The Long and the Short of Carbon Accounting

The meaning of "net zero" for investors is still evolving, and while there are no generally accepted standards, frameworks are emerging to help guide investors. The Net-Zero Asset Owner's Alliance[1], The Institutional Investors Group on Climate Change (IIGCC)[2] and The Investor Agenda[3] provide frameworks for investors to achieve net-zero portfolios. While those frameworks lack detailed guidance on achieving such objectives, two main elements of a net-zero investment strategy are clear:

- Decarbonization of portfolios
- Investment in climate solutions

What is not clear is how short positions should be treated within the construct of these frameworks. Much has been written recently about the treatment of shorts, with many suggesting that ESG characteristics and carbon emissions of shorted companies should be ignored for the purposes of measuring investor decarbonization efforts. We at FFI are of the opinion that including the carbon emissions of short positions as a "negative carbon footprint" more accurately reflects the financial risks related to carbon, allows investors to efficiently align with net-zero objectives, and is also more impactful in accelerating decarbonization (compared to ignoring the carbon emissions associated with short positions).

Decarbonization for Financial and Non-Financial Reasons

Investors who choose to adopt a net-zero objective do so for both financial and non-financial reasons. As such, when determining a carbon accounting standard for short positions, both financial and non-financial factors should be considered.

From a financial perspective, investors and stakeholders use the frameworks to measure a portfolio's exposure to carbon risks.[4] All other things being equal, companies with a higher relative emissions intensity will have their financial results adversely impacted as carbon pricing becomes a) an explicit cost or b) an implicit cost as investors seek to avoid high emitters.

Investors will also choose to adopt these frameworks to demonstrate their alignment with global goals to decarbonize the economy and reach net-zero emissions. The ongoing measurement of a portfolio's carbon footprint is an important metric to show alignment, not simply as a point-in-time measure, but also to show progress against goals that investors may have established. Finally, investors will want their investments to have an impact and use their dollars and voices to catalyze the decarbonization efforts necessary to avoid the worst effects of climate change.

How Investors (and Investment Managers) Use Short Positions

Short selling entails the borrowing of shares of a company from a broker (for a fee) for the purpose of selling those shares in the open market. The short seller is obligated to return those shares to the borrower at some future point in time. Obviously, if the share price declines sufficiently, the seller can buy them back in the market, covering the short sale, and return those borrowed shares to the broker, resulting in a profit. If, on the other hand, those shares increase in price and the short seller closes the short position, they would of course record a loss.

Short positions are used for both speculative and hedging purposes. A speculative short occurs when an investor believes that the stock price of a company will decline. If the investor is right, the utilization of a short position on that company will allow them to profit from this view.

While much is made of speculative shorting, short positions are also used as a hedge against other exposures in a portfolio, or in more nuanced ways in strategies that contemplate the relationship between long and short positions. In fact, most hedge funds that manage long-short strategies do so based on what they view is a relationship between a portfolio's long and short positions.[5]

Using Short Positions to Manage Carbon and Impact

Increasingly, investors are evaluating how climate change and carbon impact a portfolio from a risk and return standpoint. If an investor is concerned about a portfolio's exposure to an increase in the price of carbon, then that investor would logically want to avoid or eliminate exposures to high-emitting companies or high-emitting sectors. Because most companies have an emissions profile that does not align with net-zero goals, it is currently difficult to build diversified portfolios only comprised of low-emitting companies. As such, the utilization of short positions on high-emitting companies is a way to effectively hedge the total portfolio against carbon pricing and/or stranded assets.[6]

Regarding impact, while the fossil-fuel divestment movement has been effective in questioning the fossil fuel industry's social license to operate, we at FFI posit that establishing a short position is more effective for engagement than not holding any position at all; this is because corporate management and investor relations departments are most often aware of what the short community think about their companies, and even if they disagree, there is at least some communication. In addition, some may expect that short investors increase the cost of capital of the most carbon-emitting issuers. If investors are committed to making an impact, then one outcome should be to raise the cost of capital of high emitting companies.[7]

The Case for a Negative Carbon Footprint

Those who recommend that short positions be ignored when calculating a portfolio carbon footprint argue three main points:

- Shorting does not 'remove' a company's real-world carbon emissions
- Short positions should not be treated similarly to carbon offsets
- Short positions do not convey the ability to engage

Our response to these three arguments is as follows:

Carbon Removal: While basically true, this argument does not summarily suggest that the carbon emissions from shorts should be ignored, nor is it consistent with how carbon emissions are ascribed to long positions. If one acknowledges that shorts do not remove a company's real-world emissions, one must also acknowledge that **owning a company via a long position does not create more real-world carbon emissions** either. Yet emissions associated with a long investment are clearly counted in the measurement of the portfolio carbon footprint. Our view is that the rationale for ascribing carbon emissions for both long and short positions should be consistent.

Comparison to Offsets: Another argument is that the shorted company's emissions cannot be treated as equivalent to a carbon credit or offset that has been granted/purchased in the market. Offsets and short positions are fundamentally different, and we question the rationale of applying the criteria used to judge the validity of a carbon offset to establish the "validity" of a short equity position. The quality of a carbon offset is judged by features such as additionality, permanence, avoiding overestimation, exclusive claim and avoiding social and environmental harms.[8] Offsets are typically used by companies and are intended to be used when a company is unable to otherwise decarbonize (e.g., buy renewable energy). Investors typically have not utilized carbon offsets at the portfolio level but do frequently utilize shorts positions for various purposes as previously described. To evaluate short positions using the same criteria as offsets makes little sense. The two approaches are different ways of achieving the similar goals, except that a short position may provide a financial benefit to the investor.

Shareholder Engagement: A third argument is that a short position does not come with shareholder rights or engagement opportunities to influence positive behavioral change. While short positions do not convey those rights, shorting has long been an effective way to put companies on notice about the need to improve their performance. For socially responsible and impact investors, shorting (similar to fossil fuel divestment) can be used as a way to penalize companies for harmful environmental practices such as exploring for and producing fossil fuels.

Further, we suggest that short positions can **actually increase** the volume of shareholder activism, particularly with high-emitting companies. If an investor chooses to engage with a high-emitting company to bring about change (leading to lower emissions), then that investor may be incurring an exposure to a company with a high carbon footprint. That high carbon footprint may dissuade an investor from undertaking an activist role because a) they have a negative view of the sector in which a company operates (e.g., fossil fuels) or b) a hesitancy to hold positions that would raise a portfolio's emissions profile.[9] Shorting can solve this dilemma. An investor can make an activist investment in a company they believe it can influence, and also use short positions (on a different set of companies within the same industry) to hedge against sector risk and reduce the portfolio carbon footprint.[10]

Carbon Accounting: Ignoring Shorts Creates Perverse Results

A final consideration for including emissions associated with short positions in the carbon footprint calculation is the need for any such standard to align with basic accounting principles. Share ownership does not in and of itself increase or decrease real-world emissions. Rather, such ownership assigns to an investor a pro-rata portion of the company's emissions represented by the shares held.[11]

The carbon accounting argument for including short positions in the portfolio carbon footprint calculation is as follows:

> "… investors who collectively own all of a company's stock, must also account for 100% of the company's emissions (for simplicity we assume there is no debt). Some of these investors may have purchased their shares from a short seller, but they will nonetheless attribute a share of the firm's emissions to their total holdings, just like all other investors do. For the carbon accounting to work, and for the holders of a company's equity to account for 100% of the carbon footprint, short sellers must then have a negative carbon footprint of their own 'book'".[12]

To illustrate, below is an example of a 3-stock portfolio and the attribution of a carbon footprint.

Company	Position Value ($ millions)	Market Capitalization ($ millions)	Company Reported Carbon Emissions (in Mt)	Emissions Owned (%)	Carbon Emissions (in Mt)	Long-Only Emissions (in Mt)
A	100	10,000	1,000	1.0%	10	10
B	-50	5,000	2,000	-1.0%	(20)	
C	50	5,000	1,000	1.0%	10	10
Portfolio	**100**				**0**	**20**

Some market participants and ESG data providers have the view that netting the emissions attributable to shorts with the emissions attributable to the longs understates the overall portfolio emissions and that only carbon emissions associated with the long leg should be considered. We believe that this approach produces results that don't make intuitive sense, and that netting emissions produces a far more accurate picture of a portfolio carbon footprint when view through both a financial and non-financial lens.[13]

Assume that the original position for the investor was in Company A. The carbon emissions associated with Company A are 10 metric tons, or 10% per $ million of market exposure. Assume then that the investor implements a relative value trade, shorting Company B and using the proceeds from the short sale to buy a long position in Company C. The total market exposure does not change, but if the portfolio carbon emissions were measured according to a long-only view, the short B, long C trade would increase the carbon emissions of the portfolio and dramatically increase the carbon exposure per dollar of market exposure by 50% to 20% per $ million of market exposure.

Furthermore, consider for a moment that circumstance where Company B is an oil and gas exploration and production company and Company C is a clean-energy company. If emissions attributable to the short positions are ignored, this trade would **increase** the portfolio's carbon footprint!

Final Thoughts and The Greenwashing Concern

Some market participants are concerned that allowing shorts to be considered as offsets is no more than greenwashing, and that investors will seek to take advantage of the accounting and "load up" on short positions to reduce their carbon footprint. Greenwashing is detrimental to decarbonization, but in this case the risks are overstated. Investors are likely not going to utilize shorts simply to make their portfolios look greener. Shorting has inherent risks and investors are not going to include a short unless it can demonstrate a commensurate financial benefit.

Shorting bad actors is not greenwashing. If one believes that divestment, when viewed in the aggregate, can be successful in raising awareness and limiting the polluter's social license to operate, then shorting simply becomes an extension of that activity. A single divestment announcement may not have a significant impact, but the divestment movement, whether pursued by political regulation or social pressure as a whole, certainly has an impact in limiting polluters' social license to operate. Shorting polluters is a signal to the market that being a good steward of the environment is important for financial reasons and, hence, that market signal **may change corporate behavior**.

Short sellers (and hedge funds) have received much criticism. They have been accused of spreading rumors to hurt businesses, driving down share prices in order to make a profit. Some of that criticism might be deserved, but we are not here to discuss the morality of certain market participants. But to ignore the short positions in the calculation of the carbon footprint only serves to provide a further disincentive for hedge funds (arguably the most adept activists) to adopt and create investment strategies that are aligned with net zero.

Effective measurement of a portfolio carbon footprint should capture the benefits of various strategies that can be used to decarbonize portfolios. Shorting high emitters provides decarbonization benefits and is another tool (in addition to and in conjunction with shareholder engagement, divestment, and offsets) at the investor's disposal to align risk, return and net-zero objectives.

Endnotes

[1] https://www.unepfi.org/net-zero-alliance/

[2] https://www.iigcc.org

[3] https://theinvestoragenda.org

[4] The standard method for companies to measure and report their exposure to carbon (and the increase in carbon prices) is the Greenhouse Gas Protocol's Scope 1, 2, and 3 emissions measures. https://ghgprotocol.org

[5] For example, investors frequently utilize shorts in a 'relative value' trade, where an investor believes that two similar companies are not valued appropriately compared to each other. Perhaps an investor does not want to increase their exposure to the auto sector, but has a strong belief that GM is undervalued relative to Ford. In this case, the investor might establish a long position in GM and a short position in Ford to take advantage of this supposed mispricing between the two companies, while remaining neutral to the sector.

[6] i.e., assets that become unexpectedly or prematurely unable to generate an economic return.

[7] https://www.aqr.com/Insights/Perspectives/Virtue-is-its-Own-Reward-Or-One-Mans-Ceiling-is-Another-Mans-Floor

[8] https://www.offsetguide.org/high-quality-offsets/

[9] There is a paradox here in resulting from the argument that long positions only should be counted in the carbon footprint because longs provide shareholder activism opportunities. We agree that shareholder activism is one way, and perhaps the most effective way for investors to contribute to decarbonizing the economy. Shareholder activism should therefore be targeted toward those companies that are doing the most damage (i.e., we need more activism directed toward polluters). Yet in those cases, the activist investor will have to report a high carbon footprint. Take the hypothetical case of an activist fund manager that seeks to remake Exxon, Chevron and other oil & gas companies from fossil fuel companies to renewable energy companies. That fund manager's portfolio carbon footprint would be extremely high and the mere fact that such manager would have to report that footprint to "net-zero" investors, who themselves must report to their own stakeholders, suggests that the measurement framework itself should be reconsidered for pure shareholder activism.

[10] Some of the most prominent and most effective activist shareholders are hedge funds. Engine No. 1's successful proxy battle with Exxon this past spring is but one example, but we have always been of the opinion that hedge funds, if engaged, could do more to pressure companies to decarbonize. In the US SIF most recent annual report, hedge fund managers lagged other types of asset managers by a wide margin in adopting ESG principles. A standard that ignores short positions and creates an artificially high portfolio carbon footprint would only serve to further disincentivize the hedge funds from becoming involved in decarbonization activities and serve to **limit** shareholder engagement of high emitters.

[11] Hypothetically, if a company has 100 shares outstanding, and an investor is short 100 shares, it does not mean that the company now has zero shares outstanding. Likewise, the sale of the 100 shares short to another buyer does not mean that there are 200 shares outstanding, either. There are simply 100 shares outstanding, and those emissions should be allocated pro-rata among those with an economic interest.

[12] https://www.aqr.com/Insights/Research/White-Papers/CarBon-Voyage-The-Road-to-Low-Carbon-Investment-Portfolios

[13] Some have even gone so far as to suggest that emissions from a short positions should be **added** to the portfolio carbon footprint in effect treating the short position as a gross carbon exposure. Gross exposure is a way to measure the financial leverage of long short strategy, but completely illogical to ascribe ownership of and exposure to carbon emissions.