



CO₂ footprint reduction and tracking error- a total portfolio view

As the first “hype” in ESG seems to be over and reality kicks in with respect to many exaggerated expectations, many investors seem to refocus on a more reasonable approach to ESG- and climate investing. Looking at MSCI’s recently published [summary](#) of the London Climate Week or [Robeco’s 2025 Global Climate Investing Survey](#), investors seem to recognize, that the whole theme isn’t a self-perpetuating process and the basic rules of investing with respect to return and risk are still in force. As an example, in MSCI’s summary, Amy O’Brien, Nuveen’s global head of responsible investing, was cited with: ***“The narrative is shifting from what asset owners don’t own to what investors do own” and “The focus needs to be on risk-adjusted returns, something we as investors have to put front and center”.***

Moreover, Robeco’s survey indicates that climate investing ranks still high on investor’s agenda, especially in Europe and Asia. **“Strong return potential” is one of the most motivating factors in climate mitigation-, adaption- and resilience solutions** where especially European investors prefer public funds for implementation of their climate strategies. Nevertheless, the survey results reveal that portfolio decarbonization poses a challenge for investors, because data availability and quality are still seen as hurdles. As reasons **why climate adaption allocations are so low**, the survey shows, that **“uncertainty about the ability to achieve competitive risk adjusted returns”** and even a **“lack of suitable investment product from asset managers”** play a major role. Especially the latter is quite interesting as even hundreds of solutions, which came out over the last couple of years, seem to be unable to fulfill investor’s requirements.

A useful framework for climate investing and decarbonization has been published by MAN Group recently, providing [“A hierarchical approach” to climate investing](#), which incorporates pathways for decarbonization as well as adaption on a portfolio level and in real world.

One point of discussion with institutional clients quite often is the **tradeoff between active risk and carbon footprint reduction**, something we already discussed in our first paper entitled [“The Search for Climate Smart Investments”](#) in 2017. At that time, we found that an 80% carbon footprint reduction would be possible for approximately 3% tracking error in European equities. In a recent publication entitled [“How to decarbonize Multi Strategy Equity Portfolios”](#), State Street provided an overview over the Climate Index landscape, elaborated on the same topic using MSCI ACWI as a universe and found even better tradeoffs between tracking error and footprint reduction. But this shouldn’t come as a surprise as the indices

changed dramatically since 2017 due to higher concentration on a few names and lower carbon intensity as a byproduct of that. Moreover, Europe is different to a Global universe. Typically, investors break down their carbon exposure and reduction targets to asset classes following the classical asset allocation framework. But as with investment management per se, **a total portfolio approach might yield better results when looking at the tradeoff between active risk and decarbonization** on an overall portfolio level.

Since the initial project in 2016/2017 in equities, we tracked the carbon footprint of a European Low Carbon factor Long Only and Long/Short along performance and risk. In a recently finished corporate bond factor project, we developed a European **Low Carbon factor on a CDS basis** and what we found is that

- in contrast to equities, the performance of this factor has been flat over time while the equity factor produced ~ 2,5% p.a. since 2011
- the negative carbon footprint was much higher for 1 mln. Euro invested capital compared to equities as well as
- the negative carbon footprint per unit of active risk

The results in a nutshell:

	Credit Long/Short	Credit MarketNeutral*	Equity Long/Short	Equity MarketNeutral*
Tracking Error/ Volatility	0,67	1,03	5,00	3,00
GHG/ 1 Mio. Investment	- 2.285	- 383	- 1.000	- 215
GHG reduction per 1% Tracking Error/Volatility	- 3.410	- 372	- 200	- 72

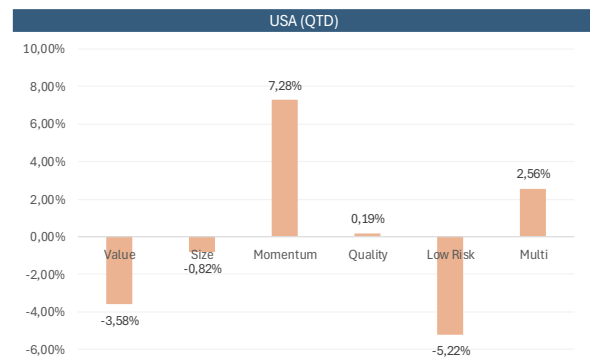
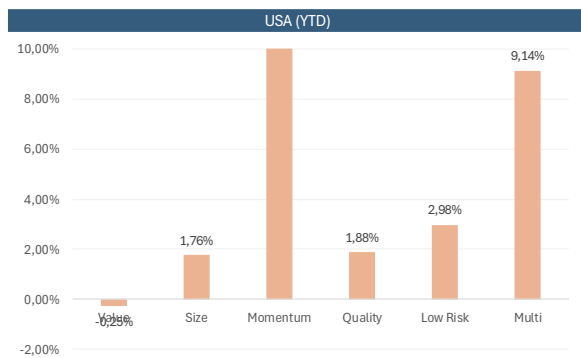
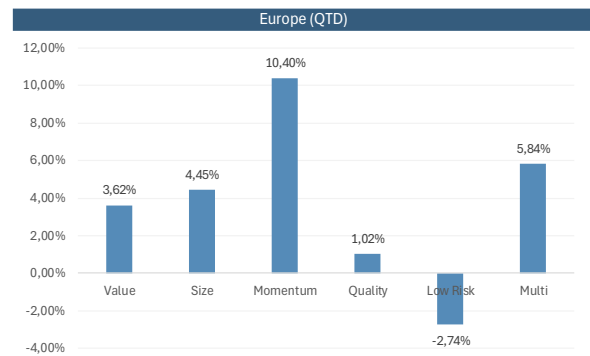
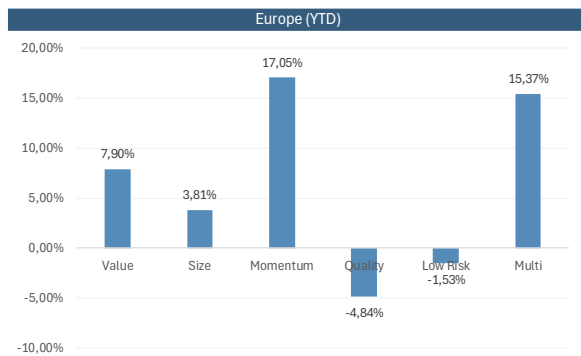
Conclusion:

Despite the fact, that carbon intensity has nearly fallen by 50 % in European equities over the last 8 years, **the active risk/decarbonization- tradeoff is still much better when using a CDS Long/Short- setup** as an overlay – if returns are left out of the equation. **Active returns and information ratios have been best in Long/Short equities** as low carbon companies in the long leg achieved (unexpected) higher earnings than their counterparts within the short leg.

Unfortunately, most investors still prefer established routes in Long Only – in equities as well as in corporate bonds – by using exclusions or investing in low carbon emission companies, **thereby giving up better return-/risk- opportunities from a total portfolio perspective.**

Factor performance

Most European factors continued to outperform during Q2/2025. Momentum delivered double digit excess returns compared to STOXX 600 Europe followed by Multi, Size and Value. US factors showed a different picture, mostly driven by a renewed run in large cap Nasdaq – stocks leaving Low Risk, Value and Size in the red.



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