PIMCO

Identifying emission reductions in the real economy: PIMCO

PIMCO is a global leader in active fixed income with deep expertise across public and private markets. PIMCO manages $1.89 trillion in assets, including $1.51 trillion in third-party client assets as of 31 March 2024. This case study, authored and provided by PIMCO, outlines the organisation's approach to decarbonisation attribution analysis.

Objective

Many investors have committed to decarbonising their portfolios and fostering the transition to a low-carbon economy aligned with Paris Agreement targets. PIMCO seeks to support investors who have elected to follow a path towards lower emissions by offering access to our rigorous research and portfolio analytics. Our four-pillar Net Zero Framework provides a realistic approach to decarbonising portfolios over time, while engaging with climate leaders and investing in climate solutions optimally positioned to contribute to real-economy emissions reductions.

PIMCO's framework addresses one overarching challenge in this area: the lack of data or standards to quantify the extent to which portfolio decarbonisation is linked to actual emission reductions in the real economy.[1]

Overview of the methodology

Portfolio attribution is a familiar concept in the context of performance, offering an analytical breakdown of how relative allocations and returns of specific sectors or investments contribute to (or detract from) overall portfolio returns. Along these lines and building on PIMCO's expertise in fixed income, our portfolio carbon attribution tool measures and reports the contribution of different factors to the overall emissions attributed to a bond portfolio, and relative to its benchmark, over time:
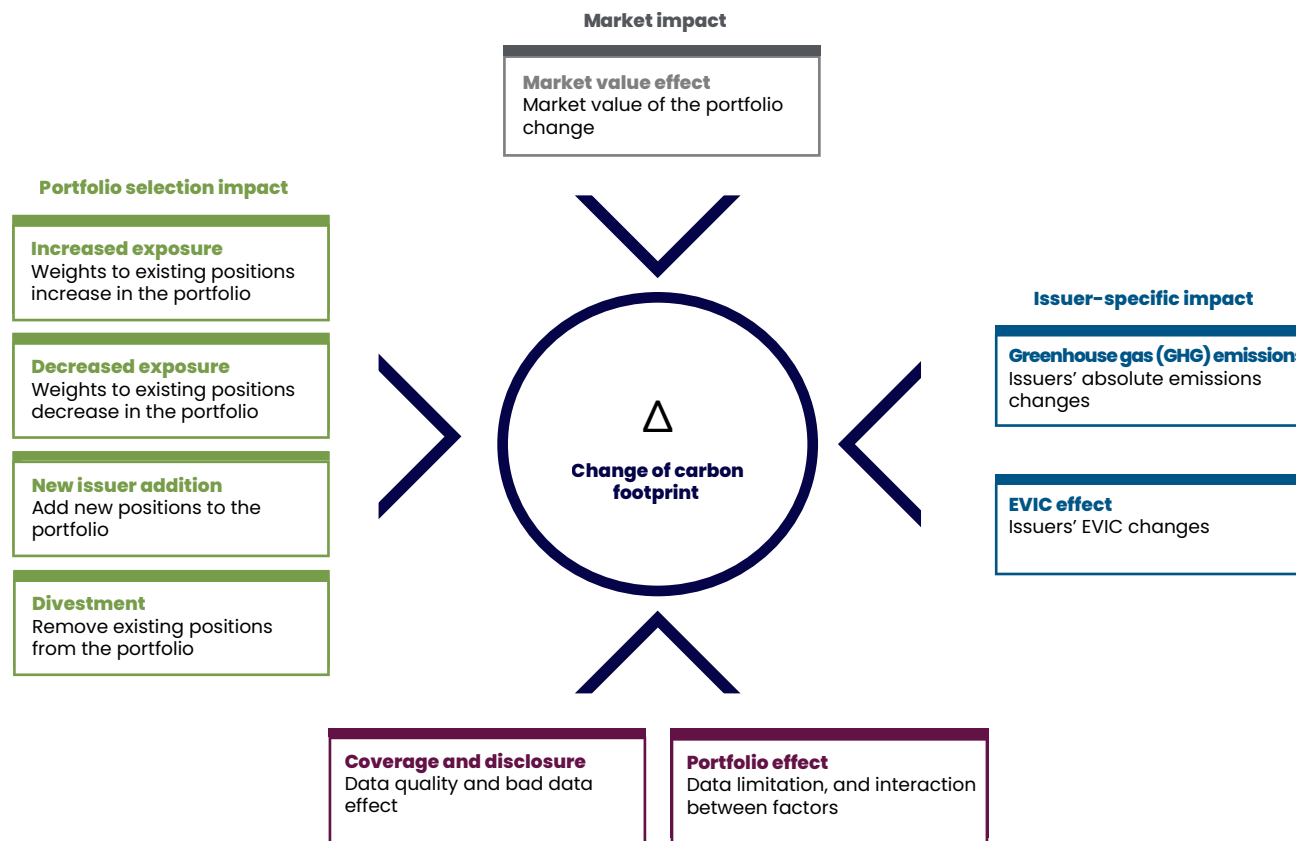
- The universe of issuers in scope (e.g., new issuers, divestment)
- Data coverage (e.g., changes in an issuer's disclosure)
- Financial variables used in carbon metrics calculation, at the issuer level (e.g., sales, enterprise value) or the portfolio level (e.g., market values, sector weights)
- Carbon emissions reported by issuers or estimated by third parties

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1   The real economy refers to all real or nonfinancial elements of an economy (source: Corporate Finance Institute, GFANZ). Emissions reductions in the real economy may therefore occur in all nonfinancial sectors and be driven by various measures, such as energy savings, or a shift from high- to low-carbon energy sources.

Hypothetical case study illustrating portfolio carbon attribution

PIMCO's ESG tool can support carbon attribution analysis under various carbon metrics, and the carbon attribution factors would differ accordingly. Taking carbon footprint as an example, we consider nine effects as the attributions to carbon footprint change over time.

Figure 1: Attributing carbon footprint change in a portfolio

Market impact

Market value effect
Market value of the portfolio change

Portfolio selection impact

Increased exposure
Weights to existing positions increase in the portfolio

Decreased exposure
Weights to existing positions decrease in the portfolio

New issuer addition
Add new positions to the portfolio

Divestment
Remove existing positions from the portfolio

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Change of carbon footprint

Issuer-specific impact

Greenhouse gas (GHG) emissions
Issuers' absolute emissions changes

EVIC effect
Issuers' EVIC changes

Coverage and disclosure
Data quality and bad data effect

Portfolio effect
Data limitation, and interaction between factors
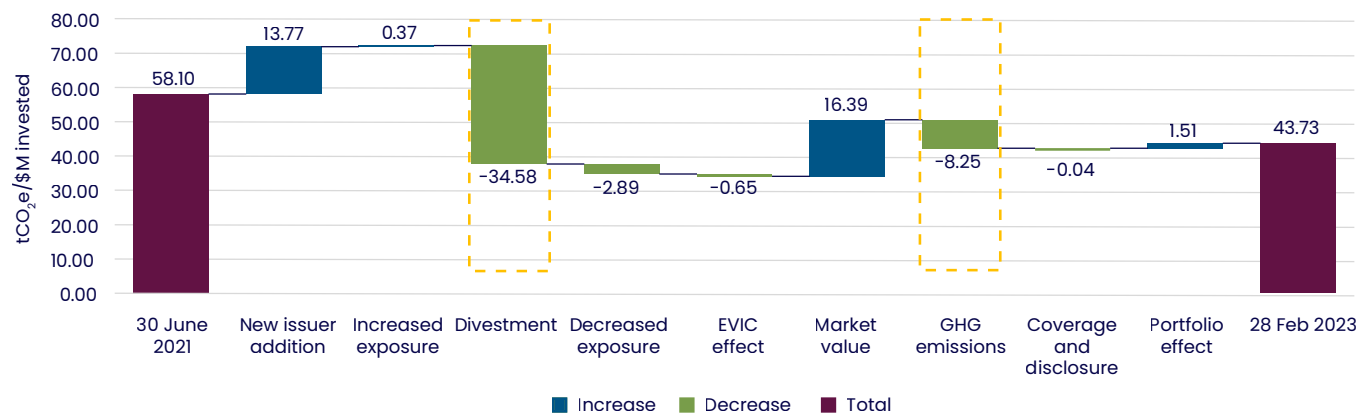
For Illustrative Purposes Only

Source: PIMCO

In a hypothetical case study (see Figure 2), first, when looking at the aggregate changes in the carbon footprint for the sample portfolio from June 2021 to February 2023, the divestment effect was the main driver of the carbon footprint reduction, with a "negative" contribution to the portfolio emissions amounting to a 59.5% decrease from June 2021. The contribution of emissions reductions from the portfolio holdings is approximately a 14.2% decrease from June 2021.

Second, the tool can dive into each factor, at the sector and then the individual issuer level, to see the largest contributors to total carbon footprint change and each attribution.

Third, at each timestamp, the carbon footprint difference between the portfolio and the benchmark can be attributed to the allocation effect and the selection effect:

- **Allocation effect** refers to the carbon footprint the portfolio manager subtracts or adds by having different sector weights in the portfolio than the sector weights in the benchmark.

- **Selection effect** refers to the carbon footprint the portfolio manager subtracts or adds by holding individual securities or instruments within the sector on top of the weight contributed from the allocation decisions.

Figure 2: Hypothetical portfolio carbon footprint change through time attribution (June 2021 – Feb. 2023)

Source: MSCI, PIMCO as of 28 February 2023.[2]

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2   **Hypothetical example for illustrative purposes only.** Absolute corporate carbon emissions attributed to the portfolio divided by the market value, expressed as tCO2e / $M invested (corporate issuers only, Scope 1 and Scope 2). The effect is based on the total differential to calculate the effect brought about by each variable. The analysis above is presented for illustrative purposes only, as a general example of PIMCO's ESG research capability and/or engagement capability and is not intended to represent any specific portfolio's performance or how a portfolio will be invested or allocated at any particular time. PIMCO's ESG processes may yield different results than other investment managers and ESG factors may change over time. **Past performance does not predict future returns.**

How the results may be used

We see many use cases for the portfolio carbon attribution tool to help investors and portfolio managers look through the noise in portfolio decarbonisation:

- **Identify decarbonising assets** – Identify the changes in a portfolio's carbon emissions driven by issuers effectively reducing absolute emissions. As first step this involves assessing whether this is estimated or reported data, and for reported data disentangling changes associated with carbon emissions from changes driven by all other parameters, including the share that has been engaged on emissions reduction. Additional considerations may apply to estimated data, such as engagement with vendors regarding estimation methods.

- **Understand impact of active management decisions** – Understand to what extent the changes in the portfolio's carbon emissions have been driven by active portfolio management decisions, including divesting climate laggards (issuers with weak decarbonisation commitments and plans) and investing in climate leaders (issuers with strong decarbonisation commitments and plans), versus broader market trends or factors not directly related to emissions, such as bond maturities. (We also note the spectrum of issuers between "laggards" and "leaders," and that investment decisions can reflect nuances among issuer decarbonisation approaches.)

- **Evaluate need for rebaselining** – Evaluate whether it is appropriate to change the baseline of a portfolio emission reduction target, for example as a result of a significant change in the universe of issuers with data.

The portfolio attribution tool is only the first step to assess whether there are carbon emissions changes in the real economy that are linked to a portfolio. As a second step, our evaluation and engagement with corporate issuers can help make a similar distinction between carbon emissions changes and other parameters. For example, changes in the reporting scope due to acquisitions, divestments, and mergers, or real-economy reductions based on targeted measures (e.g., efficiency improvements, material or fuel substitution) or other factors (e.g., closure, production level).

The ultimate objective is to enhance the investment decision-making process, notably when seeking to make an impact on real-economy emissions reductions based on active portfolio decisions.