

# ESG *investment* methodology



*How we consider ESG risks in our investment processes*

## Artemis SmartGARP Paris-Aligned Global Equity Fund

Assessing whether a company's current and expected future activities are aligned with the goals of the Paris Agreement of 2015 - "to limit the rise in global average temperatures to well below 2 degrees Celsius compared to pre-industrial levels" - is challenging. Yet recent years have seen a marked improvement in the availability of data as well as significant refinements in the methodologies used to make such an assessment. There are still material gaps in the data and a lively debate as to which methodology is most suitable. But we believe the available information is good enough to begin making asset allocation decisions on the basis of today's best estimates of companies' alignment (or lack thereof) with the goals of the Paris Agreement.

In our view, inaction or waiting for all of the data and methodology issues to be settled is not an option - given that on current trends, the world is heading for a temperature rise in excess of 3 degrees Celsius.

A number of the approaches that assess companies' Paris-alignment estimate the so-called 'implied temperature rise' of companies' activities. These estimates allow determining what global warming trajectory a portfolio as a whole lies on; and therefore whether or not it is 'Paris-aligned'.

This note gives an overview of the methodology used to estimate companies' Implied Temperature Rises, highlighting some of its underlying assumptions.

### Implied Temperature Rise

For the purposes of managing the Fund, we rely on an external provider's Implied Temperature Rise estimates. The advantage of focussing on companies' Implied Temperature Rises is that they are easy to interpret when compared to the goal of keeping global warming to below 2 degrees Celsius. The ease of interpretability, however, comes at a cost of significant complexity: a number of non-trivial methodological choices are involved in arriving at the estimates.

Fundamentally, there are three key methodological steps that have to be made when trying to determine a portfolio's alignment with the Paris agreement:

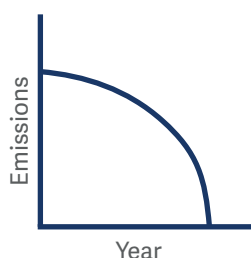
1. Translating scenario-based carbon budgets into benchmarks.
2. Assessing company level alignments with these benchmarks.
3. Aggregating from company level to portfolio level to assess overall alignment.

<sup>1</sup> As this is a very dynamic area of research with multiple providers competing to have the most robust and scientifically sound estimates, we may well complement or even substitute this provider in future, just as we have in the past evolved and refined the other inputs that go into SmartGARP, Artemis' proprietary stock-screening tool that is used to guide our stock selection.

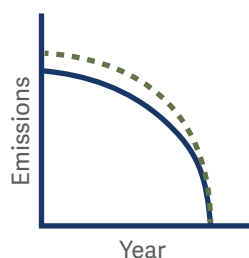


## The three common steps to portfolio alignment<sup>2</sup>

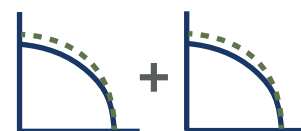
Step 1:  
Create a normative  
benchmark



Step 2:  
Measure counterparty  
performance



Step 3:  
Aggregate counterparty-  
level scores



The intuition behind each step is straightforward:

- We need to have (at least) one decarbonisation trajectory that is aligned with one (or more) global warming pathways.
- We need to compare an individual company's current and likely future Greenhouse Gas (GHG) emission profile with this/these warming pathways and determine which warming trajectory the company is on in relation to this/these.
- It is necessary to aggregate from individual companies' alignment estimates to the overall portfolio's.

Each step, however, requires a multitude of assumptions or choices to be made. To cite but a few examples, one needs to decide whether and/or how:

- to use a single or multiple benchmarks reflecting one (or more) global warming trajectories;
- to use sector and/or country specific benchmarks or a global one;
- to focus on absolute emissions or emission intensity;
- to rely on historical, current and/or expected future emissions; and
- to avoid unintended consequences when aggregating from company to portfolio level alignments estimates.

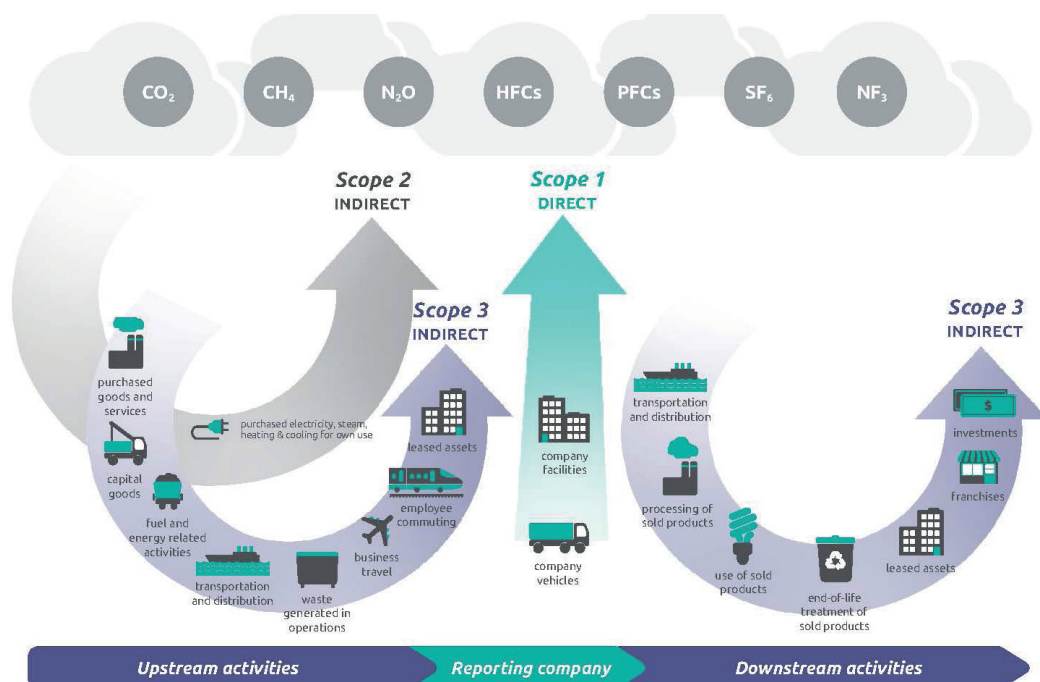
There are at present at least seven data providers who attempt to assess companies' temperature alignment. A working group with representatives from multiple stakeholders has done extensive work comparing the various approaches. This group has made recommendations as to what constitutes best practice with a view to facilitating a convergence of methodologies and ensuring a degree of comparability of estimates across data providers.<sup>3</sup>

Our preferred approach starts with the assumption of a remaining budget of cumulative GHG emissions between now and 2070 that is consistent with a high probability of below 2 degrees Celsius warming by the year 2100. This is then broken down by countries and sectors based on individual countries' so called 'Nationally Determined Contributions'. These have been published and updated in the years following the signing of the Paris Agreement.

Using these, companies are then allocated Paris-aligned GHG emission budgets broken down by Scope 1, 2 and 3 emissions. Scope 1 emissions are direct GHG emissions from sources that are controlled or owned by the company. Scope 2 emissions are its indirect GHG emissions associated with the purchase of electricity, steam, heat or cooling. Scope 3 emissions are indirect GHG emissions along a company's value chain. See chart below for an illustration of Scope 1 - 3 emissions.

<sup>2</sup>Source: Measuring Portfolio Alignment: Technical Supplement p. 22. [https://assets.bbhub.io/company/sites/60/2021/05/2021-TCFD-Portfolio\\_Alignment\\_Technical\\_Supplement.pdf](https://assets.bbhub.io/company/sites/60/2021/05/2021-TCFD-Portfolio_Alignment_Technical_Supplement.pdf)

<sup>3</sup>See "Measuring Portfolio Alignment: Technical Supplement", July 2021: [https://assets.bbhub.io/company/sites/60/2021/05/2021-TCFD-Portfolio\\_Alignment\\_Technical\\_Supplement.pdf](https://assets.bbhub.io/company/sites/60/2021/05/2021-TCFD-Portfolio_Alignment_Technical_Supplement.pdf)



Source: [https://ghgprotocol.org/sites/default/files/standards/Scope3\\_Calculation\\_Guidance\\_0.pdf](https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf)

Companies are allocated Scope 1 and Scope 2 emission budgets on the basis of each sector's emission budget and the share of companies' revenues within their sector. The overall global Scope 3 emissions budget is broken down to the company level, reflecting companies' shares of global revenues.

Combining these Scope 1, 2 and 3 budgets for each company gives a GHG emission budget that is deemed consistent with a temperature rise of at most 2 degrees Celsius by 2100.

The second step is compare companies' current and expected future emissions with this budget, based on published or estimated current emissions and planned/expected future emissions. Deviations from budgets are then converted into deviations from 2 degree warming, relying on the approximately linear relationship between cumulative GHG emissions and global mean temperature rises, thus yielding Implied Temperature Rise estimates.

The third and final step is the aggregation from companies' Implied Temperature Rises to the Fund's. This is done by following the following steps:

1. Calculate for each holding the amount invested by the Fund as a share of the company's Enterprise Value and multiply it by the future cumulative absolute emissions over- or undershoots of the company, relative to budget.
2. Total these so-called 'owned' emissions over- or undershoots for all holdings.
3. Convert this sum, expressed as an absolute emissions deviation, into a deviation from the 2 degree bound in the same way as for an individual company (see previous paragraph).

In managing the fund we thus follow an approach which:

- Compares companies' emission trajectories with one that is consistent with global warming of 2 degrees Celsius;
- Calculates sector- and country-specific emission benchmarks which are based on the 'Nationally Determined Contributions' countries submitted following the Paris Agreement;
- Tries to capture Scope 1, 2 and 3 emissions;
- Incorporates current and expected future emissions;
- Estimates implied temperature rises from companies' absolute over- or undershoots of their emission budgets;
- Determines the Fund's overall implied temperature rise by comparing the portfolio's 'owned' projected emissions with its projected owned emission budgets.

<sup>4</sup>For details see: Understanding the climate performance of investment funds", <https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/climate-performance-of-investment-funds> Part 2, p. 19, as well as Annex E



We are aware that these methodological choices have advantages and disadvantages<sup>5</sup>, but we believe our approach is sound and robust. Moreover, as highlighted above, we expect to refine and augment our approach over time as research in this area advances and data improves further.

## Exposure to carbon intensive sectors and low-carbon technologies

While the overall portfolio has a constraint that the aggregate implied temperature rise of its holdings must be below 2 degrees Celsius, this does not mean that each individual holding must satisfy this condition. Rather, we believe that the Fund can make a greater contribution to the energy transition if it also invests selectively in carbon-intensive sectors. This is because these sectors cover a substantial part of the global economy's capital stock that will need to be de-carbonised at some significant expense. While investing exclusively in innovative companies with a low, or even negative, carbon footprint facilitates the energy transition to some extent, this alone will not suffice.

It is worth noting in this context that the Fund's benchmark, the MSCI ACWI Climate Paris-Aligned Index, has a constraint to have an aggregate exposure to sectors that highly contribute to climate change, or so-called 'highly-exposed' sectors (these are listed in the Appendix of this statement), of no less than that of the unconstrained MSCI All Country World index for this very reason.<sup>6</sup>

Given the Fund's overall constraint to have an aggregate implied temperature rise of below 2 degrees Celsius, it stands to reason that within carbon intensive sectors, the Fund will seek to invest in companies that are ahead of their peers in terms of making/facilitating the energy transition. It is important to highlight that this could be because their expected future carbon footprint is already relatively low; because they have made the most aggressive commitments to reduce the GHG emission; and/or because they are changing their business models, investing in low carbon technologies and growing the share of these so-called 'green' revenues.

## Exclusions

Nonetheless, some companies are explicitly excluded from the Fund's investment universe - such as thermal coal producers. The Fund also excludes investments in companies involved in the production and sale of controversial weapons, including companies making component parts thereof. In addition, tobacco companies are also excluded from the Fund's investment universe. These exclusions follow those of the ACWI Climate Paris-Aligned Index, i.e. the Fund's benchmark.

## One Example: Steel Dynamics

In the following we illustrate the above methodology using Steel Dynamics, a US steel producer, as an example.

The global iron and steel sector's combined cumulative Scope 1-3 GHG emission budget is 35.6 GtCO<sub>2</sub>e, of which US iron and steel producers have a combined budget of 4 GtCO<sub>2</sub>e. Of this, on the basis to its share of global and US steel revenues, a budget of 0.63 GtCO<sub>2</sub>e of cumulative emissions is allocated to Steel Dynamics.

This compares with Steel Dynamics' projected actual cumulative Scope 1-3 emissions of 0.77 tCO<sub>2</sub>e. Steel Dynamics' overshoot of 0.14 tCO<sub>2</sub>e can be converted into an overshoot compared to the 2 degree limit of 0.18 degrees Celsius on the assumption that all companies globally overshoot their budget by the same proportion. In other words, Steel Dynamics' current and projected future emissions are aligned with a 2.18 degree Celsius global warming trajectory; or in short, Steel Dynamics has an Implied Temperature Rise of 2.18 degrees.

With an Implied Temperature Rise in excess of 2 degree Celsius, Steel Dynamics is thus clearly not Paris-aligned. It is worth noting, however, that, relative to its peers in the iron and steel sector, Steel Dynamics scores very well in terms of temperature alignment: the average temperature rise of the iron and steel sector is 4.5 degrees. Steel Dynamic's lower Implied Temperature Rise reflects a variety of emission reducing measures such as shifting to a circular manufacturing model, invested entirely in electric arc technology, which primarily uses recycled scrap metal to produce new steel. Moreover, the company has published clear goals concerning the reduction of its environmental footprint by 2025 and 2030, and has committed publicly to reaching carbon neutrality by 2050.

<sup>5</sup> See again "Measuring Portfolio Alignment: Technical Supplement", cited above, for a very thorough overview of the competing methodologies and their pros and cons.

<sup>6</sup> In fact, this is a requirement for a benchmark to be allowed to be called Paris-Aligned in some jurisdictions: "To ensure that EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks provide a realistic image of the real economy, including of sectors that should actively reduce GHG emissions to make the objectives of the Paris Agreement attainable, the exposure of those benchmarks to those sectors should not be less than the exposure of their underlying investable universe." See p. 7 of the 17 July 2020 EU Commission Delegated Regulation regarding the minimum standards for climate benchmarks: [https://ec.europa.eu/finance/docs/level-2-measures/benchmarks-delegated-act-2020-4757\\_en.pdf](https://ec.europa.eu/finance/docs/level-2-measures/benchmarks-delegated-act-2020-4757_en.pdf)

<sup>7</sup> N.B. This assumes a relationship of an additional 0.000529 degree Celsius warming for each Gt of incremental cumulative CO<sub>2</sub>e emissions. See again Annex E of "Understanding the climate performance of investment funds" <https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/climate-performance-of-investment-funds>

<sup>8</sup> Source: Company website, <https://ir.steeldynamics.com/Presentations>, page 22 of Q2 2021 Investor Call Presentation

## Appendix 1: EU list of highly exposed sectors

Aerospace	Diversified REITs	Oil Equipment & Services
Alternative Electricity	Electrical Components & Equipment	Paper
Aluminium	Electronic Equipment	Pipelines
Auto Parts	Electronic Office Equipment	Railroads
Automobiles	Exploration & Production	Real Estate Holding & Development
Brewers	Farming Fishing & Plantations	Real Estate Services
Building Materials & Fixtures	Food Products	Residential REITs
Business Support Services	Forestry	Retail REITs
Clothing & Accessories	Gas Distribution	Semiconductors
Coal*	General Mining	Soft Drinks
Commercial Vehicles & Trucks	Heavy Construction	Specialized Consumer Service
Commodity Chemicals	Hotel & Lodging REITs	Specialty Chemicals
Computer Hardware	Industrial & Office REITs	Specialty REITs
Containers & Packaging	Industrial Machinery	Tires
Conventional Electricity	Integrated Oil & Gas	Tobacco*
Defence*	Iron & Steel	Trucking
Delivery Services	Marine Transportation	Water
Distillers & Vintners	Multiutilities	
Diversified Industrials	Nonferrous Metals	

\* sectors excluded per the fund's investment policy

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