GSI PERSPECTIVE

Carbon Intensity

Value Strategies and CO_2 Emissions

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Carbon intensity - Value Strategies and CO_2 Emissions

Value investors need to be aware of the fact that their portfolios can be highly exposed to companies with high CO2 emissions, one of the main factors contributing to global warming. In order to mitigate this unwanted by-product, value investors need to limit exposure to those companies in their investment process, as we do at GSI.

Bernd Hanke, PhD, CFA
Managing Partner,
Co-Chief Investment Officer,
GSI

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FOR PROFESSIONAL INVESTORS ONLY

CO2 emissions are at the forefront of climate change discussions. Behind the struggle to address global warming and climate change lies the increase in carbon dioxide in our atmosphere. Carbon dioxide is a chemical compound in the atmosphere that is capable of absorbing infrared radiation, thereby trapping and holding heat in the atmosphere. By increasing the heat in the atmosphere, carbon dioxide is responsible for the greenhouse effect, which ultimately leads to global warming.

Because of this key role that CO2 emissions play in the process of global warming, many environmentally conscious investors have been exploring investment strategies that seek to limit exposure to companies with high CO2 emissions.

In this paper we explore CO2 emissions in the context of value investment strategies. To do this, we use a metric which we label “Carbon Intensity”. Following the Task Force on Climate-Related Financial Disclosures (TCFD) carbon intensity definition, we compute a company’s CO2 emissions divided by its sales or revenue.[1] We measure total CO2 emissions as the sum of CO2 scope 1 emissions (carbon1) and CO2 scope 2 emissions (carbon2). Scope 1 emissions consist of CO2 produced directly from sources that are owned or controlled by a company. Scope 2 emissions consist of indirect CO2 emissions resulting from the generation of electricity, heating and cooling and steam off site but purchased by a company.[2]

[1] To be precise, we use “carbon dioxide equivalent” instead of solely carbon dioxide. In layman’s terms, carbon dioxide equivalent is a measurement of the total greenhouse gases emitted, expressed in terms of the equivalent measurement of carbon dioxide.

[2] There are also CO2 scope 3 emissions which are indirect emissions from activities of the organisation, occurring from sources that they do not own or control. In most countries, there is no legal obligation for companies to report their scope 3 emissions.

We therefore compute carbon Intensity as follows:

$$\text{Carbon Intensity} = \left(\text{carbon 1} + \text{carbon 2}\right) / \text{sales}$$

CO_2 Emissions for Value Strategies

In order to compare the carbon intensity of value investment strategies to that of market weighted (purely passive) portfolios, we examine two widely used global ETFs that are based on well-known indices. The ETFs that we compare and contrast are the following:

- iShares Core MSCI World UCITS ETF (benchmark: MSCI World)
- iShares Edge MSCI World Value Factor UCITS ETF (benchmark: MSCI World Enhanced Value Index)[3]

Both ETFs are widely used by investors. The iShares Core MSCI World ETF (which we label "MSCI" in the following paragraphs) had about $60 billion assets under management as of the end of September 2023 and the iShares Edge MSCI World Value Factor ETF (which we label "MSCI Value" in the following) had about $4 billion assets under management. Both ETFs almost fully replicate their benchmark indices, so their holdings are almost identical to the corresponding index constituents at any given point in time.

The MSCI World Index captures large and mid-cap companies across 23 developed markets countries. It has roughly 1500 index constituents as of 30 September 2023. The MSCI World Enhanced Value Index captures companies from that same universe but exhibiting higher value style characteristics relative to their peers within the same Global Industry Classification sector (GICS). The value investment style characteristics for index construction are defined using three variables: Price-to-Book Value, Price-to-Forward Earnings and Enterprise Value-to-Cash flow from Operations. The MSCI World Enhanced Value Index is a good representation of commonly used value strategy portfolios and has roughly 400 index constituents as of 30 September 2023.

In order to compare the carbon Intensity of both types of portfolios, let's examine some general portfolio characteristics first. As the graph below shows, global sector weights of both portfolios are almost exactly the same as of 30 September 2023. Hence, MSCI Value is constructed in a way such that a constraint is imposed to match market sector weights.

On an overall portfolio level, a value portfolio often has higher carbon intensity than a market weighted (passive) portfolio.

This puts a standard value strategy at a disadvantage for an environmentally conscious investor compared to a purely passive market weighted strategy.

[3] iShares is a registered trademark owned by Blackrock, Inc. MSCI is a registered trademark owned by Morgan Stanley Capital International, Inc.

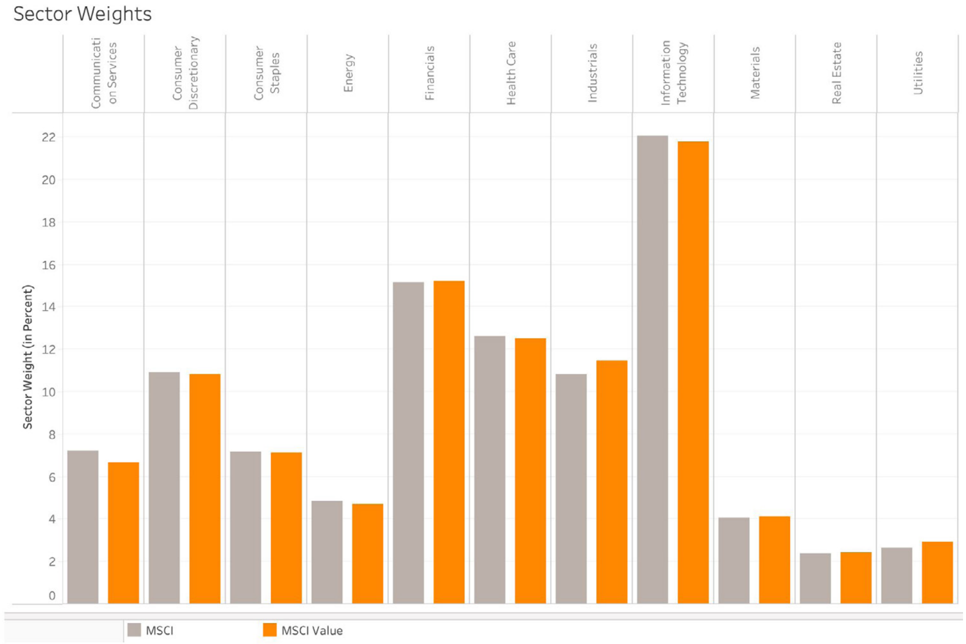

Chart 1 - Source: GSI LLP. Based on iShares data supplied by Factset.

An untethered value strategy, without a constraint on sector weights, would likely have a higher exposure to the worst carbon intensity offenders.

Country weights of developed markets differ much more markedly. In particular, MSCI Value allocates a much higher weight to Japan than MSCI which is due to the fact that Japan (in aggregate) exhibits more pronounced value characteristics. Most of the overweight in Japan of MSCI Value vs. MSCI comes from a corresponding underweight in the United States, a country with much less pronounced value characteristics but which has a large global market weight.

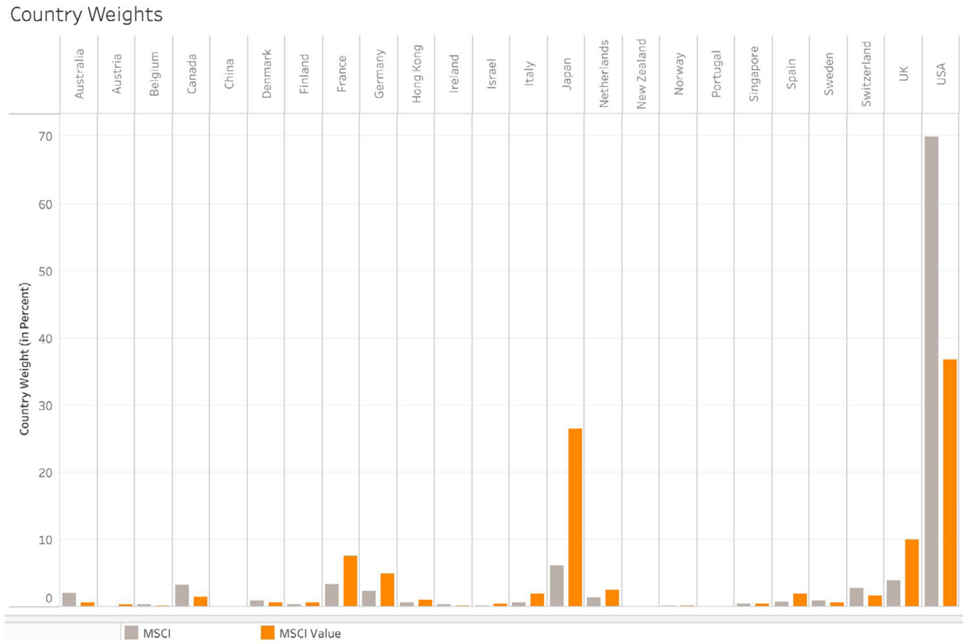

Chart 2 - Source: GSI LLP. Based on iShares data supplied by Factset.

If we divide up companies within the MSCI universe into carbon intensity deciles and then examine the contribution of each carbon intensity decile to the total portfolio carbon intensity, here's what we get:

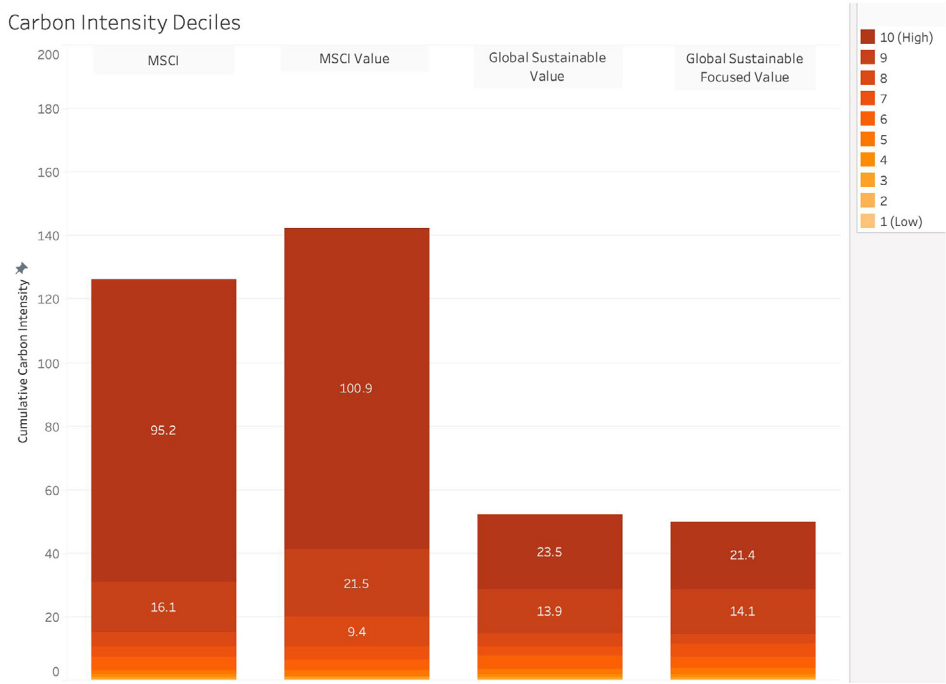

Chart 3 - Source: GSI LLP. Based on iShares data supplied by Factset as well as Sustainalytics data

Chart 3 above shows the contribution of each carbon intensity decile to the total portfolio carbon intensity. This information is shown for MSCI, MSCI Value and for our two GSI portfolios, the Global Sustainable Value fund and the Global Sustainable Focused Value fund.

Most of the carbon intensity of a portfolio originates from a small number of companies. Carbon intensity decile 10 contributes more than half of the total portfolio carbon intensity in the two MSCI portfolios.

We can observe for MSCI and MSCI Value that carbon intensity decile 10 contributes the overwhelming majority of the total portfolio carbon intensity. In contrast, the GSI portfolios, namely the Global Sustainable Value fund and the Global Sustainable Focused Value fund substantially reduce carbon intensity. Hence, most of the carbon intensity of a portfolio originates from a small number of companies. Moreover, MSCI Value has a higher total portfolio carbon intensity than MSCI, the market weighted portfolio. Its contribution to total portfolio carbon intensity from decile 10 companies is higher.

This finding tends to be true in general, namely, on an overall portfolio level, a value portfolio often has higher carbon intensity than a market weighted (passive) portfolio. This puts a value strategy at a disadvantage for an environmentally conscious investor compared to a purely passive market weighted strategy. We need to stress that this is often the case even though the value strategy we examine here does not tilt portfolio weights to sectors that have especially high carbon intensity in any meaningful way.

In fact, sector weights of the two portfolios, MSCI and MSCI Value, are very similar as we have seen in the chart above. As a result, the higher carbon intensity of the value portfolio originates from stock selection within sectors rather than sector tilts away from a market weighted portfolio. It is worthwhile noting that, by matching sector weights to market weights, MSCI Value constrains its high carbon intensity exposure. An untethered value strategy, without a constraint on sector weights, would likely have a higher exposure to the worst carbon intensity offenders.

However, a portfolio with a value tilt can be constructed in a way that carbon intensity is tightly controlled while retaining the value characteristics of the portfolio. This is the approach that GSI have taken. As can be seen in the chart, our two strategies, Global Sustainable Value and Global Sustainable Focused Value, exhibit considerably lower total portfolio carbon intensity than both MSCI and especially MSCI Value.

A portfolio with a value tilt can be constructed in a way that carbon intensity is tightly controlled while retaining the value characteristics of the portfolio and without sacrificing the payoff resulting from value factors.

Therefore, as a value investor running a sustainable portfolio, we need to be acutely aware of this pattern and we need to manage the carbon intensity resulting from a standard value tilt. This can be done in various ways, either by completely excluding companies with high carbon intensities from the portfolio or by underweighting them relative to a market weighted portfolio.

In our process, we tilt towards value but we avoid overweighting companies with high or extreme carbon intensities. As a result, our overall portfolio carbon intensity is substantially lower than that of a market weighted portfolio and a standard value portfolio. We achieve this lower portfolio-level carbon intensity without sacrificing the payoff resulting from value factors.

Conclusion

Value investors need to be aware of the fact that their portfolios are likely to be exposed to companies with high CO2 emissions, one of the main factors contributing to global warming. In order to mitigate this unwanted by-product of a value strategy, investment managers following a value strategy need to actively limit exposure to those companies in their investment process. At GSI, carbon intensity is one of the inputs into our portfolio construction process which is constantly monitored and mitigated. Our funds have been classified as low carbon by Morningstar. We are able to capture the payoff associated with a value strategy in a more sustainable and environmentally friendly manner.

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Global Systematic Investors LLP
75 King William Street, London EC4N 7BE
Tel. 020 7717 5578
www.gsillp.com

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