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Investment Institute *Asset Class Views*

Is there a premium for low-carbon-intensity European equities?

Exploring the potential benefits of investing in carbon efficient companies in Europe

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Key points

- 2022 was only the third year in 12 when a key ESG leaders index has underperformed the broader market
- From a pure carbon intensity perspective, the best performing companies appear to outperform their European peers over the longer term
- The most carbon-efficient companies may offer greater diversification relative to ESG indices and European benchmarks to a larger extent
- The best-performing low-carbon intensity companies appear to less impacted by the real rates regime compared to growth stocks
- A carbon efficiency strategy may offer an interesting complement for stock pickers

A tough year for ESG-led investing

2022 marked the end of a bonanza decade for equity investors. A myriad of events disrupted investor sentiment, but one of the most influential aspects was how runaway inflation brought an end to the 'central bank put' – the idea that monetary policy would always step in to limit equity market losses.

The rise in real interest rates had a clear impact on growth stocks, given their long duration,[1] but also dragged on the performance of European indices focused on environmental, social and governance (ESG) factors (Exhibit 1). Last year was only the third time in the last 12 that the MSCI ESG Europe Leaders Index has underperformed the broader European equity market.

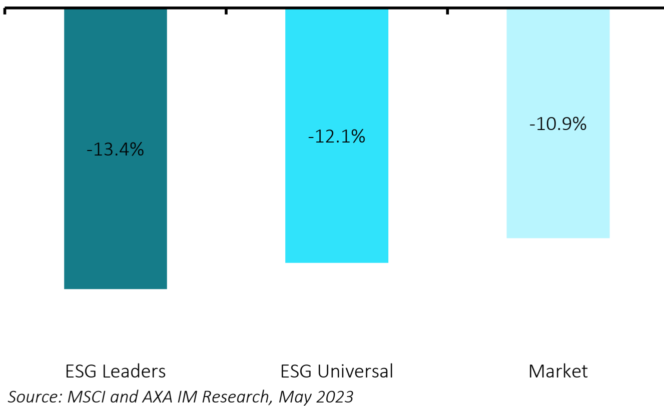
The widely held view that rates are going to remain higher for longer is making potential growth opportunities scarcer for equity investors. With the hurdle rate to beat now being higher for companies, we think that a thoughtful and long-term assessment of the most compelling investment themes in play will be more important than ever.

[1] Makonga, E., The real story behind the value/growth rotation, AXA IM Research, 7 April 2022

Consequently, we believe that all sorts of investments that support the transition to a more environmentally sustainable economy may be relevant. The aim of this study is to determine whether **the least carbon-intensive European companies** have been rewarded by investors – and whether there is sufficient evidence to support the continued growth and influence of sustainable investment.

Exhibit 1: An unusual year for ESG equity investments[2]

European equity market - 2022 Annual returns



Source: MSCI and AXA IM Research, May 2023

The low-carbon-intensity strategy

We define the **lowest carbon intensity group** as the MSCI Europe companies with a carbon intensity score below the 20th percentile using – direct (scope 1 and scope 2) emissions per million dollars of revenue.[3]

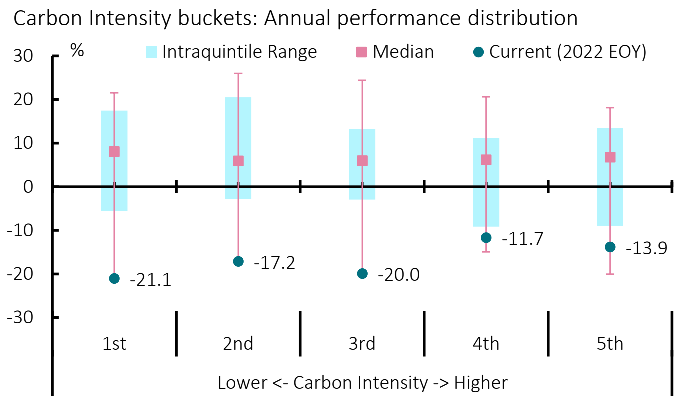
The groups are rebalanced on an annual basis and the carbon intensity scores normalised by sector to capture best-in-class companies across industries and avoid excluding the most at-stake firms. The methodology is explained in the Appendix.

In Exhibit 2, which covers the 2011-2022 period, we can see that the most carbon efficient companies (first quintile) post a median annual performance of +8.1% whilst the remaining baskets fail to exceed +7%. Simply put, the most carbon efficient companies have tended to outperform since 2011 – although past performance is not a guide to future returns.[4]

Relative to the European equity market, low-carbon-intensity European companies have averaged an excess return of 60 basis points (+3.9% versus +3.3%) per calendar year since 2011. This outperformance is reasonably consistent, in our view, as the top quintile's excess return over the market has been positive seven out of 12 years.

Exhibit 2: Carbon efficient stocks are better in average

Carbon Intensity buckets: Annual performance distribution



Source: Refintiv and AXA IM Research, May 2023

So how about 2022? As we can see in Exhibit 2(dark blue dots), it was the worst year for performance among those companies in the top quintile, down 21.1% over the 12 months.

Structurally, low carbon intensity companies tend to exhibit some growth characteristics, as evidenced by projections for annual growth three years out from now (known as FY3)[5] and the valuation premium to the market. In common with growth, the low-carbon-intensity basket has suffered greatly following 2021, when valuation levels and sales growth were considerably ahead of average.[6]

Consequently, a natural question arises – do companies showing low carbon intensity show any substantial differentiation compared to growth stocks? Looking at the behaviour of the bucket versus the MSCI Europe Growth benchmark, we notice that the two strategies tend to diverge depending on the level of real rates.

The low-carbon-intensity bucket appears to be discount rate neutral. Indeed, the average annual performance of the basket **does not vary according to the German real rates regime** (which we use as a proxy for Europe as a whole) whereas it does for the growth sector (Exhibit 3).

At times when real rates are higher, and growth suffers, the low-carbon-intensive bucket seems to be a potentially good alternative to growth.

[2] On an annual basis, the MSCI Europe ESG Leaders index has returned +4.7% on average, with outperformance relative to the market of +0.7% since 2011.

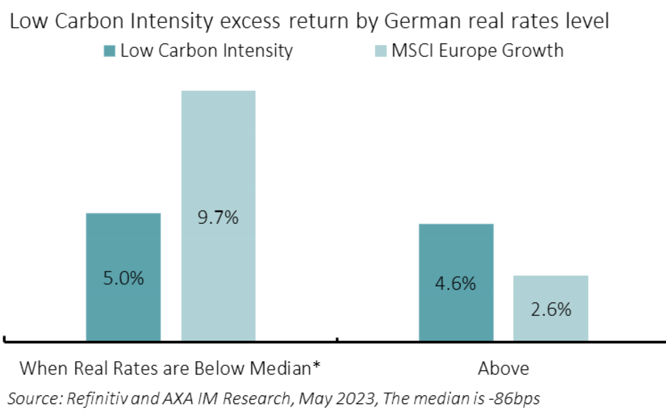
[3] **Scope 1:** All direct greenhouse gas (GHG) emissions linked to a company's own operations. **Scope 2:** Indirect GHG emissions stemming from the consumption of purchased electricity, heat or steam. **Scope 3:** Other indirect emissions coming from the supply chain of a company and from its customers (i.e., before and after its own operations).

[4] Our study covers the European equity market from 2011, by which time at least 70% of the companies have reported their emissions data (see Appendix).

[5] We use companies' FY3 IBES sales forecasts as they are less sensitive to cyclical shocks that may occur in the short term

[6] Source: Bloomberg and AXA IM Research, March 2023

Exhibit 3: Growth and low intensity stocks diverge depending on the real rates regime



Source: Refinitiv and AXA IM Research, May 2023, The median is -86bps

Thus, independently of real rates, the underperformance of the basket in relation to growth in 2022 is mainly explained by its overweight in the transportation sector (-25.6% year on year in 2022). On the one hand, the slowdown in global demand has led to the easing of bottlenecks (a drop in transportation fees), and on the other hand, the rise in commodities prices has led to the rise in input prices which have strongly penalised margins. It is important to note these elements appear transitory, being the outcome of exogenous events, firstly a pandemic (COVID-19) and then geopolitics (war in Ukraine).

More broadly, the **best companies** from a carbon emission point of view are not excessively correlated with the ESG index or the European equity market in general. We have seen they are slightly correlated with growth stocks, but we find that this correlation occurs at the right time – when both are going up. Therefore, the **most carbon efficient companies** appear to offer an opportunity for diversification, in our view.

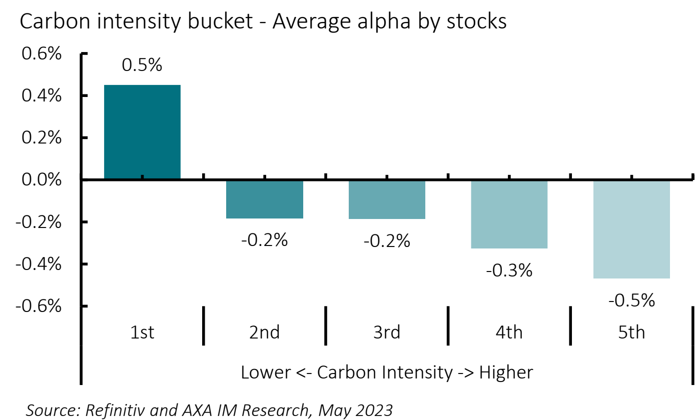
An encouraging future

As we expect headwinds to persist for global equity markets, would a low-carbon-intensity strategy be relevant going forward?. While the Fed has likely hit the peak of its monetary tightening, while the ECB is probably some 50bps away, the market has been quite impatient in pricing rate cuts in our opinion, given how stubborn inflation has been. We consequently expect some volatility around interest rates looking ahead. Since the performance of the low-carbon names is not sensitive to the level of interest rates, they should provide some good protection to investors.

Second, from an economic growth perspective, even though the path to bring inflation back into its target range will be bumpy, our economists are predicting below-potential growth in Europe and the US for next year with a mild recession forecast for the latter. As stock markets trade on forward expectations, they tend to rebound before economic growth bottoms. Growth and cyclical stocks are the biggest beneficiaries in an environment of recovering business cycle, so this may provide a tailwind for a low-carbon-intensity investment strategy.

Finally, at a more abstract but structural level, the environmental challenge is a major issue, and the role of financial players is becoming ever more essential in the transition to a greener economy. Directing capital into energy-efficient companies is vital to the success of this transition and is increasingly supported by policy and regulatory momentum.

Exhibit 4: The strategy may display stock selection capability



Source: Refinitiv and AXA IM Research, May 2023

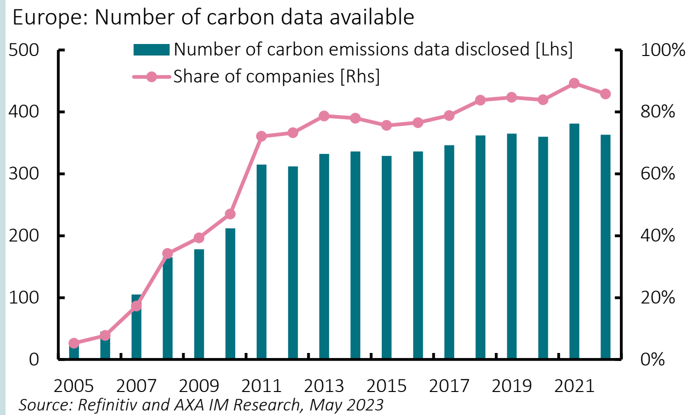
The findings from our analysis appear to underpin the appeal of the low-carbon theme, as the cohort of low-carbon-intensive firms has averaged a median alpha of +0.5% since 2011 (Exhibit 4). We also note that in addition to being the only group with positive average alpha across the bucket,[7] it has consistently held in positive territory reflecting a possible element of quality in the low-carbon strategy's stock-picking nature.

[7] Alpha refers to the excess return over and above that of a benchmark. Benchmark returns are referred to as 'beta'.

APPENDIX: Methodology followed to construct carbon intensity buckets

Our study covers the European equity market from 2011 – by which time at least 70% of companies have reported their emissions data – until the end of 2022 (Exhibit 5). Please also note that we use the carbon emissions data of the previous two fiscal years to avoid a knowledge bias as the data is gradually released in the following year.

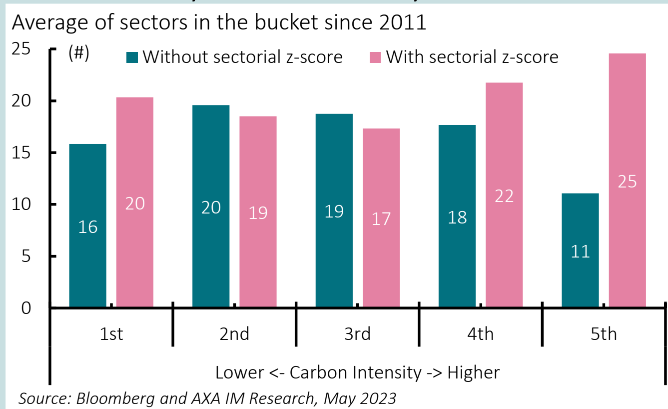
Exhibit 5: Be careful with data availability



Source: Refinitiv and AXA IM Research, May 2023

We define carbon intensity as the ratio of combined scope 1 and scope 2 emissions per million dollars of revenue. This is designed to compensate for the correlation between the size of emissions and the size of a company's business – a small company can be much less efficient than a large one.[8] We focus only on scopes 1 and 2 since, although the use of scope 3 (indirect emissions) would be beneficial,[9] the fact that these data are mainly modelled could bias the results.[10]

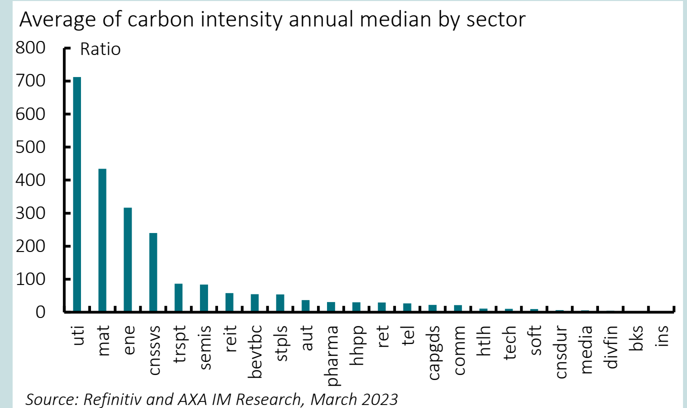
Exhibit 6: Industry normalisation is key



Source: Bloomberg and AXA IM Research, May 2023

To construct our baskets, we normalise the carbon intensity ratios by sector in a first step, and then apply a separation into five groups using quintiles as a threshold, from the least carbon intensive firms (first quintile) to the most carbon intensive (fifth quintile). The advantage of normalising by z-score is that it allows for more diversity across each basket to avoid sector banning (Exhibit 6).[11]

Exhibit 7: … given the asymmetry that exists between them



Source: Refinitiv and AXA IM Research, March 2023

Thanks to the z-score adjustment, our baskets seem to benefit from a sectoral diversification that reflects the carbon efficiency premium in a purer way than a basket constructed with the unnormalized carbon intensities. The non-normalised method exposes the investor who's investing in the most carbon-efficient companies to a large financial bias that disappears with normalisation (Exhibit 7).

[8] Trinks, A., Ibikunle, G., Mulder, M. and Scholtens, M.,"Carbon Intensity and the Cost of Equity Capital", SSRN, 24 February 2021

[9] Eugène, O., "Understanding scope 3: How responsible investors can wrestle with the unruliest of emissions", AXA IM Investment Institute Sustainability, 23 February 2023

[10] Aswani, J., Raghunandan, A. and Rajgopal, S., "Are Carbon Emissions Associated with Stock Returns?", SSRN, 23 February 2023

[11] The z-score is a statistical tool designed to avoid sample bias. It measures a value distance to the average by unit of standard deviation.

Our Research is available online: www.axa-im.com/investment-institute

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