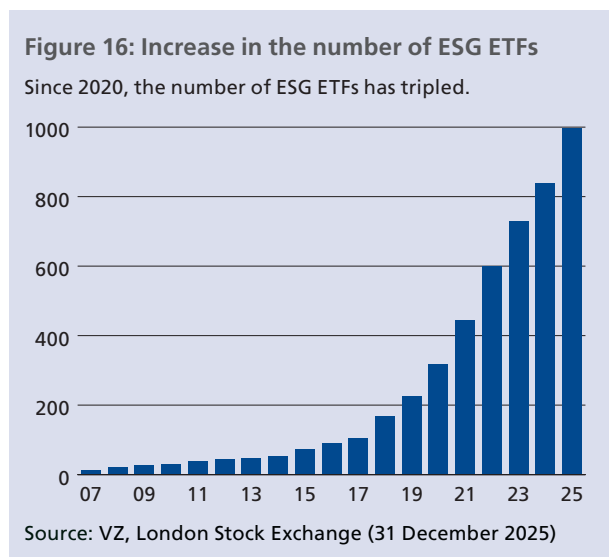
Claim 3:

A wide range of ESG ETFs are now available

ETFs are designed to replicate an index in a cost-efficient manner. Of the approximately 3,100 products listed on the London Stock Exchange, Lumin's analysis shows that nearly one-third now track indices that explicitly incorporate ESG criteria (see Fig. 15).



Lumin classifies ETFs based on the methodology of the underlying index. An ETF is categorised as an ESG ETF if ESG criteria are taken into account in the selection or weighting of its constituent securities. This also includes ETFs that focus on specific sustainability themes, such as water, renewable energy or electrification. Under this classification approach, ESG-labelled products do not necessarily exhibit stronger ESG characteristics than traditional ETFs (see Claim 4).

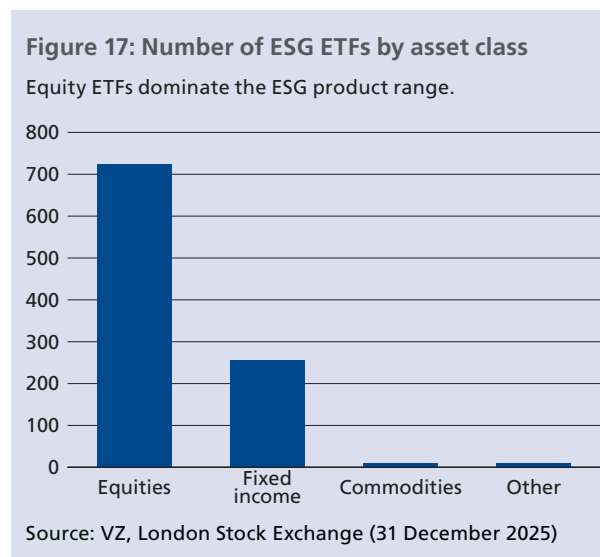


The range of ESG ETFs has increased significantly in recent years (see Fig. 16). Of the 998 products that were available at the end of December 2025, more than half have been launched since 2022. These include not only newly created products, but in some cases also existing products that have been converted to incorporate ESG criteria.

As shown in Fig. 17, ESG ETFs are offered predominantly in the equity segment. In the bond space, significantly fewer products are available.

It is not surprising that the proportion of ESG ETFs in the commodities segment is very low. Looking at the regional breakdown of available ESG equity ETFs, almost three quarters of the products focus on the three major regions: Global, Europe and the U.S. (see Fig. 18).^D UK equities are currently represented by only eleven ESG ETFs. Of the country-specific ETFs, three track the FTSE UK ESG Low Carbon Select Index and two track the FTSE All-Share ex Investment Trusts ESG Climate Select Index. The remaining ETFs replicate indices provided by MSCI and WisdomTree.

When equity ETFs are classified by their investment focus, ESG products primarily cover regional, country and thematic exposures (see Fig. 19). More recently, sector and factor-based products have also become



^D Inclusion of all investment segments (regions, factors, sectors, and themes).

increasingly available, areas that are already well established within traditional ETFs. ESG ETFs can also be differentiated according to the ESG approaches embedded in their underlying indices.

In ESG indices, companies may be excluded, for example due to controversial business activities or weak ESG ratings. Alternatively, companies with lower CO₂ intensity may be given a higher weighting. There is now a wide range of different ESG strategies available. By way of illustration, the global equity asset class is used as an example. For this region alone, ETFs track 30 different indices, of which 21 are provided by MSCI. Figure 20 outlines the ESG approaches applied in six of these MSCI indices. When selecting an index,

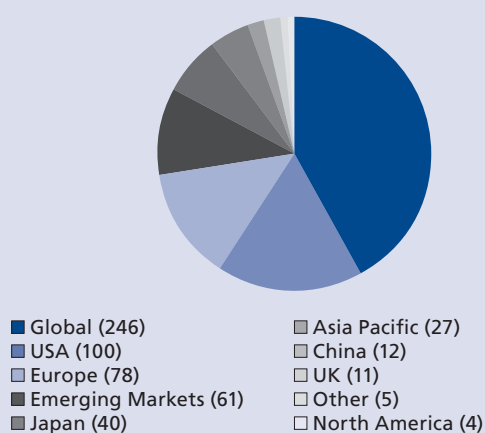
it is important to understand how the chosen ESG methodology may affect both ESG characteristics (see Claim 4) and return characteristics (see Claim 6).

Broadly diversified investment strategies can now be implemented using ESG ETFs, given that they already provide coverage across a wide range of allocations. This is illustrated by a sample portfolio with an investment amount of £450,000 (see Fig. 21).

Only in the two sub-asset classes of UK government bonds and global government bonds is the current product offering still limited. In these areas, investors may therefore need to rely on traditional investment products.

Figure 18: Number of ESG equity ETFs by region

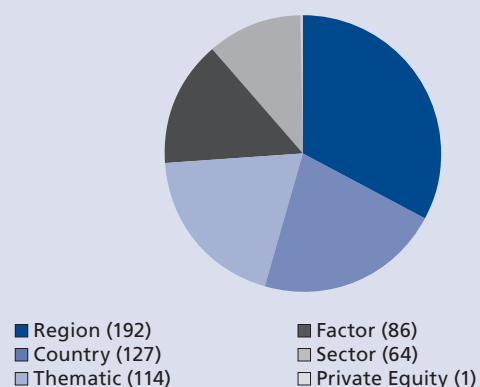
Around 75 percent of equity ETFs cover the global, European, and US regions.



Source: VZ, London Stock Exchange (31 December 2025)

Figure 19: Number of ESG equity ETFs by investment category

The vast majority of equity ETFs are focused on regions and themes.



Source: VZ, London Stock Exchange (31 December 2025)

Figure 20: ESG indices tracking global equities

Overview of selected ESG indices from the provider MSCI.

Index	Value-based exclusions	Norm-based exclusions	Weighting based on ESG ratings	Selection based on ESG ratings (best-in-class)	Selection based on CO ₂ data
MSCI World	No	No	No	No	No
MSCI World Screened (until 2025 MSCI World ESG Screened)	Yes	Yes	No	No	Yes
MSCI World Universal (until 2025 MSCI World ESG Universal)	Yes	Yes	Yes	No	No
MSCI World ESG Enhanced CTB	Yes	Yes	No	No	Yes
MSCI World Selection (until 2025 MSCI World ESG Leaders)	Yes	Yes	No	Yes	No
MSCI World SRI	Yes	Yes	No	Yes	No
MSCI World Climate Paris Aligned	Yes	Yes	No	No	Yes

Source: VZ and MSCI as at 31 December 2025

Conclusion

It is true that a significant number of ESG ETFs are now available. However, depending on the investment strategy, it can still be challenging to construct a portfolio using exclusively ESG ETFs. Investors may also consider ESG mutual funds as an alternative. In addition, some traditional ETFs may exhibit strong ESG characteristics. With the expansion of the product universe and the growing variety of ESG approaches, overall complexity has increased significantly. As always, investors should only invest in products they fully understand. This includes taking

a close look at the underlying index methodology in order to assess whether the applied ESG approaches align with their own preferences and to understand the potential implications for risk and return characteristics.

Figure 21: Illustrative portfolio with ESG ETFs/index funds

Sample allocation favouring ESG options where available.

Sub-asset class	Traditional index	ESG index	ETF/index fund	Weight	Amount (GBP)
UK equities	MSCI United Kingdom IMI	MSCI United Kingdom IMI SRI Filtered PAB	Amundi MSCI United Kingdom SRI PAB Index	12.5%	56,250
Total UK equities				12.5%	56,250
Global equities	MSCI World	MSCI World SRI Low Carbon Select 5%	UBS MSCI World SRI ETF	13.0%	58,500
North American equities	MSCI USA	MSCI USA Low Carbon SRI Selection	Xtrackers MSCI USA ESG UCITS ETF	8.5%	38,250
European equities	FTSE Developed Europe	FTSE Developed Europe Choice	Vanguard ESG Developed European Index	5.0%	22,500
Emerging market equities	MSCI Emerging Markets	MSCI Emerging Markets SRI Filtered PAB	Amundi MSCI EM SRI PAB Index	7.0%	31,500
Japanese equities	Morningstar Japan	Morningstar Japan ESG Enhanced	iShares Japan Equity ESG Screened and Optimised Index Fund	2.0%	9,000
Global small cap equities	MSCI World Small Cap	MSCI World Small Cap SRI Low Carbon Select 5%	UBS MSCI World Small Cap Socially Responsible UCITS ETF	2.0%	9,000
Total Ex-UK equities				37.5%	168,750
UK fixed income	Bloomberg UK Government Bond	–	Vanguard U.K. Government Bond Index	8.5%	38,250
UK fixed income	Bloomberg GBP Non-Government 1-5 Y Bond	–	Vanguard UK Short-Term Investment Grade Index	4.5%	20,250
Total UK fixed income				13.0%	58,500
Global fixed income	Bloomberg World Government Inflation-Linked 1-10 Y	–	Aberdeen Short-Dated Inflation Linked	5.0%	22,500
Global fixed income	Bloomberg Global Aggregate Bond (GBP Hedged)	Bloomberg MSCI Global Aggregate and Green Bond ESG SRI	iShares Global Aggregate Bond ESG SRI UCITS ETF	24.0%	108,000
Global fixed income	Bloomberg US Corporate High Yield Bond	Bloomberg MSCI US Corporate High Yield ESG SRI Bond	iShares \$ High Yield Corp Bond ESG UCITS ETF	2.5%	11,250
Total Ex-UK fixed income				31.5%	141,750
Global property	FTSE EPRA Nareit Developed	FTSE EPRA Nareit Developed Green Low Carbon Target	iShares Environment & Low Carbon Tilt Real Estate Index Fund	2.3%	10,125
Global infrastructure	FTSE Global Core Infrastructure	Foxberry SMS Global Sustainable Infrastructure	Rize Global Sustainable Infrastructure UCITS ETF	3.3%	14,625
Total alternatives				5.5%	24,750
Total				100%	450,000

Source: VZ, Factsheets of fund providers as at 31 December 2025

Claim 4:

Traditional equity ETFs always have significantly weaker ESG characteristics than products specifically marketed as ESG

Investors often expect stronger ESG characteristics from equity ETFs that are marketed as ESG. This is one of the reasons why interest in these products has increased. But what exactly defines the ESG characteristics of an investment? In the UK, there are currently no fully prescriptive standards governing ESG classifications, although claims must be substantiated and not misleading. In practice, a number of commonly used ESG metrics have become established and can be considered when selecting ETFs (see Fig. 22). It is important to recognise that the calculation of certain ESG metrics is subject to significant, and in some cases very substantial, uncertainty. This applies, for example, to measures such as CO₂ intensity or implied temperature rise.

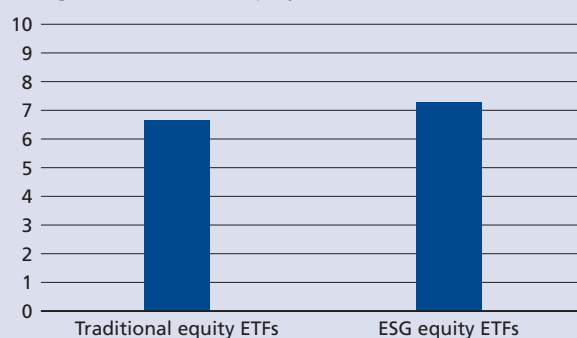
To compare these ESG characteristics, Lumin analysed both traditional and ESG marketed equity ETFs listed on the London Stock Exchange, along with their respective underlying indices (see Fig. 23).

For an initial overview, the ESG ratings from MSCI ESG were compared (10 = highest rating, 0 = lowest

rating) (see Claim 2). In this comparison, the average ESG rating of sustainable equity ETFs is slightly higher at 7.3 than that of traditional equity ETFs, which average 6.6. A more detailed analysis shows that, on a percentage basis, a greater proportion of sustainably marketed products achieve high MSCI ESG ratings, specifically in the ranges of 8.6 to 10.0 and 7.1 to 8.6, corresponding to the letter ratings “AAA” and “AA.”

Figure 23: MSCI ESG ratings of traditional and ESG equity ETFs

On average, ESG equity ETFs exhibit slightly higher ESG ratings than traditional equity ETFs.



Source: VZ, MSCI ESG as at 31 December 2025

Figure 22: Examples of ESG characteristics

Overview of established ESG characteristics for companies and ETFs.

ESG Rating	Assessment of a company across the three areas of environment, social responsibility, and corporate governance. Depending on the ESG rating provider, different criteria and topic areas may be considered.
CO ₂ Intensity	Carbon intensity of a company. The value is expressed in tonnes of CO ₂ equivalents (CO ₂ e) per USD 1 million of revenue. A distinction is made between direct (Scope 1) and indirect (Scope 2 and 3) greenhouse gas emissions. Indirect emissions from a company's value chain (Scope 3), despite their importance, are often not taken into account due to insufficient data availability.
Fossil Fuel Reserves	Assessment of whether a company holds fossil fuel reserves (coal, oil, gas).
"Green" Revenues	Revenue generated by a company from goods and services in the following business areas: alternative energy, energy efficiency, green building, pollution prevention, and sustainable water management.
"Brown" Revenues	Revenue generated by a company from goods and services in the following business areas: coal mining, oil extraction, gas extraction, oil refining, and electricity generation based on thermal coal, liquid fuels, or natural gas.
Implied Temperature Rise	Estimate of the implied temperature increase by 2100 if the entire economy were to exceed or remain within its carbon budget to the same extent as the company in question.
Controversial Business Activities	Share of company activities in the business areas of adult entertainment, alcohol, gambling, nuclear energy, conventional weapons, genetically modified organisms, and tobacco.
Controversies	Assessment of whether a company is involved in one or more very severe controversies relating to the environment, customers, human rights, labour rights, and/or corporate governance.
UN Global Compact Violations	Assessment of whether a company violates the UN Global Compact principles, including issues such as child labour and corruption.

Source: MSCI

However, in absolute terms, sustainably marketed equity ETFs are represented in these two higher MSCI rating categories in roughly similar numbers to traditional products (see Fig. 24 and 25). By contrast, traditional equity ETFs are more heavily represented in the lower MSCI ESG rating categories, both in absolute terms and on a percentage basis.

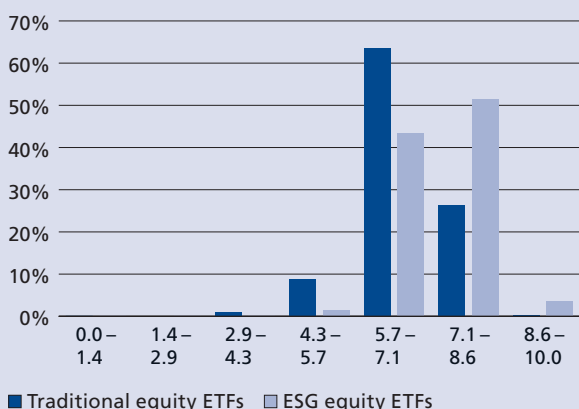
In addition, the MSCI ESG ratings of equity ETFs were analysed across different investment regions, namely the UK, Global, U.S., Europe, Japan, Asia-Pacific and Emerging Markets (see Fig. 26). To avoid distortions caused by double counting, the comparison excludes ETFs from the same provider that track an identical underlying index, for example where a currency-hedged share class exists. Across all regions, ESG equity ETFs display slightly higher average MSCI

ESG ratings, ranging between 6.8 and 8.4, compared with products tracking traditional indices, which show average ratings between 6.2 and 7.8. The difference in average scores ranges from 0.5 in Asia-Pacific to 0.9 in the UK. When examining the extreme values, it becomes apparent that in every region, the lowest ESG rating is assigned to a traditional product. At the same time, ESG ETFs consistently achieve the highest ESG rating within each region.

However, the analysis also highlights the importance of regional exposure. Both ESG and traditional products tracking European equity indices tend to achieve relatively strong ESG ratings. By contrast, ESG ratings for the U.S. and Emerging Markets are comparatively low, even among ESG-labelled products. For example, the average traditional ETF focused on European

Figure 24: Percentage distribution of MSCI ESG ratings for traditional and ESG equity ETFs

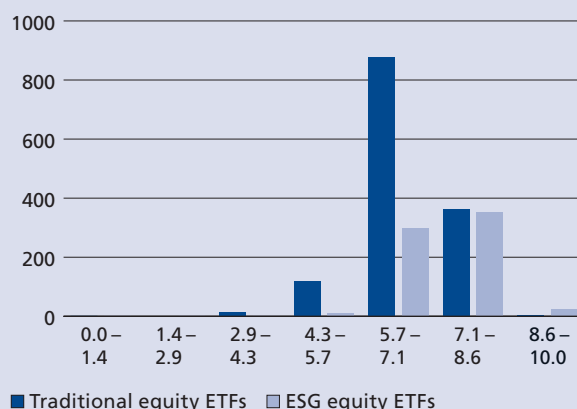
ESG ETFs are proportionally better represented in higher ESG rating categories (0 = lowest rating, 10 = highest rating).



Source: VZ and MSCI ESG as at 31 December 2025

Figure 25: Numerical distribution of MSCI ESG ratings for traditional and ESG equity ETFs

Traditional ETFs are more numerous in the lower ESG rating categories (0 = lowest rating, 10 = highest rating).



Source: VZ and MSCI ESG as at 31 December 2025

Figure 26: MSCI ESG ratings of traditional and ESG equity ETFs

Comparison of the MSCI ESG ratings of ETFs tracking traditional and ESG equity indices across different investment regions.

	Number		Lowest MSCI ESG Rating		Average MSCI ESG Rating		Highest MSCI ESG Rating	
	Traditional	ESG	Traditional	ESG	Traditional	ESG	Traditional	ESG
United Kingdom	21	9	6.2	8.0	7.4	8.3	7.6	8.5
World	76	55	5.9	6.6	6.7	7.4	7.8	8.4
USA	80	67	5.7	6.3	6.2	6.8	7.2	7.9
Europe	67	50	6.4	8.0	7.8	8.4	7.9	9.1
Japan	50	39	6.2	7.1	7.4	8.2	7.7	9.3
Emerging Markets	61	55	5.7	6.0	6.4	7.1	6.7	8.5
Asia Pacific	29	25	5.9	6.8	7.2	7.7	7.7	9.0

Source: VZ, MSCI ESG, London Stock Exchange as at 31 December 2025

equities achieves an ESG rating that is broadly comparable to that of the highest-rated ESG product within Emerging Markets equities.

The analysis below provides a snapshot of ESG ratings as at 31 December 2025. It should be noted, however, that ESG ratings can evolve over time in either direction, for example due to changes at the company level or adjustments to rating methodologies and index construction. As a result, the differences between traditional and ESG equity ETFs may also change. Figure 27 illustrates the development of the MSCI ESG rating for the traditional MSCI World Index compared with the ESG-focused MSCI World SRI Index. Over the past five years, the ESG rating of the MSCI World Index has increased from 5.8 to a peak of 9.1.

Following a methodology adjustment, the rating subsequently declined to 7.0. Over the past two years, it has gradually stabilised at around 6.7. The MSCI World SRI Index has maintained a higher ESG rating throughout the entire period. However, a similar decline can also be observed in this case following the introduction of the revised rating methodology. The gap between the ratings of the two indices has narrowed over the past five years (see Fig. 28). While the MSCI World SRI Index temporarily held an advantage of more than 3 points, however, the premium at one stage declined to just 0.5 points. Over the past two and a half years, the difference has stabilised at around 1.5 points.

Figure 27: Change in the MSCI ESG ratings of a traditional and a ESG global equity index over time

Change in the MSCI ESG ratings of an ETF tracking the MSCI World and an ETF tracking the MSCI World SRI from 31 December 2020 to 1 January 2026.



■ MSCI World ■ MSCI World SRI

Source: VZ, MSCI ESG as at 31 December 2025

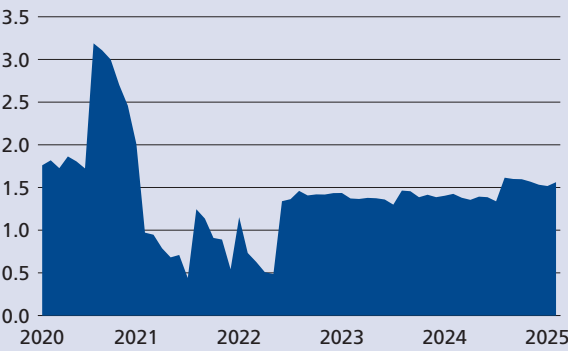
Then the ESG ratings from MSCI ESG, Sustainalytics, ISS ESG and LSEG were analysed across various equity regions – namely the UK, Global, U.S., Europe, Japan, Asia-Pacific and Emerging Markets. In addition, further ESG characteristics were assessed (see Fig. 22 on page 21). Within each region, traditional indices were compared with their ESG counterparts.

For UK indices (see Fig. 29 on page 26), it is evident that the ESG ratings of the ESG indices are noticeably stronger. However, ESG indices do not outperform across all ESG characteristics. For example, in terms of the share of Green Revenue, the FTSE UK ESG Low Carbon Select Index scores lower than the traditional FTSE 100 Index. By contrast, the FTSE UK ESG Low Carbon Select Index performs clearly better than the traditional benchmark in terms of the share of Brown Revenue and implied temperature rise. The FTSE ESG Climate Select Index performs only similarly or marginally better than the traditional benchmark on these two metrics. The share of controversial business activities also remains relatively high.

Overall, the two UK ESG indices analysed exhibit stronger ESG characteristics. However, the extent of the improvement depends on the specific metrics considered. In the case of UK equities, investors can therefore meaningfully enhance ESG characteristics through the use of ESG funds.

Figure 28: Change in the difference in MSCI ESG ratings between a traditional and ESG global equity index

Change in the difference in MSCI ESG ratings between an ETF tracking the MSCI World and an ETF tracking the MSCI World SRI from 31 December 2020 to 1 January 2026



■ Difference in rating: MSCI World SRI minus MSCI World

Source: VZ, MSCI ESG as at 31 December 2025

For Global equities (see Fig. 30 on page 27), the differences in ESG ratings are relatively small. Only the MSCI World SRI Index stands out clearly. Across the other ESG metrics, however, the ESG indices perform noticeably better than the traditional MSCI World Index, although the degree of improvement varies depending on the index methodology applied. From an ESG perspective, the MSCI World ESG indices therefore offer investors tangible advantages.

When examining the remaining regions, further differences are evident with regard to ESG criteria. In these cases, traditional equity indices were compared with the corresponding Selection Index, which excludes 50 percent of the market capitalisation based on ESG criteria. In the US equity region (see Fig. 31 on page 28), the ESG index demonstrates ESG characteristics that are at least as strong as those of the traditional index across all metrics. The ESG index achieves higher ESG ratings from all providers and includes a lower share of controversial business activities. The differences are particularly pronounced in climate-related metrics. The CO₂ intensity of the ESG index is almost 50 percent lower than that of the traditional index. Fossil fuel reserves, “Brown” revenue and the implied temperature rise are also significantly lower.

Sustainable US companies also perform very well in terms of “Green” revenue. However, compared with the other two developed regions, Europe and Japan, the traditional US index exhibits somewhat weaker ESG characteristics. As a result, the improvements observed in the ESG index appear more pronounced.

For European equities (see Fig. 32 on page 29), the improvements in ESG ratings for the ESG index are comparatively modest. In fact, the LSEG ESG rating and the share of “Green” revenue are even lower than those of the traditional index. The reduction in CO₂ intensity and other climate-related metrics is also visibly less pronounced than in the case of US equities. At the same time, the European ESG index is able to reduce the share of controversial business activities more significantly than in other regions.

The Japan equity region already exhibits relatively strong ESG characteristics. As a result, it is more

challenging for the ESG index to achieve marked improvements (see Fig. 33 on page 30). In terms of “Green” revenue, the MSCI Japan Selection Index even performs slightly worse than the traditional MSCI Japan Index. Overall, however, the MSCI Japan Selection Index, alongside the MSCI Europe Selection Index, ranks among the ESG indices with the strongest ESG characteristics.

The Asia-Pacific equity region performs relatively weakly compared with the other developed regions (see Fig. 34 on page 31). Even so, the corresponding ESG index shows improvements in only five of the ESG criteria assessed. For the climate-related metrics of CO₂ intensity, “Green” revenue and “Brown” revenue, the ESG index actually performs worse than the traditional benchmark. It does, however, achieve better results in terms of fossil fuel reserves and implied temperature rise. Nevertheless, at 3.2°C, the implied temperature rise remains higher than that of the traditional equity indices in the other developed regions.

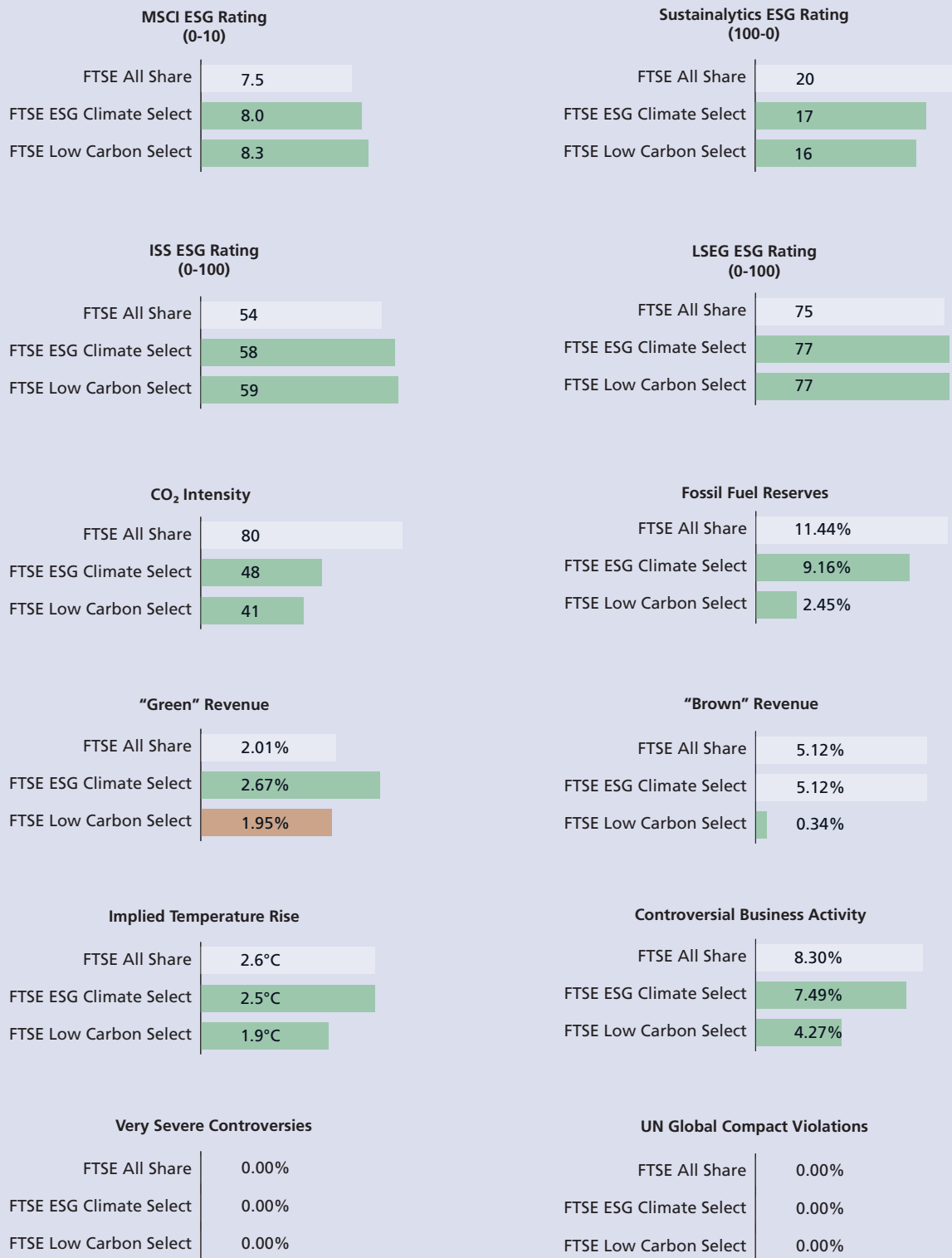
As shown in Fig. 35 (page 32), Emerging Markets equities exhibit the weakest ESG characteristics. However, the MSCI Emerging Markets Selection Index performs better than the traditional MSCI Emerging Markets Index across all criteria assessed. The differences are particularly pronounced in relation to very severe controversies and UN Global Compact violations. These two metrics typically already show relatively strong results in Developed Markets, even for the traditional indices. There are also clear improvements in the ESG ratings from MSCI and LSEG. Although CO₂ intensity and implied temperature rise improve meaningfully under the ESG index, they remain comparatively high despite these gains.

Conclusion

In general, ESG products tend to exhibit stronger ESG characteristics than traditional equity ETFs within the same category. However, depending on the specific ESG criteria assessed, the investment region and the index methodology applied, these improvements may be modest or, in some cases, ESG characteristics may even deteriorate. It is also possible that a traditional ETF focused on a particular equity region, for example European equities via the MSCI Europe Index, does not necessarily have weaker ESG characteristics than an ESG ETF focused on a different region, such as global equities via an MSCI Selection Index. The claim that traditional equity ETFs invariably have significantly weaker ESG characteristics than ESG products is therefore difficult to substantiate. When selecting products, investors should not rely solely on the fund label, but should carefully assess and compare the underlying ESG characteristics. It is also advisable to review these characteristics regularly, as they may change materially over time.

Figure 29: ESG characteristics of UK equity indices

Overview of ESG characteristics of ETFs/index funds tracking the UK equity market and selected UK ESG indices.

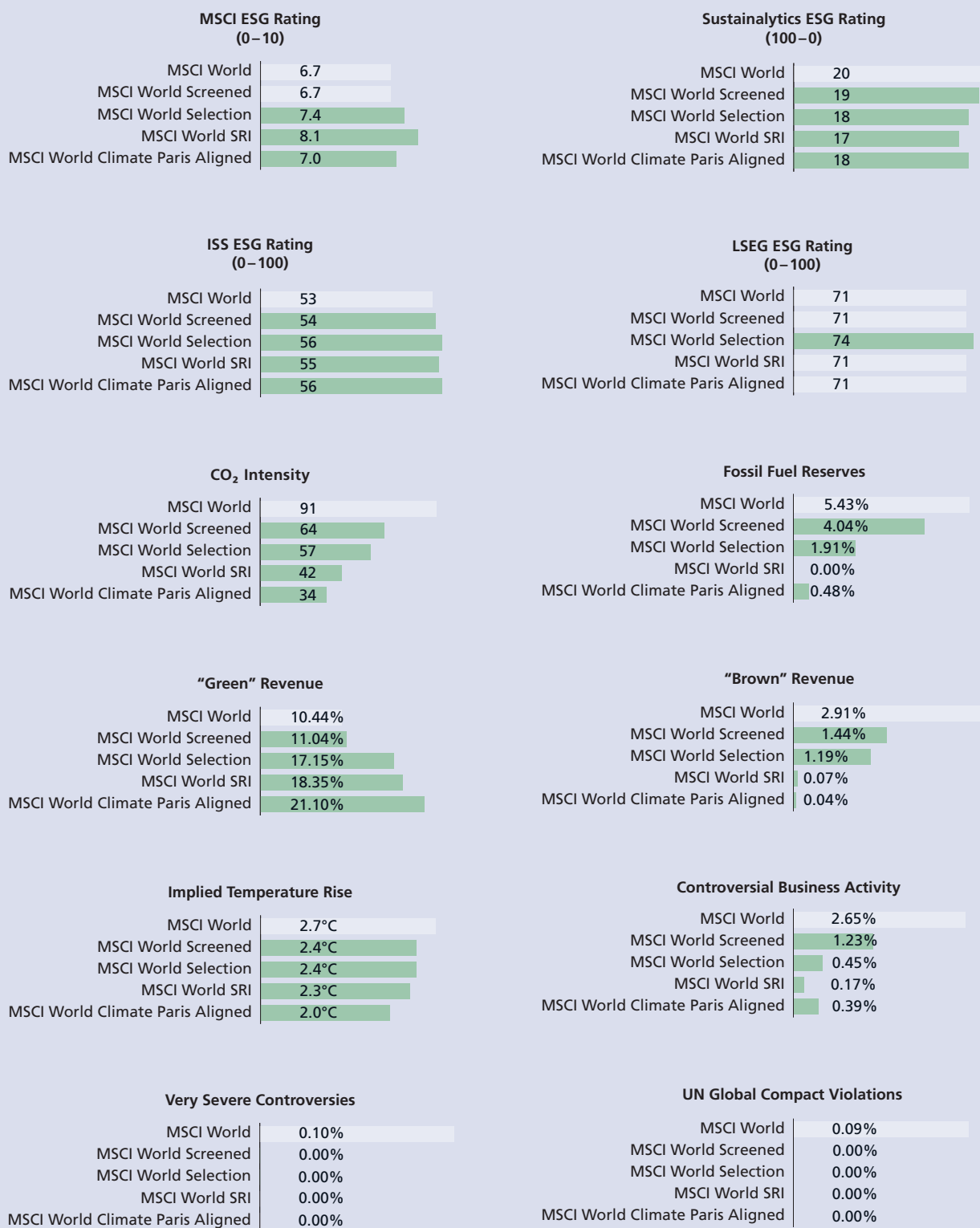


■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Figure 30: ESG characteristics of global equity indices

Overview of ESG characteristics of ETFs/index funds tracking the MSCI World and four MSCI World ESG indices.

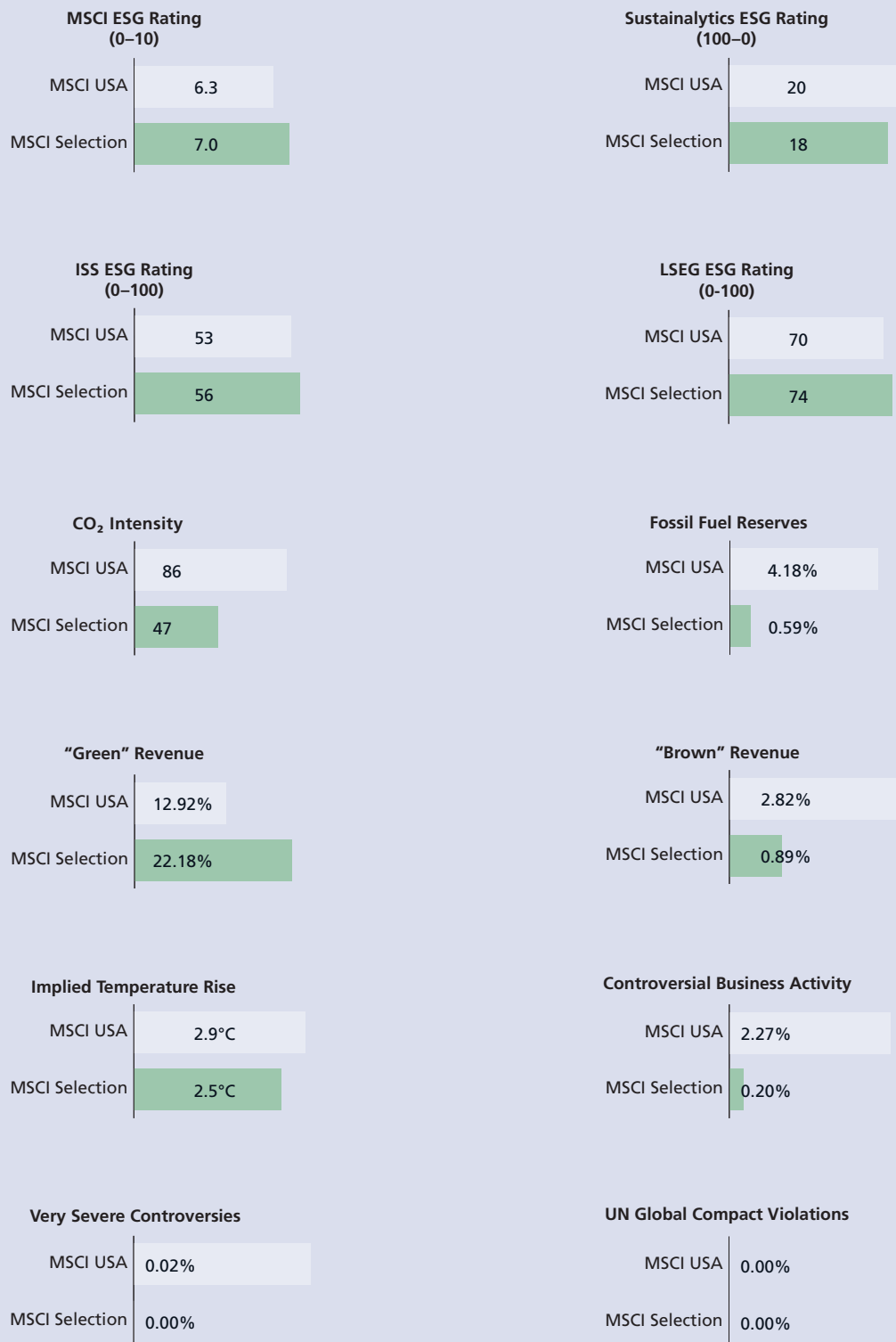


■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Figure 31: ESG characteristics of U.S. equity indices

Comparison of the ESG characteristics of ETFs/index funds tracking the MSCI USA and the MSCI USA Selection.

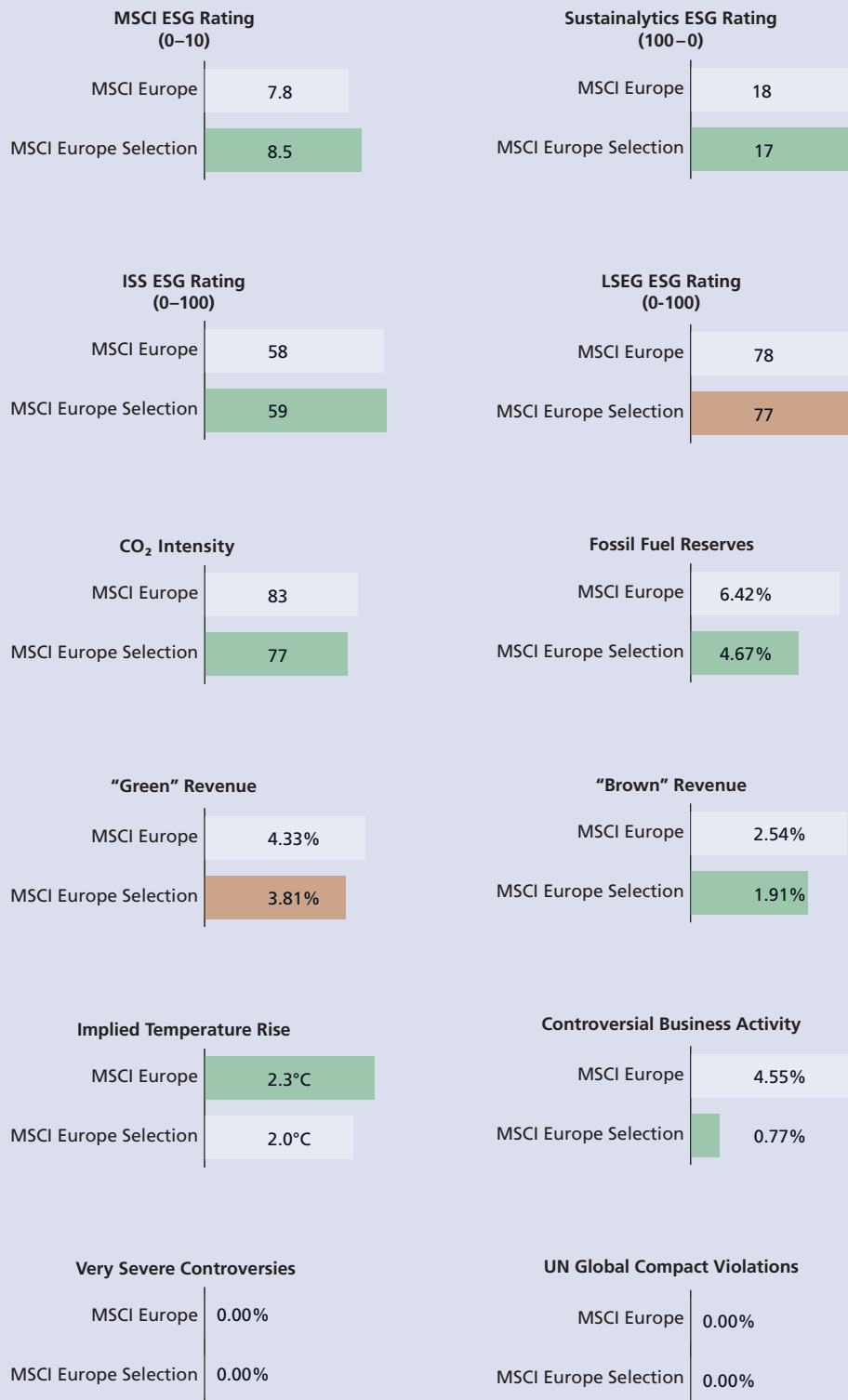


■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Figure 32: ESG characteristics of European equity indices

Comparison of the ESG characteristics of ETFs/index funds tracking the MSCI Europe and the MSCI Europe Selection.

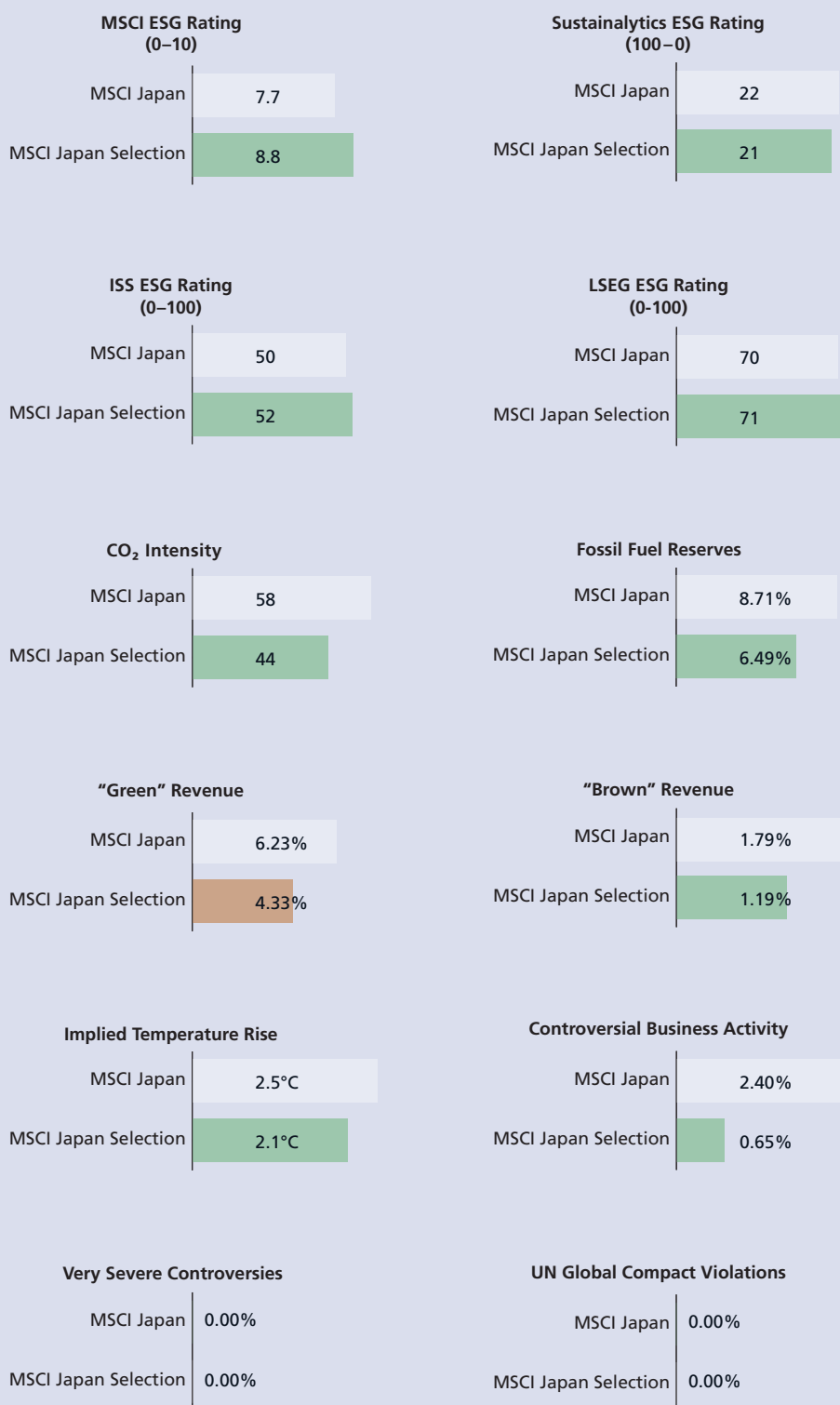


■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Figure 33: ESG characteristics of Japanese equity indices

Comparison of the ESG characteristics of ETFs/index funds tracking the MSCI Japan and the MSCI Selection.

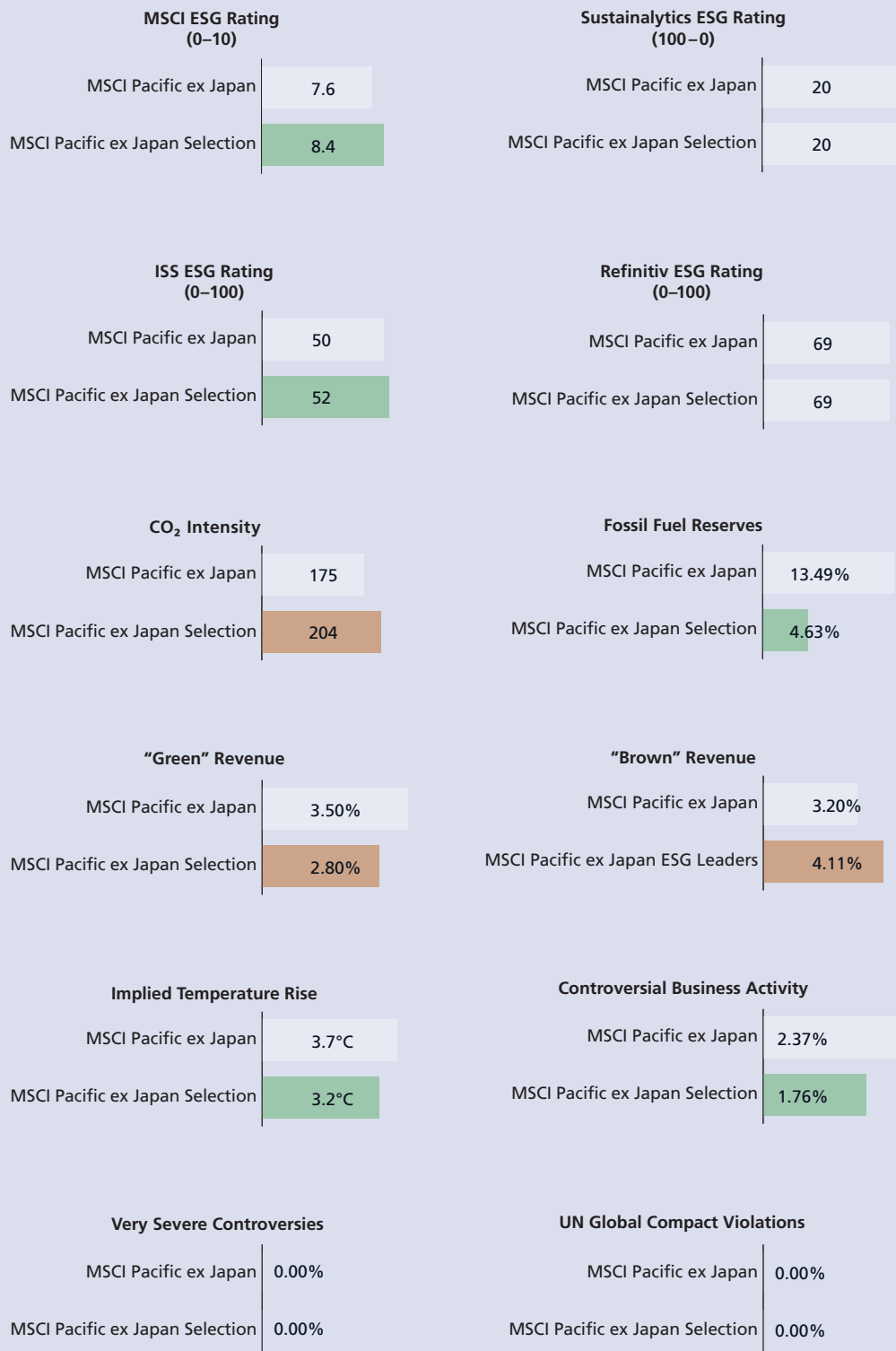


■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Figure 34: ESG characteristics of Asia Pacific equity indices

Comparison of the ESG characteristics of ETFs/index funds tracking the MSCI Pacific ex Japan Selection.

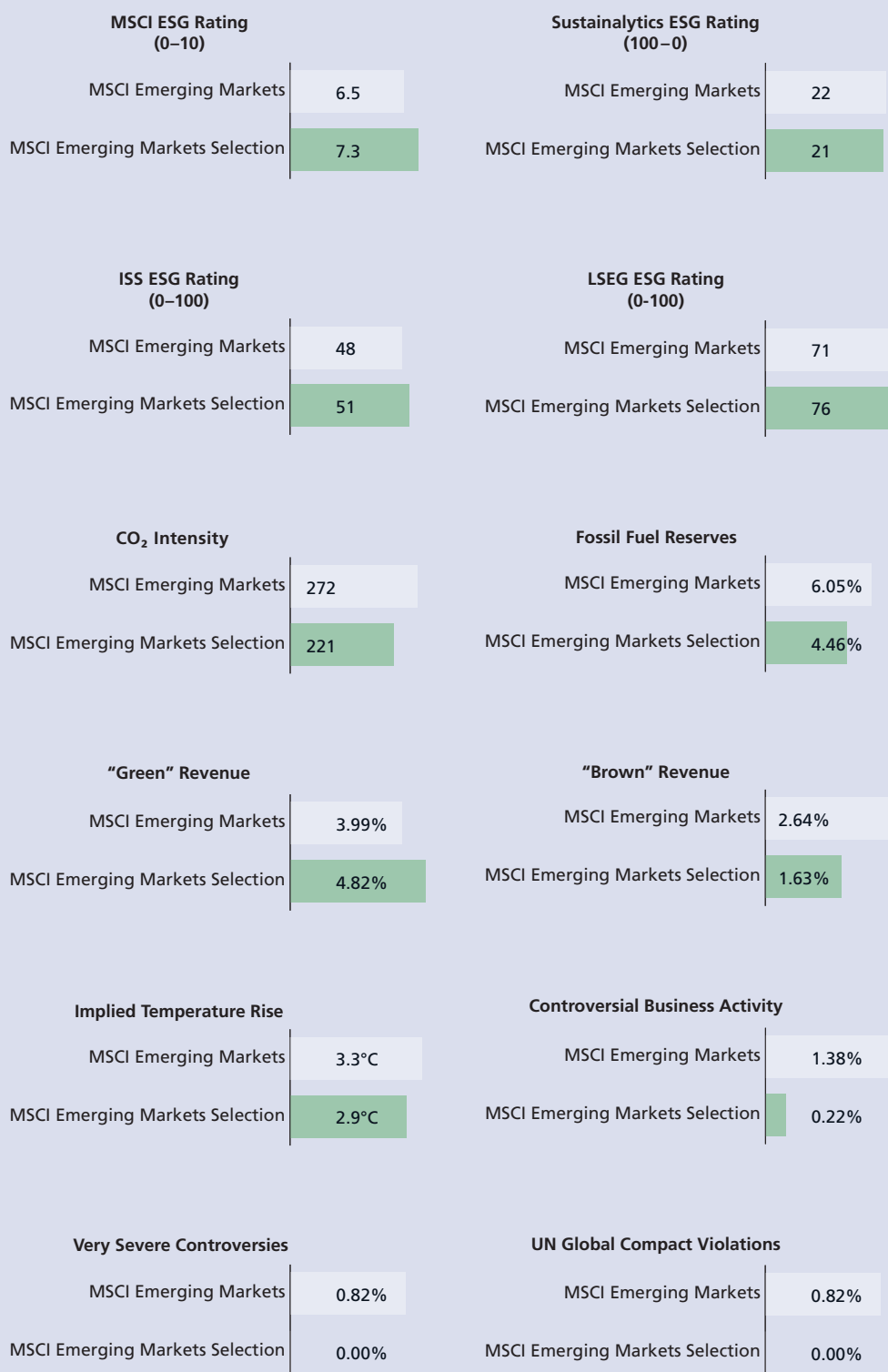


■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Figure 35: ESG characteristics of emerging markets equity indices

Comparison of the ESG characteristics of ETFs/index funds tracking the MSCI Emerging Markets and the MSCI Emerging Markets Selection.



■ Better than benchmark
■ Worse than benchmark

Source: VZ, MSCI ESG, Morningstar/Sustainalytics, ISS, Refinitiv, data as at 31 December 2025

Claim 5:

ESG equity ETFs are significantly more expensive than traditional products

ETFs continue to grow in popularity, largely because they are regarded as highly cost-efficient investment vehicles. However, investors often question whether they must pay higher fees when investing in ESG ETFs rather than traditional ETFs. At first glance, one might assume that ESG ETFs involve higher costs due to the additional ESG analysis and data requirements compared with conventional products.

The Total Expense Ratio (TER) provides the clearest indication of the ongoing costs of investment funds and ETFs. It includes all management fees, marketing expenses and custodian fees. It is expressed as a percentage of the fund's average assets under management. However, the TER should not be viewed in isolation, as other factors can also influence a fund's overall return. In the case of ETFs, these may include weak replication quality or a tax-inefficient fund domicile. At the same time, fund providers can enhance returns through securities lending or by selecting a tax-efficient fund domicile (see Fig. 36).

Lumin analysed the Total Expense Ratios (TERs) of ESG and traditional ETFs across different equity

regions listed on the London Stock Exchange. The results for the UK, Global, U.S., Europe, Japan, Asia-Pacific and Emerging Markets are shown in Fig. 37. To avoid distortions caused by double counting, products from the same provider tracking an identical underlying index were excluded from the analysis. In addition, ETFs focused on specific factors, sectors or themes within the respective regions were not included.

The TER of ESG equity ETFs is, on average, slightly higher than that of products tracking traditional indices in almost all regions, with a difference of between 0.02 and 0.03 percentage points. The exceptions are the smaller regions of Asia-Pacific and Japan, where ESG ETFs are, on average, cheaper. Across all regions, the range of average TERs, between 0.13 and 0.24 percent, is somewhat narrower for ESG ETFs.

The lowest-cost product is a traditional ETF in three regions and an ESG ETF in the other three. In most regions, the difference amounts to only 0.01 percentage points. However, in the UK, the cheapest traditional ETF is 0.08 percentage points less expensive, and in Emerging Markets it is 0.06 percentage points cheaper. The most expensive product is a traditional index ETF in all regions except Global equities. In Japan, the most expensive traditional ETF is more than twice as costly as the most expensive ESG ETF.

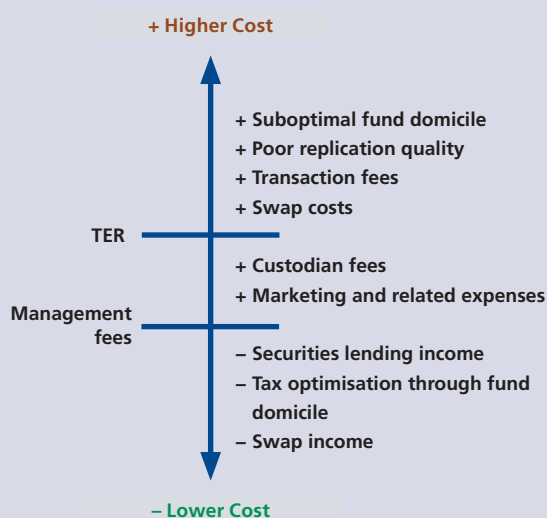
When comparing TERs across different investment regions, it becomes clear that the claim that ESG products are more expensive than traditional ones no longer holds in general. However, the average traditional ETF listed on the London Stock Exchange remains slightly cheaper than the average ESG ETF.

Cost differences can, in some cases, be attributed to individual providers. For example, a particularly low-cost fund or index provider may predominantly offer ESG products, while a comparatively more expensive provider may focus on traditional ETFs.

To eliminate provider-related fee differences, Figures 38 and 39 compare the TERs of comparable ESG and

Figure 36: Factors influencing the ongoing costs of ETFs

Illustrative list of various direct and indirect cost factors of ETFs.



Source: VZ

traditional World/European equity ETFs from the same fund provider (iShares and Amundi) and based on the same index provider (MSCI).

In the case of the Amundi products, a cost premium is evident for certain ESG ETFs. By contrast, for iShares ETFs, the costs of the ESG products are identical to those of the corresponding traditional ETF. Both iShares and Amundi have reduced the fees of certain ESG products since 2020. However, Amundi has also lowered the costs of its traditional ETFs, although it slightly increased the fee for the MSCI Europe SRI Filtered PAB. At the same time, Amundi launched a new ETF tracking the MSCI Europe Broad CTB, with a fee equal to the ETF tracking the traditional benchmark. Compared with actively managed equity funds, that can have TERs exceeding 1 percent, both

traditional and ESG ETFs are significantly more cost-efficient. In most cases, the cost differences between traditional and ESG ETFs are relatively small.⁵

Conclusion

In the past, ESG equity ETFs often carried a fee disadvantage compared with traditional equity ETFs. Today, this is less frequently the case, and the broad claim that ESG equity ETFs are significantly more expensive than traditional products is no longer accurate. Depending on the index and the product provider, fee differences may work either in favour of or against ESG ETFs. Investors are therefore advised to review and compare costs carefully before investing.

Figure 37: TER of traditional and ESG ETFs

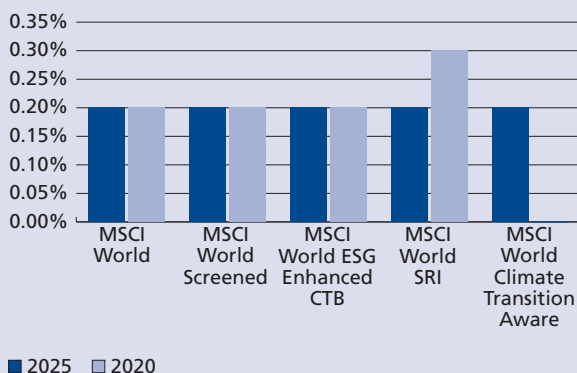
Comparison of the TER of ETFs tracking traditional and ESG equity indices across different equity regions.

	Number		Lowest TER		Average TER		Highest TER	
	Traditional	ESG	Traditional	ESG	Traditional	ESG	Traditional	ESG
United Kingdom	21	9	0.04%	0.12%	0.14%	0.16%	0.33%	0.28%
World	77	57	0.05%	0.04%	0.20%	0.23%	0.55%	0.60%
USA	86	69	0.03%	0.04%	0.10%	0.13%	0.50%	0.35%
Europe	67	50	0.05%	0.04%	0.14%	0.16%	0.40%	0.30%
Japan	50	39	0.05%	0.04%	0.20%	0.17%	0.64%	0.30%
Emerging Markets	61	55	0.10%	0.16%	0.23%	0.26%	0.74%	0.65%
Asia Pacific	29	25	0.10%	0.10%	0.32%	0.24%	0.74%	0.65%

Source: VZ, London Stock Exchange, Trackinsight as at 31 December 2025

Figure 38: Management fees of ESG global equity ETFs from iShares

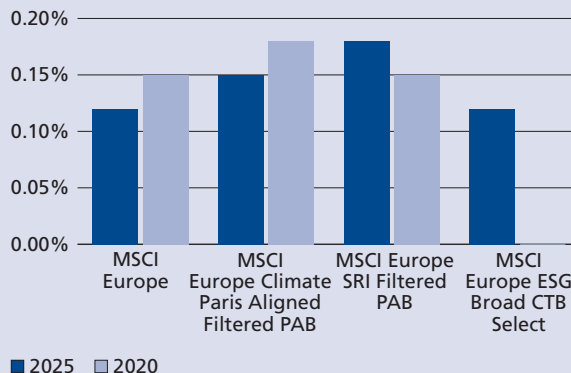
Comparison of the TER of ETFs tracking ESG MSCI World indices and the MSCI World from the same provider (iShares).



Source: VZ, Morningstar, as at 31 December 2025

Figure 39: Management fees of ESG European equity ETFs from Amundi

Comparison of the TER of ETFs tracking ESG MSCI European indices and the MSCI European from the same provider (Amundi).

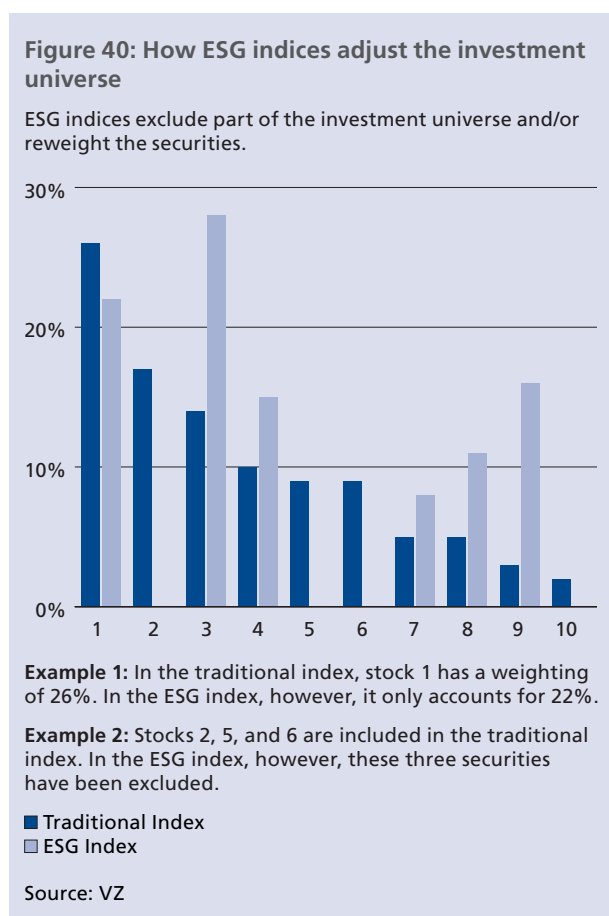


Source: VZ, Morningstar, as at 31 December 2025

Claim 6:

ESG equity ETFs enable investors to achieve higher returns compared with traditional investments

When investors allocate capital to ESG equity ETFs, they do not hold all securities within the investment universe, as would typically be the case with traditional ETFs. Instead, based on ESG criteria embedded in the underlying index methodology, certain securities are excluded and/or weighted more heavily or more lightly (see Fig. 40).



Such an approach to index construction is comparable to factor indices, such as a Value index (for example the MSCI World Value), where not all securities from the broader investment universe (for example the MSCI World) are included. Instead, only companies that meet specific valuation criteria are included.

With such indices, there is a deliberate deviation from the broad market. This raises the question for investors of whether this deviation will result in similar, higher or lower returns compared with the overall market.

To answer this question, it is important to recognise that ESG indices can differ to varying degrees from their traditional counterparts. A meaningful outperformance or underperformance can only occur if the ESG index deviates materially from the composition of the traditional index.

An example of a global equity ESG index that does not diverge significantly from its traditional benchmark is the MSCI World Screened Index compared with the MSCI World Index (see Fig. 41). The MSCI World Screened excludes around 8 percent of constituents, representing just over 6 percent of the market capitalisation of the MSCI World. As a result, sector and country allocations, as well as factor exposures, change only marginally. For such an index, neither significant outperformance nor significant underperformance would be expected relative to the traditional benchmark.

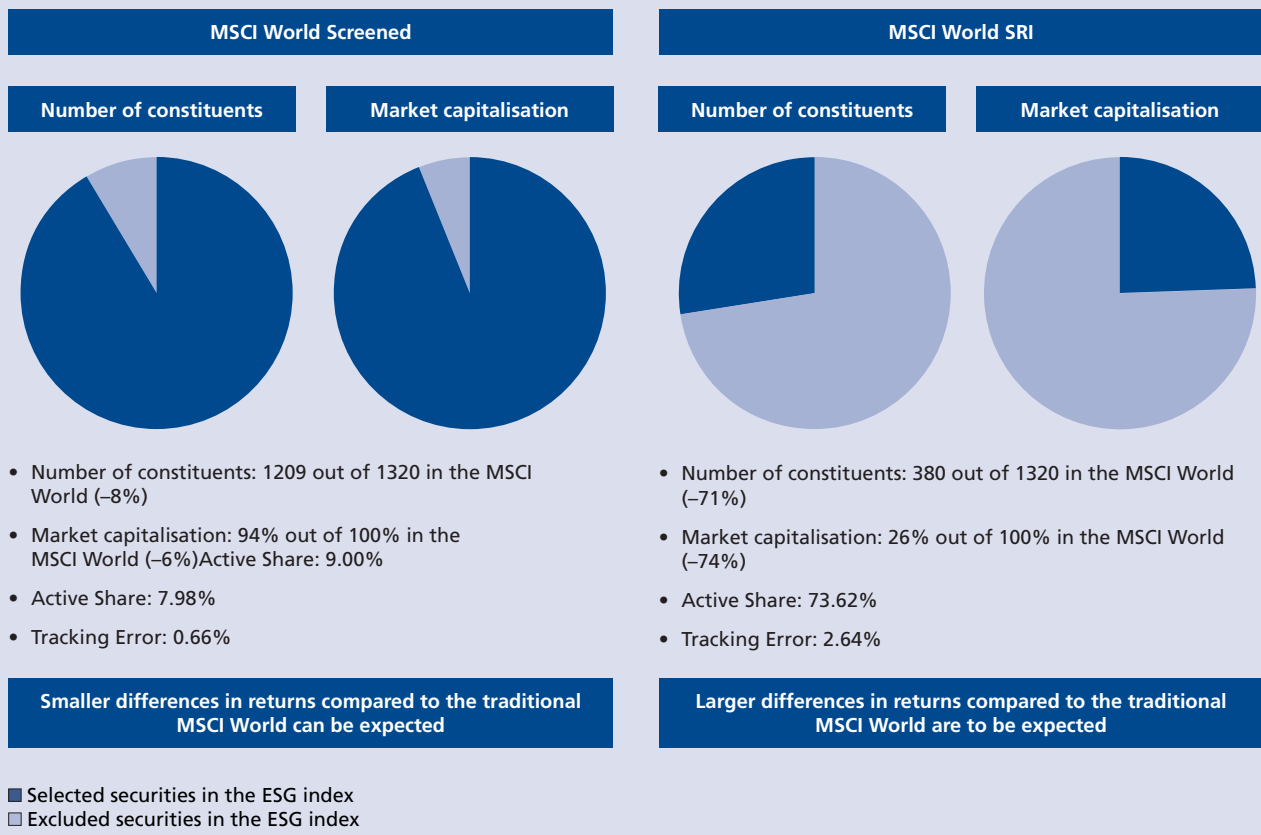
More pronounced deviations can be observed in the global ESG index MSCI World SRI (see Fig. 41, right). Measured by market capitalisation, around 75 percent of the constituents of the traditional index are excluded from this index. This has a noticeable impact on country and sector allocations, as well as on factor exposures such as size and quality. Due to this greater divergence in index composition, the potential performance deviation relative to the traditional benchmark increases, whether positively or negatively.

In addition to the extent of the change in the investment universe, investors should also clarify the basis on which these adjustments are made. There are now numerous ESG criteria and strategies that can be applied for security selection, exclusions or differentiated weightings (see Fig. 42). Even when the same ESG criteria are used, the resulting deviations in index composition can vary significantly.

For example, depending on which ESG ratings are used, and therefore what provider's methodology underpins the index, the resulting deviations can differ materially (see Claim 2).

Figure 41: ESG indices with differing degrees of deviation from the traditional index

Comparison of two ESG indices in terms of the number of constituents, market capitalisation, active share, and tracking error.



Source: VZ, MSCI, data as of 31 December 2025

Figure 42: Examples of sustainability criteria for the (non-)selection and/or weighting of securities

Overview of five sustainability criteria with selected examples.

Examples of ESG criteria	
ESG ratings	– ESG rating for MSCI ESG – ESG rating for ISS
Values-based criteria	– Revenue from alcohol or tobacco – Revenue from controversial weapons
Norms-based criteria	– UN Global Compact – OECD Guidelines
Climate-based criteria	– CO₂ intensity – Implied temperature rise
Impact-oriented criteria	– Revenue linked to the Sustainable Development Goals (SDGs) – Paris Climate Agreement

Source: VZ

- Does the exclusion of equities with low ESG ratings according to MSCI ESG lead to outperformance?
- Does the exclusion of equities with low ESG ratings according to ISS lead to outperformance?
- Does the exclusion of equities with high CO₂ emissions lead to outperformance?
- Do values-based exclusions lead to outperformance?

These specific questions are not taken into account when financial institutions rely on academic meta-studies to make broad claims that their ESG investment products entail no return disadvantage or may even offer a return advantage. Such meta-studies aggregate the findings of hundreds or even thousands of individual studies.

These individual studies generally examine whether, and to what extent, there is a relationship between ESG criteria and return metrics – whether neutral, positive

or negative. In one frequently cited meta-study, a positive relationship was identified in 48 percent of cases, while a negative relationship was observed in only 7 percent.⁶ However, investors should be aware that the underlying studies included in such meta-analyses can differ significantly in terms of methodology, scope and focus, and therefore also in their results.

In academic studies, a wide range of sustainability criteria is used. These may include data points such as CO₂ intensity, employee satisfaction or the proportion of women within a company (see also Fig. 42). In some instances, analysis incorporates a combination of these data points. In addition to overall ESG ratings, studies may also examine the individual ratings for the environmental, social and governance dimensions, often sourced from different ESG rating providers.

In most academic studies, return metrics are based on accounting measures at the company level, such as profit margins or return on equity. It is important to note that stronger corporate fundamentals do not necessarily translate into higher returns for investors. As such, these analyses are only of limited relevance when assessing the potential return advantages of ESG products.^{7 8}

Only a significantly smaller number of studies examine actual equity returns directly.⁹ Where stock returns are analysed, some studies explore theoretical relationships at the individual company level, assessing whether companies with certain ESG characteristics achieve higher equity returns. Relatively few studies compare the returns of real-world ESG equity indices or passive and active ESG funds with their traditional counterparts. According to meta-analyses, these studies show positive relationships in a smaller proportion of cases, around 16 percent and 21 percent respectively, while negative relationships are observed in 11 percent and 17 percent of cases.^{10 11}

Consequently, the large majority of individual studies indicate a neutral or inconclusive relationship.¹² However, such findings also depend on which specific funds or indices were examined in the analysis.

Individual studies can also vary with respect to the investment regions analysed, the time periods considered

and the analytical methodologies applied. Consequently, the results may differ significantly depending on these factors.

In addition, there are further considerations that should be critically assessed when interpreting such studies. These include, for example:

- Many studies do not meet the highest academic standards.¹³
- Individual study authors may face conflicts of interest, for example when conducting research commissioned by product providers.
- Depending on whether and how returns are adjusted for risk, the observed relationships may change.^{14 15}
- Apparent outperformance often disappears when returns are properly adjusted using a multi-factor model.^{16 17 18}
- Differences in security, sector or country exposures may, depending on the market phase, have a positive or negative impact on relative returns that is coincidental and unrelated to ESG factors.^{19 20 21}
- Methodologies used to calculate ESG data, such as ESG ratings, may change over time and affect results.²²
- Companies with strong ESG ratings may in some cases have developed a valuation premium, whereas in the past they traded at a discount.²³
- In certain instances, outperformance may have occurred entirely from increased investor demand for ESG investments.^{24 25 26 27}
- In general, observed correlations do not constitute proof of causal relationships.
- Relationships observed in the past do not necessarily hold in the future.
- Expected return deviations depend on many factors, many of which are not predictable.

It should also be noted that sustainability, or ESG, is not recognised in financial theory as an established factor in the same way as Value, Size or Momentum.²⁸
²⁹ In this context, it is important to remember that even well-established equity factors can experience extended periods of underperformance.

Unlike these widely accepted factors, potential risk-based or behavioural explanations for ESG-related return patterns have so far been less thoroughly researched. That said, theoretical models can be found that support both the expectation of outperformance and the expectation of underperformance.^{30 31 32 33}

Independent of ESG-specific considerations, empirical evidence suggests that deviations from the broad market tend, on average, to result in lower returns. When the investment universe is further constrained by the application of ESG criteria, it may, from a theoretical perspective, become even more challenging to outperform the market.

From a practical and simplified perspective, the following section illustrates how various MSCI World indices incorporating ESG considerations have performed compared with the traditional MSCI World Index. These comparisons are based on index-level data, meaning that ETF product costs are not taken into account (for fees, see Claim 5).

Figure 43 illustrates the return differences from the start of data availability for these indices through to the

end of 2025. Over these various periods, the ESG indices have performed slightly better than, or at least in line with, the traditional MSCI World Index. It should be noted that some of the reported returns are based on price simulations (backtesting), as certain indices were launched only at a later date. Such simulations may involve index optimisation or data mining, which can result in returns appearing more favourable than they might have been in real time. For this reason, Figure 44 additionally presents the live returns since the respective index launches. In this case, two of the four indices underperform the MSCI World, while one index performs slightly better and one performs almost identically. However, the observation periods in this comparison are shorter than in the previous analysis, which represents a general limitation of such comparisons.

Figure 45 shows the annual return deviations recorded by the indices over the period from 2014 to 2025. In recent years, at least some of the ESG indices have outperformed the traditional MSCI World Index (light grey fields). The outperformance has at times been modest, and in certain years relatively pronounced. However, the negative deviations, such as those observed in 2022, clearly illustrate that investors cannot

Figure 43: Return comparison of ESG global equity indices since the start of data

Total returns and annual returns compared with the MSCI World (in GBP and including dividends).

Index name	Available since	Total return	Return p.a.	Total return MSCI World	Return p.a. MSCI World	Return difference p.a.
MSCI World Screened	31.05.12	477.3%	13.8%	447.3%	13.3%	0.4%
MSCI World Selection	28.09.07	482.0%	10.1%	479.6%	10.1%	0.0%
MSCI World SRI	28.09.07	499.5%	10.3%	479.6%	10.1%	0.2%
MSCI World Climate Paris Aligned	26.11.13	324.2%	12.7%	304.8%	12.3%	0.4%

Source: VZ, Bloomberg as at 31 December 2025

Return comparison of ESG global equity indices since start of data.

Past performance is not a reliable indicator of future results. Some results shown are simulated, not actual performance.

Figure 44: Return comparison of ESG global equity indices since index launch

Total returns and annual returns compared with the MSCI World (in GBP and including dividends).

Index name	Creation date	Total return	Return p.a.	Total return MSCI World	Return p.a. MSCI World	Return difference p.a.
MSCI World Screened	22.10.18	141.4%	13.0%	132.9%	12.5%	0.6%
MSCI World Selection	01.10.07	477.8%	10.1%	474.8%	10.1%	0.0%
MSCI World SRI	28.06.11	414.1%	11.9%	427.5%	12.1%	-0.2%
MSCI World Climate Paris Aligned	26.10.20	83.6%	12.4%	93.7%	13.6%	-1.2%

Source: VZ, Bloomberg as at 31 December 2025

Return comparison of ESG global equity indices since index launch. Past performance is not a reliable indicator of future results.

assume an inherent return advantage. In each of the past two years, the MSCI World ranked second among the indices considered. It should again be noted that these comparisons are based on price simulations, or backtesting. When interpreting such analyses, this is

an important consideration, as simulated time series may, to some extent, be influenced by assumptions that do not fully reflect real-world conditions.

Finally, a few remarks on ESG thematic ETFs: this segment also includes products that remain relatively close to traditional indices, as well as ETFs that exhibit pronounced return deviations compared with traditional benchmarks.

Figure 46 presents the traditional MSCI World Index alongside two thematic indices focused on “Renewable Energy” and “Water.” While the S&P Global Water Index remains relatively close to the MSCI World over the period shown the S&P Global Clean Energy Transition Index exhibits much larger deviations. As illustrated in Figure 47 (shown on next page), the returns of the S&P Global Clean Energy Transition Index are significantly lower than those of the MSCI World in many years. Over the full period considered, the S&P Global Clean Energy Transition Index underperforms the MSCI World by a wide margin.

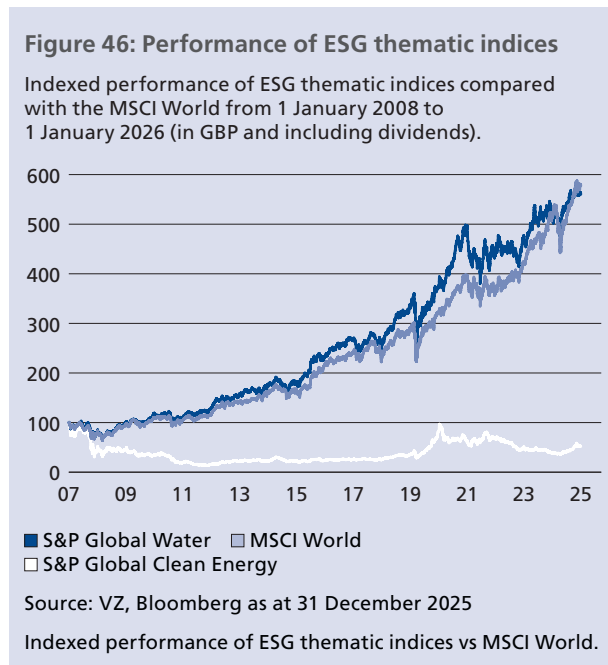


Figure 45: Annual returns of ESG global equity indices and the MSCI World

Calendar year return comparison from 2014 to 2025 (in GBP and including dividends).

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
MSCI World Climate PAB 13.7%	MSCI World Climate PAB 7.3%	MSCI World Climate PAB 29.1%	MSCI World Climate PAB 13.0%	MSCI World SRI -1.0%	MSCI World SRI 24.7%	MSCI World SRI 16.5%	MSCI World SRI 28.1%	MSCI World -8.4%	MSCI World SRI 21.2%	MSCI World Screened 22.3%	MSCI World Screened 12.9%
MSCI World Screened 12.0%	MSCI World Screened 5.7%	MSCI World SRI 28.5%	MSCI World SRI 12.9%	MSCI World Climate PAB -1.9%	MSCI World Climate PAB 24.3%	MSCI World Climate PAB 14.8%	MSCI World Selection 25.8%	MSCI World Selection -10.0%	MSCI World Screened 19.7%	MSCI World 21.0%	MSCI World 12.7%
MSCI World 11.6%	MSCI World 4.8%	MSCI World 28.3%	MSCI World Screened 11.8%	MSCI World Selection -2.1%	MSCI World Selection 23.2%	MSCI World Screened 14.2%	MSCI World Screened 23.2%	MSCI World Screened -10.1%	MSCI World Selection 18.9%	MSCI World Climate PAB 20.4%	MSCI World Selection 12.5%
MSCI World Selection 11.5%	MSCI World Selection 4.6%	MSCI World Selection 28.0%	MSCI World 11.7%	MSCI World Screened -3.0%	MSCI World Screened 23.2%	MSCI World 12.6%	MSCI World Climate PAB 22.9%	MSCI World Climate PAB -12.3%	MSCI World Climate PAB 18.8%	MSCI World Selection 19.6%	MSCI World Climate PAB 10.1%
MSCI World SRI 10.5%	MSCI World SRI 4.1%	MSCI World Screened 27.7%	MSCI World Selection 10.4%	MSCI World -3.1%	MSCI World 22.7%	MSCI World Selection 12.0%	MSCI World 22.9%	MSCI World SRI -13.3%	MSCI World 17.3%	MSCI World SRI 16.2%	MSCI World SRI 6.1%

Source: VZ, Bloomberg as at 31 December 2025

Past performance is not a reliable indicator of future results. Some results shown are simulated, not actual performance.

Annual returns of ESG global equity indices and the MSCI World.

Conclusion

By investing in ESG equity ETFs, investors deviate from the overall market composition in different ways based on specific ESG criteria and strategies. These deviations can result in either outperformance or underperformance. It is therefore true that ESG equity ETFs can generate excess returns. However, it is equally true that they can lead to negative return deviations. The extent of these differences depends on the index selected and the methodology applied. A careful, product-specific assessment is therefore worthwhile. Investors should also exercise caution if they are promised “at least equivalent returns” when investing in ESG products.

Figure 47: Annual returns of ESG thematic indices and the MSCI World

Calendar year return comparison from 2008 to 2025 (in GBP and including dividends).

Year	MSCI World	S&P Global Water Index	Return difference	S&P Global Clean Energy Transition	Return difference
2008	-19.35%	-17.06%	2.29%	-52.82%	-33.47%
2009	17.33%	19.06%	1.73%	-3.19%	-20.52%
2010	15.76%	19.56%	3.80%	-25.12%	-40.87%
2011	-5.04%	-6.71%	-1.67%	-44.27%	-39.23%
2012	10.60%	15.27%	4.67%	-20.14%	-30.74%
2013	24.20%	24.22%	0.02%	45.24%	21.04%
2014	11.57%	10.66%	-0.91%	1.17%	-10.40%
2015	4.83%	4.16%	-0.67%	7.33%	2.50%
2016	28.32%	27.50%	-0.81%	-1.38%	-29.70%
2017	11.73%	16.01%	4.28%	9.95%	-1.78%
2018	-3.14%	-4.31%	-1.17%	-3.42%	-0.28%
2019	22.69%	28.64%	5.95%	38.72%	16.03%
2020	12.61%	12.82%	0.21%	134.45%	121.84%
2021	22.86%	32.95%	10.09%	-22.75%	-45.61%
2022	-8.42%	-12.15%	-3.73%	6.28%	14.70%
2023	17.34%	8.84%	-8.50%	-24.51%	-41.85%
2024	20.98%	7.21%	-13.77%	-24.35%	-45.33%
2025	12.70%	10.05%	-2.65%	36.63%	23.93%

Source: VZ, Bloomberg as at 31 December 2025

Past performance is not a reliable indicator of future results. Annual returns of ESG thematic indices vs MSCI World. Returns shown are index returns and do not reflect product fees, charges or other implementation costs.

Claim 7:

By investing in ESG equity ETFs, investors are making a positive contribution to the climate

This claim raises the fundamental question of whether, and how, an investor can generate a positive impact, meaning a non-financial return, by investing in an equity ETF. In this context, impact refers to a positive or negative change relative to a defined baseline situation, affecting a specific parameter, that is causally attributable to a particular action and would not have occurred without that action. This is known as the principle of additionality. A simple example would be project financing provided to a company, representing the action, which enables it to expand production and manufacture a greater number of environmentally friendly solar panels – representing the impact, compared with the previous year, which serves as the baseline.^{34 35}

The concept of “impact” is, at least from a theoretical perspective, relatively clearly defined. In practice, however, it is often complex to demonstrate causal relationships and to measure actual changes. In this context, many investment products that claim to deliver impact lack robust evidence to substantiate those claims.

It is therefore not surprising that there have already been legal disputes concerning so-called “impact washing.” In one case, for example, a bank was prohibited from advertising that an investment in its impact equity fund would result in several tonnes of waste being saved.³⁶

When assessing potential impact channels of equity ETFs, it is important to distinguish between the impact generated by investors through their capital

allocation and the impact created by the companies themselves (see Fig. 48).

Investors do not have a direct impact on the world or on changes in key ESG parameters, such as the climate. However, they may influence corporate activities, commonly described as investor impact, which can in turn result in environmental or societal effects referred to as corporate impact. Investor impact therefore describes the change that investors help bring about in corporate impact. In recent years, significant progress has been made in measuring and improving data availability with regard to corporate impact. For example, in the disclosure of CO₂ emissions or in attributing portions of corporate revenues to the United Nations Sustainable Development Goals (SDGs). By contrast, there are currently very few robust metrics and limited data available to assess investor impact directly.

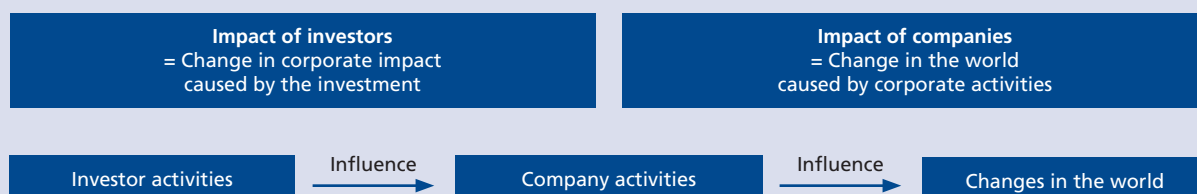
It is important not to confuse “creating impact” with “impact alignment.” When investment products, such as funds or structured products, are marketed as delivering “impact,” this often means that the companies held within the portfolio are aligned with certain sustainability objectives – for example the Paris Climate Agreement.

However, this does not automatically mean that investors contribute to those sustainability goals simply by purchasing such products.³⁷

A positive contribution, for example to the climate, can potentially be achieved through investment products

Figure 48: Impact of investors and companies

Investors can potentially initiate change indirectly by influencing companies.



Source: VZ, Illustration based on Kölbel et al. (2020) and Wilkens et al. (2022)

such as equity ETFs by influencing corporate activities via three impact channels (see Fig. 49): capital allocation, active engagement, and other indirect effects.

The following section describes these three impact channels and their potential effectiveness.^{38 39 40 41 42 43}

Impact channel 1 (capital allocation) relates to the buying and selling of shares carried out by physically replicating ETFs based on ESG considerations – for example, purchases due to strong ESG ratings^{44 45} or sales due to high CO₂ emissions. It is important to recognise that such transactions take place on the stock exchange in the secondary market. As a result, no capital directly flows to or from the company itself. In certain circumstances, however, these transactions may influence a company’s share price or cost of capital – for example if a large number of investors sell the stock due to high CO₂ emissions. This, in turn, could incentivise management to reduce emissions.

From an academic perspective, there is some evidence suggesting that, under certain conditions that are not necessarily easy to fulfil, investors can influence share prices through such transactions.⁴⁷ However, the magnitude of this effect remains unclear. There is no robust evidence that these effects, such as higher financing

costs, subsequently lead to a material change in corporate ESG practices.

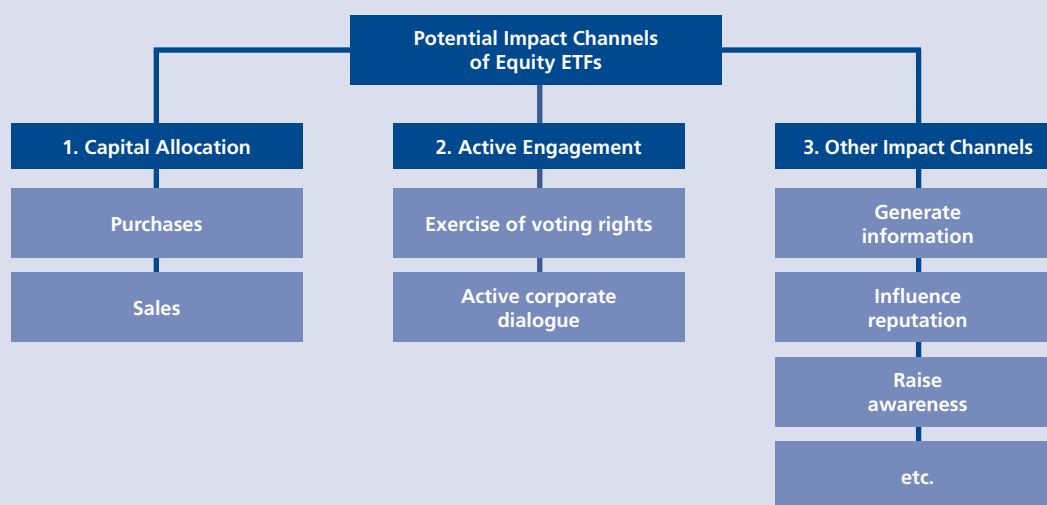
One study suggests that sales of “brown” stocks by equity funds are associated with lower share prices and lower CO₂ emissions thereafter.⁴⁸ It should also be considered that investor pressure could, in some cases, even worsen outcomes, as described by the “green paradox.” For example, more heavily regulated companies may divest carbon-intensive business segments to foreign or private firms that face less regulatory or investor scrutiny.⁴⁹

Impact channel 2, referred to as active engagement or investment stewardship, involves two primary mechanisms through which an ETF’s fund management can potentially generate a positive impact: exercising voting rights and engaging in active dialogue with companies.

By exercising their shareholder rights, investors can influence corporate decision-making. For example, a proposal at a company’s annual general meeting may be rejected if it does not align with the ESG policy of the ETF or the fund provider. Shareholders can also express dissatisfaction with a company’s sustainability strategy by voting against the re-election of certain board members. Providers of ESG equity ETFs

Figure 49: Impact channels of equity ETFs

Possible impact mechanisms of equity ETFs.



Source: VZ, Illustration based on Kölbel et al. (2020) and Wilkens et al. (2022)

increasingly exercise their voting rights. They typically set out voting guidelines that specify how votes should be cast on different issues. In some cases, external specialised providers are engaged to support the voting process. ISS, short for Institutional Shareholder Services, is regarded as one of the leading proxy advisors. Voting reports from various providers are also increasingly made publicly available. The proportion of holdings within an ETF for which voting rights are exercised depends on the fund provider and, above all, on the region in which the ETF is invested. For ETFs tracking UK equity indices, voting rights are usually exercised for almost all holdings. By contrast, for ETFs tracking emerging market indices, voting may take place for only around half of the positions. It should also be noted that most fund providers do not differentiate in their voting behaviour between ESG ETFs, traditional ETFs or actively managed funds

In addition to exercising voting rights, fund management can seek to exert greater influence through engagement activities. In this context, the ETF enters into an active, and typically long-term, dialogue with company management in order to influence corporate policy and ESG-related decisions. In some cases, these engagement activities are delegated by the fund management to specialised firms, such as Morningstar/Sustainalytics.

Engagement can take place through various channels, such as meetings, written correspondence or representation on the board of directors. The aim is to encourage companies to adopt specific measures. For example, a company may be asked to enhance its sustainability reporting or to develop a clear decarbonisation strategy.

If dialogue with management does not lead to the desired outcomes, fund managers may escalate their actions – for instance by threatening to vote against certain board members, reject remuneration proposals or ultimately divest the holding.

Not all fund management companies disclose whether engagement is conducted and, if so, with how many companies within a given fund. In many cases, only a small proportion of holdings, for example 0 to

10 percent, are subject to active engagement. As with voting, engagement is generally not limited to ESG equity ETFs but is also carried out for traditional ETFs.

With regard to the effectiveness of active engagement, the likelihood of success tends to increase when shareholders hold a significant stake in a company. That said, there are also examples of interventions by smaller shareholders that have led to meaningful corporate changes. In some instances, voting rights are pooled through shareholder initiatives, such as Climate Action 100+, in order to strengthen collective influence.

From an academic perspective, engagement can lead to positive corporate outcomes if certain conditions are met. However, further comprehensive research is still needed in this area.

Figure 49 presents three key impact channels. It is entirely possible that additional mechanisms exist beyond those illustrated.

Lastly, impact channel 3 relates to the indirect pathways through which impact may arise. In this case, the activities of investors may influence third parties, such as consumers or other investors, who in turn may affect corporate behaviour. For example, increased demand for ESG investments may lead to the generation and publication of additional ESG information and data, thereby raising awareness. This could result in positive or negative reputational effects for companies. It may also heighten awareness of ESG issues among consumers, potentially leading to behavioural changes, including in areas such as political voting decisions.

There is currently no empirical research or robust evidence supporting these potential effects through impact channel 3. As such, these mechanisms should be regarded as conceptual narratives rather than empirically validated impact pathways.

Conclusion

Academic literature does provide theoretical explanations and narratives suggesting that investing in an ESG equity ETF could, for example, have a positive impact on the climate by influencing corporate behaviour. However, to what extent such positive effects materialise in practice remains relatively unclear and is difficult to measure or substantiate.

Current empirical studies indicate that any meaningful positive impact is most likely to be achieved through active engagement by the fund provider. For other impact channels, there is little supporting evidence. This does not necessarily mean that an investment cannot have some positive effect, but the magnitude and reliability of such an effect remain uncertain. At present, the most balanced answer to the question of whether investing in an equity ETF generates positive outcomes, such as for the climate, would be “in some cases, perhaps to a limited extent.” Investors should therefore apply careful scrutiny when financial institutions promote investment products on the basis of delivering impact.

Conclusions

The range of ESG investment products, and with it overall complexity, has increased significantly in recent years. Individual products can differ substantially, not least because the concept of ESG investing is not uniformly defined.

In many cases, however, ESG products do not differ materially from traditional investment solutions. Investors should therefore assess whether, and to what extent, the ESG characteristics that are relevant to them are genuinely improved compared with conventional investments.

It is also important to recognise that strong ESG characteristics do not automatically mean that an investor is generating a positive environmental or social impact. For most investment products, any material positive impact is uncertain and difficult to measure or substantiate.

Investors should therefore critically examine the proposed impact channels whenever providers market products on the basis of delivering positive outcomes.

Whether and to what extent ESG criteria should be explicitly incorporated into an investment strategy is ultimately a decision that investors must make individually, based on their own objectives and motivations.

Independent advice, free from conflicts of interest, can help ensure that clients receive an objective assessment of the potential advantages and disadvantages of ESG products.

In particular, where providers promote and offer their own ESG products, the independence of the advice provided should be critically examined.

Investors should also be aware that improving ESG characteristics typically comes at the expense of benchmark proximity. As a result, performance may deviate from the broader market. Depending on the investment region, the specific ESG strategies or criteria applied, and the prevailing market environment, these deviations may be positive, resulting in outperformance, or

negative, resulting in underperformance. From an empirical perspective, and independently of ESG considerations, it is important to recognise that deviations from the broad market do not typically reward investors over the long term.

Nevertheless, some asset managers may use the ESG theme as an opportunity to repackage active and often more expensive investment products. Investors should therefore carefully review any changes made to their portfolios when asset managers proactively convert existing investment solutions into ESG offerings.

For example, it is important to clarify whether fees have increased or whether additional risks, such as counterparty risk, have been introduced.

The UK Financial Conduct Authority (FCA) and the European Securities and Markets Authority (ESMA) have both published warnings about the risk of 'greenwashing' and the repackaging of existing products as ESG to attract inflows or justify higher fees. For example, ESMA's 2024 report on impact washing highlights regulatory concerns about funds being rebranded as ESG without substantive changes to their investment process or impact.³⁶

Bibliography

- ¹ Gibson, R., Krueger, P. & Schmidt, P. (2021). *ESG Rating Disagreement and Stock Returns*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3433728.
- ² Berg, F., Kölbel, J. & Rigobon, R. (2022). Aggregate Confusion: *The Divergence of ESG Ratings*. Review of Finance, Vol. 26, No. 6. Available at: <https://academic.oup.com/rof/article/26/6/1315/6590670>.
- ³ Kimbrough M. D., Wang X. F., Sijing W. & Zhang J. I. (2022). *Does Voluntary ESG Reporting Resolve Disagreement Among ESG Rating Agencies?* Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4128503.
- ⁴ Berg, F., Kölbel, J. & Rigobon, R. (2022). *Aggregate Confusion: The Divergence of ESG Ratings*. Review of Finance, Vol. 26, No. 6. Available at: <https://academic.oup.com/rof/article/26/6/1315/6590670>.
- ⁵ Morningstar (2025). *Morningstar's 2024 Annual US Fund Fee Study*. Available at: <https://www.morningstar.com/business/insights/research/annual-us-fund-fee-study>.
- ⁶ Friede, G., Busch, T. & Bassen, A. (2015). *ESG and Financial Performance: Aggregated Evidence from more than 2000 Empirical Studies*. Journal of Sustainable Finance & Investment. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2699610.
- ⁷ Escobar-Saldívar, L. J., Villarreal-Samaniego, D., & Santillán-Salgado, R. J. (2025). *The effects of ESG scores and ESG momentum on stock returns and volatility: Evidence from US markets*. Journal of Risk and Financial Management, 18(7), 367. Available at: <https://www.mdpi.com/1911-8074/18/7/367>
- ⁸ Bruno, G., Esakia, M. & Goltz, F. (2021). *Honey, I Shrunk the ESG Alpha: Risk-Adjusting ESG Portfolio Returns*. The Journal of Investing. Available at: <https://www.pm-research.com/content/iiinvest/early/2021/12/15/joi20211215>.
- ⁹ Friede, G., Lewis, M., Bassen, A., Busch, T. (2015). *ESG & Corporate Financial Performance: Mapping the global landscape*. Deutsche Asset & Wealth Management. Available at: <https://www.stern.nyu.edu/sites/default/files/assets/documents/DeutscheESG2015.pdf>.
- ¹⁰ Atz, U., Van Holt, T., Zongyuan, Z. L., Christopher, C. B. (2022). *Does Sustainability Generate Better Financial Performance? Review, Meta-analysis, and Propositions*. Journal of Sustainable Finance and Investment. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3708495.
- ¹¹ Friede, G., Lewis, M., Bassen, A., Busch, T. (2015). *ESG & Corporate Financial Performance: Mapping the global landscape*. Deutsche Asset & Wealth Management. Available at: <https://www.stern.nyu.edu/sites/default/files/assets/documents/DeutscheESG2015.pdf>.
- ¹² Atz, U., Van Holt, T., Zongyuan, Z. L., Christopher, C. B. (2022). *Does Sustainability Generate Better Financial Performance? Review, Meta-analysis, and Propositions*. Journal of Sustainable Finance and Investment. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3708495.
- ¹³ Atz, U., Van Holt, T., Zongyuan, Z. L., Christopher, C. B. (2022). *Does Sustainability Generate Better Financial Performance? Review, Meta-analysis, and Propositions*. Journal of Sustainable Finance and Investment. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3708495.
- ¹⁴ Bruno, G., Esakia, M. & Goltz, F. (2021). *Honey, I Shrunk the ESG Alpha: Risk-Adjusting ESG Portfolio Returns*. The Journal of Investing. Available at: <https://www.pm-research.com/content/iiinvest/early/2021/12/15/joi20211215>.
- ¹⁵ Atz, U., Van Holt, T., Zongyuan, Z. L., Christopher, C. B. (2022). *Does Sustainability Generate Better Financial Performance? Review, Meta-analysis, and Propositions*. Journal of Sustainable Finance and Investment. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3708495.

- ¹⁶ Bruno, G., Esakia, M. & Goltz, F. (2021). *Honey, I Shrunk the ESG Alpha: Risk-Adjusting ESG Portfolio Returns*. The Journal of Investing. Available at: <https://www.pm-research.com/content/iiinvest/early/2021/12/15/joi20211215>.
- ¹⁷ Plagge, J.-C. (2020). *Studie: Müssen ESG-Anleger auf Rendite verzichten?* Available at: <https://www.finanzen.net/nachricht/fonds/studie-muessen-esg-anleger-auf-rendite-verzichten-8980663>.
- ¹⁸ Edmans, A. (2022). *Is There Really No Evidence That ESG Strategies Outperform?* Available at: <https://www.growthepic.net/is-there-really-no-evidence-that-esg-strategies-outperform>.
- ¹⁹ Choi, D., Gam, Y. K., Kim, Y. H., Muravyev, D., & Shin, H. (2024). *Market Risk Premium and ESG Risk*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4762314.
- ²⁰ Cornell, B. (2021). ESG preferences, risk and return. *European Financial Management*, 27(1), 12-19. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3683390
- ²¹ Bruno, G., Esakia, M. & Goltz, F. (2021). *Honey, I Shrunk the ESG Alpha: Risk-Adjusting ESG Portfolio Returns*. The Journal of Investing. Available at: <https://www.pm-research.com/content/iiinvest/early/2021/12/15/joi20211215>.
- ²² Berg, F., Fabisik, K., Sautner, Z. (2021). *Is History Repeating Itself? The (Un)predictable Past of ESG Ratings*. ECGI Working Paper Series in Finance. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3722087.
- ²³ Bofinger, Y., Heyden, K. J., & Rock, B. (2022). Corporate social responsibility and market efficiency: Evidence from ESG and misvaluation measures. *Journal of Banking & Finance*. Available at: <https://papers.ssrn.com/sol3/Delivery.cfm?abstractid=3571211>
- ²⁴ Bruno, G., Esakia, M. & Goltz, F. (2021). *Honey, I Shrunk the ESG Alpha: Risk-Adjusting ESG Portfolio Returns*. The Journal of Investing. Available at: <https://www.pm-research.com/content/iiinvest/early/2021/12/15/joi20211215>.
- ²⁵ Atz, U., Van Holt, T., Zongyuan, Z. L., Christopher, C. B. (2022). *Does Sustainability Generate Better Financial Performance? Review, Meta-analysis, and Propositions*. *Journal of Sustainable Finance and Investment*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3708495.
- ²⁶ Van der Beck, P. (2021). *Flow-Driven ESG Returns*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3929359.
- ²⁷ Pástor, L., Stambaugh, R. & Taylor, L. (2022). *Dissecting green returns*. *Journal of Financial Economics*, Vol. 146, No. 2. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0304405X22001672>.
- ²⁸ West, J. & Polychronopoulos, A. (2020). *Is ESG a Factor?* Research Affiliates. Available at: <https://www.researchaffiliates.com/publications/articles/813-is-esg-a-factor>.
- ²⁹ Dobrick, J., Klein, C., & Zwergel, B. (2025). *ESG as risk factor*. *Journal of Asset Management*, 26(1), 44-70. Available at: <https://link.springer.com/article/10.1057/s41260-024-00382-z>.
- ³⁰ Edmans, A. (2023). *Applying Economics – Not Gut Feel – To ESG*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4346646.
- ³¹ Behnke, F. & Plagge, J.-C. (2022). *Which factors drive ESG fund performance?* Vanguard Investor Webinar.
- ³² Cornell, B. (2021). ESG preferences, risk and return. *European Financial Management*, 27(1), 12-19. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3683390.
- ³³ Sautner, Z., Van Lent, L., Vilkov, G., & Zhang, R. (2023). *Firm-level climate change exposure*. *The Journal of Finance*, 78(3), 1449-1498. Available at: <https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/jofi.13219>.

- ³⁴ Kölbel, J., Heeb, F., Paetzold, F. & Busch, T. (2020). *Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact*. SAGE Journals (Organization & Environment). Available at: <https://journals.sagepub.com/doi/full/10.1177/1086026620919202>.
- ³⁵ Heeb, F. (2021). *Does impact need to be measurable to count as impact?* Available at: <https://www.linkedin.com/pulse/does-impact-need-measurable-count-intentional-florian-heeb>.
- ³⁶ LexGo (2024). *ESMA reports on impact-washing concerns around funds focused on the United Nations Sustainable Development Goals*. Available at: <https://www.lexgo.be/en/news-and-articles/13284-esma-reports-on-impact-washing-concerns-around-funds-focused-on-the-united-nations-sustainable-development-goals>
- ³⁷ Busch, T., Bruce-Clark, P., Derwall, J., Eccles, R., Hebb, T., Hoepner, A., Klein, C., Krueger, P., Paetzold, F., Scholtens, B. & Weber, O. (2021). *Impact investments: a call for (re)orientation*. SN Business & Economics. Available at: <https://link.springer.com/article/10.1007/s43546-020-00033-6>.
- ³⁸ Heeb, F. & Kölbel, J. (2020). *The Investor's Guide to Impact. Evidence-based advice for investors who want to change the world*. University of Zurich (Center for Sustainable Finance and Private Wealth CSP). Available at: https://www.csp.uzh.ch/dam/jcr:8ab39cba-07ad-4dbf-9f1d-676ecdd36fcf/CSP_Investors%20Guide%20to%20Impact_9_3_2021_pages.pdf.
- ³⁹ Wilkens, M., Rohleder, M. & Zink, J. (2025). *The Impact of Sustainable Investment Funds – Impact Channels, Status Quo of Literature, and Practical Applications*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4205546.
- ⁴⁰ Kölbel, J., Heeb, F., Paetzold, F. & Busch, T. (2020). *Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact*. SAGE Journals (Organization & Environment). Available at: <https://journals.sagepub.com/doi/full/10.1177/1086026620919202>.
- ⁴¹ Pedersen, L. H. (2025). *Can Sustainable Finance Save the Planet?*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5549819.
- ⁴² Caldecott, B., Clark, A., Harnett, E., & Liu, F. (2024). *How sustainable finance creates impact: transmission mechanisms to the real economy*. Review of World Economics, 1-33. Available at: <https://link.springer.com/content/pdf/10.1007/s10290-024-00541-9.pdf>
- ⁴³ Wilkens, M., Rohleder, M. & Zink, J. (2025). *The Impact of Sustainable Investment Funds – Impact Channels, Status Quo of Literature, and Practical Applications*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4205546.
- ⁴⁴ Pedersen, L. H. (2025). *Can Sustainable Finance Save the Planet?*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5549819.
- ⁴⁵ Berg, F., Heeb, F. & Kölbel, J. F. (2022). *The Economic Impact of ESG Ratings*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4088545.
- ⁴⁶ Heeb, F., Kellers, A. & Kölbel, J. (2020). *Does ESG integration impact the real economy? A theory of change and review of current evidence*. University of Zurich (Center for Sustainable Finance and Private Wealth CSP). Available at: https://www.csp.uzh.ch/dam/jcr:aeea438a-ed4c-4565-b269-e7dc07f3cc07/BAFU%20Report_DIGITAL_spreads.pdf.
- ⁴⁷ Pedersen, L. H. (2025). *Can Sustainable Finance Save the Planet?*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5549819.
- ⁴⁸ Wu, Y. (2025). Carbon Footprint of Private Equity. In *The Palgrave Encyclopedia of Private Equity*. Cham: Springer Nature Switzerland.
- ⁴⁹ Wilkens, M Hartzmark, S. M., & Shue, K. (2022). *Counterproductive sustainable investing: The impact elasticity of brown and green firms*. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4359282

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