





AIM Impact Report methodology

Issuer impact reporting is heterogeneous, utilising different methodologies, reporting formats and performance indicators. This often means that we cannot compare reported impact data accurately nor appropriately.

The impact metrics included in our impact reports can be considered underestimates for two key reasons:

- Not all issuers are able to report on 100% of the portfolio.
 This may be due to a range of reasons, such as issuers having insufficient resources, or gaps in initial data collected to permit reasonable calculations, or lack of impact metric methodologies and expertise.
- AIM and our partners (e.g. ISS ESG) were not able to use the supplied/reported impact data. This will be the case if, for example, there are differences in issuer reporting methods or a lack of transparency in how the figures were calculated or lack of comparability with other issuers.

However, AIM engages with issuers to encourage market consistency in reporting, including the adoption of industry best practices, such as disclosing their reporting methodologies, appropriate references to baselines and higher levels of disclosure – for example, prorated project-specific information where available. Where possible, this report attempts to standardise the diverse methodologies and metrics used by issuers.

Our methodology to collect, evaluate and process impact data in this report is as follows:

- 1. Verify issuers' reporting and transparency of proceeds commitments as part of our SPECTRUM Bond® analysis. (Issuers with poor reporting practices are excluded or placed on the watchlist.)
- Collect impact-bond-issuer proceeds commitments and impact-performance metrics. Issuers tend to report annually on the anniversary of the first impact bond issuance and use different reporting periods.
- 3. Where the issuer reports at the impact bond level or a sub-set of bonds, we include only projects associated with the bond/sub-set held in our portfolio. Otherwise, as a general rule, AIM takes projects at the framework level.

- 4. Engage with invested impact bond issuers to request greater disclosure, targeting project-specific data where required. To limit double counting, AIM requests issuers to determine their financing share of projects in order to permit calculation of impact bond issuer prorated project information.
- 5. Tag and categorise issuer-reported impact bond data by AIM sectors, sub-sectors, region, country and SDG alignment at the project level per framework. Projects and bonds can be aligned to more than one SDG and sector.
- 6. Estimate portfolio share of impact data as a percentage of portfolio holding amount to total relevant impact bond funding. For example, if the portfolio had an average time-weighted holding of US\$1m of a US\$500m green bond funding programme the portfolio will be allocated 0.2% of reported impact bond key performance indicators (KPIs).
- 7. Calculate portfolio time-weighted sector, geographic and SDG distribution in USD equivalent terms and portfolio-adjusted KPIs using the above data.
- 8. Where relevant and possible, calculated independent portfolio metrics in adherence to international best practices, such as the Greenhouse Gas Protocol, with leading climate data specialists. Non-mitigation focused activities and social bonds are excluded from GHG emissions estimates currently.



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Funded projects net zero scenario methodology

Following a pilot analysis performed in 2022, in 2023 AIM partnered once again with ISS ESG to assess the net zero alignment of relevant funded projects. Our goal is to help assess the alignment of funded projects to our mission of supporting the Paris Agreement and investing in line with limiting global warming to 1.5°C this century.

For this exercise we covered three major sectors in our portfolios: energy, transport, and buildings, which make up the majority of our portfolio-weighted funded projects.

Net zero alignment methodology:

- Determine the sector and sub-sector at the asset-level of our funded projects. For example, Energy Generation – Solar CSP.
- 2. Follow either a technology or expected-performance approach to determine the necessity of the technology in use in the net zero transition. The technology approach categorises certain technologies as aligned with a net zero scenario, for example onshore wind power. The performance approach is based on technology specific quantitative thresholds for the different projects (i.e. GHG emissions below defined gCO2e/kWh levels). See the following section for details on references used to determine sector thresholds.

- 3. Categorise the alignment status of each asset/project into one of the following:
- Aligned: project performance currently fulfils 2050 criteria for net zero alignment under either approach.
- Aligning: project performance meets the current year's threshold on a net zero-by-2050 trajectory
- Expected to align: the issuing entity has a sufficiently robust climate strategy that underlying projects can be considered committed to aligning to net zero-by-2050.
- Not aligned: project emissions may exceed the current year's alignment criteria but the project contributes to decarbonising and climate resilience by supporting themes such as electrification, efficiency of energy usage and generation and pollution prevention
- No data: there is insufficient data to assess the project under either the technology or the expected performance approach.

Other important methodological considerations include:

- Data availability: while we endeavour to obtain the most granular and high-quality data possible for assessment, we are aware that the outcome of the assessment is highly dependent on data availability. Where possible, we seek publicly available information and engage with issuers to fill in any data gaps. However, when this is not possible estimated data will be used.
- Alignment status timeframe: it is also important to note that some of the quantitative thresholds applied may change over time as decarbonisation of the global economy advances. Therefore, the alignment status of an asset/project is only applicable to the latest year under analysis and does not allow for predictions of whether an asset will be aligned with a climate transition to below 1.5°C at a future point.



Using energy generation as an example category, below are examples of where technology or performance-assessment approaches are used. In the case of performance-assessment approaches we have also given examples of the performance threshold used.

Project sub-category	Technology approach	Performance approach	Comments
Solar PV ¹	Yes	-	-
Solar CSP ²	-	Direct GHG < 100gCO ₂ e/kWh	-
Wind (On/Offshore)	Yes	-	-
Bioenergy – heating	-	80% less GHG vs. baseline	Baseline can be project- specific, country-specific or generic fossil fuel baseline
District heating	Powered by: thermal solar, geothermal, heat pumps, biomass, waste, green hydrogen	80% less GHG vs. baseline	Baseline can be project- specific, country-specific or generic fossil fuel baseline

The underlying criteria is determined based on the following references:

Reference name	Reference overview	Sectors applied to
Climate Bonds Taxonomy	Framework identifies the assets, activities, and projects compatible with a trajectory to net zero by 2050 and is based on input from the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA).	Renewable energy, district heating, transmission and distribution and transport
Carbon Risk Real Estate Monitor (CRREM)	Global initiative aimed at supporting the real estate industry in tackling climate transition risks and fostering investments in energy efficiency. CRREM publicly released regional and property-type-specific 1.5°C and 2°C decarbonization pathways.³ ISS applies the 1.5C scenario to determine alignment of building projects.	Buildings

Issuer assessment in absence of project data availability:

Where insufficient data is available at the project level, the issuer's overall climate targets and strategy will be considered, if covered by our partner ISS-ESG. To determine alignment at an issuer level, we consider the following criteria:

- Materiality: we consider whether the company is disclosing sector-specific material GHG emissions
- 2050 net zero target: whether the issuer has declared a net zero target by 2050 or sooner, including if the target includes scope 1, 2, and relevant scope 3 emissions.

If both criteria are fulfilled, then the issuers' projects are assigned an alignment status of "Expected to Align".

https://www.crrem.eu/wp-content/uploads/2023/04/CRREM-Risk-Assessment-Reference-Guide-V2_20_03_2023.pdf





¹ Dhotovoltaic

¹ Photovoltaic

Carbon Yield™ methodology



The Carbon Yield, jointly developed by Lion's Head Global Partners, ISS ESG and AIM, with funding by the Rockefeller Foundation, quantifies the environmental impact of a green bond in terms of greenhouse-gas (GHG) emissions avoided through the financed activities. It is an open-access methodology, available for issuers and investors to use.

AIM published a case study on our experience of applying the Carbon Yield, which can be accessed at http://www.affirmativeim.com/publications









The impact is expressed in Potential Avoided Emissions (PAE) enabled by the use of proceeds of the bond in terms of tonnes of CO₂e/year/unit of capital.1

Full details on the Carbon Yield can be found at www.carbonyield.org

- 1. Projects and activities funded through the issuer's green-bond framework are identified and categorised according to sector and technology
- 2. Relevant baselines for each project/activity type are identified. To calculate the abatement potential of an activity, a reference emissions baseline is applied.
- 3. The potential annual scope 1 and 2 GHG abatement is calculated for each project (and/or activity). This metric is defined as the average GHG abatement for the underlying project's expected lifetime, or the operating GHG abatement, adjusted for the construction years (where relevant). Under the initial proposal, the Carbon Yield is not adjusted for GHG emissions created during the construction phase, although in time and as disclosure improves, the market may move to demand such an adjustment. However, the number of construction years is accounted for within the total project lifetime, so that the average abatement is an average over the whole project lifetime, including the construction phase.
- 4. The capital cost of the project is determined. Where the full capital cost is not known, it can be imputed from technology benchmarks published by entities such as the International Renewable Energy Agency (IRENA) and other industry organisations.
- 5. The annual potential GHG abatement per unit of invested capital can be derived using the annual abatement potential and information on the capital cost of, and bond allocations to, the project.

- 6. Once the annual potential GHG abatement per unit of invested capital is known, an issuer can then allocate that potential abatement to the quantum of capital that they have invested in or committed to the project.
- 7. By taking a weighted average of the potential abatementimpact per capital invested for each activity in the framework, the issuer can then calculate the Carbon Yield per unit of invested capital of their green-bond framework, i.e. the Carbon Yield of the green bonds issued under such a framework. Alternatively, if the issuer does not provide a Carbon Yield for their security, the investor can still use this approach to calculate the Carbon Yield, provided certain base information regarding the use of proceeds is available through the green-bond framework.
- 8. Individual bond Carbon Yields can then be aggregated to determine the portfolio-weighted GHG emissions avoided per US\$1,000 invested.

Independent funded projects **GHG** emissions methodologies

Avoided GHG emissions are defined as emissions that would have been released if a particular action or intervention had not taken place. The emissions avoided by using a more efficient product or service are often dependent on either consumer or market behaviour. This analysis does not make absolute predictions about behaviour or market developments. Consequently, the avoided emissions presented are not assured or verified by a third party and are conditional upon certain behaviours, though they do provide an estimate of the climate-change-mitigation impact of impact bonds.

Energy – renewable energy generation

- annual generation. IEA-grid-emissions factors were
- the emissions from the use of grid-based electricity

Impact bond proceeds GHG emissions:

- 1. Impact-bond issuer and proceeds information is gathered:

About ISS ESG

ISS ESG is the responsible investment arm of Institutional Shareholder Services Inc., a leading provider of environmental, social and governance solutions for asset owners, asset managers, hedge funds and asset servicing providers.

WACI methodology

As outlined in the Measuring greenhouse gases (GHG) section of the main report, the Weighted Average Carbon Intensity (WACI) is a carbon-intensity metric recommended by Task Force on Climaterelated Financial Disclosures (TCFD) and used to measure the portfolio's exposure to GHG-intensive issuers.

We calculate the WACI of our portfolios and estimate WACI for the Bloomberg Global Aggregate Bond Index, to provide further context to our portfolio's performance. Both portfolio and benchmark WACI calculations follow the same methodology, outlined below.

In line with last year's reporting, we have continued to include separate WACI figures for sovereigns and regulators, and corporates and agency issuers for the portfolio WACI. This is to address the fundamentally different methodological and data challenges relating to companies and sovereign-related issuers. We define these two categories as follows:

- Sovereigns and regulators: central governments/ treasuries and regional/local governments. This definition fully aligns with the definition of "Treasury" and "Sovereign" issuers from the Bloomberg Fixed Income Classification System (BCLASS), and partially aligns with its definition of "Local Authority".1
- · Corporates and agencies: all other entities.

We also provide an aggregated WACI, which combines portfolio sovereign and corporate WACIs, for comparison with the estimated aggregated benchmark WACI.

TCFD reporting (scope 1 and 2)			
Aggregated WACI (tCO ₂ e/US\$m)	corporate scope 1 and 2 WACI + sovereign scope 1 and 2 WACI		
Corporate and agencies WACI (tCO ₂ e/US\$m revenue)	$\sum_{n}^{i} (\frac{\text{current value of investment}_{i}}{\text{current portfolio value}} \times \frac{\text{issuer's scope 1 and 2 GHG emissions}_{i}}{\text{issuer's US$m revenue}_{i}})$		
Sovereign and regulators WACI (tCO ₂ e/PPP GDP US\$m)	$\sum_{n}^{i} (\frac{\text{current value of investment}_{i}}{\text{current portfolio value}} \times \frac{\text{country's scope 1 and 2 GHG emissions}_{i}}{\text{country's PPP-adjusted GDP US\$}_{i}})$		

SFDR reporting (scope 1, 2 and 3)			
Aggregated WACI (tCO ₂ e/US\$m)	corporate scope 1, 2 and 3 WACI + sovereign WACI (territorial approach)		
Corporate and agencies WACI (tCO ₂ e/US\$m revenue) ²	$\sum_{n}^{i} (\frac{\text{current value of investment}_{i}}{\text{current portfolio value (US$m)}} \times \frac{\text{issuer's scope 1,2 and 3 GHG emissions}_{i}}{\text{issuer's US$m revenue}_{i}})$		
Sovereign and regulators WACI (tCO ₂ e/PPP GDP US\$m) ³	$\sum_{n}^{i} \left(\frac{\text{current value of investment}_{i}}{\text{current portfolio value (US\$m)}} \times \frac{\text{country's GHG emissions (territorial approach)}_{i}}{\text{country's PPP-adjusted GDP US\$m}_{i}} \right)$		

Table 1: Formulas used to derive TCFD WACI and SFDR-equivalent metrics. Based on: TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, 2017; Joint Committee of the European Supervisory Authorities, Final Report on draft Regulatory Technical Standards, 2021; PCAF, Financed Emissions, The Global GHG Accounting and Reporting Standard Part A, 2022

Corresponding SFDR metric name: GHG intensity of sovereigns (tCO2e /EURm GDP). SFDR requires country scopes 1, 2 and 3 emissions to be covered, but does not specify the approach to be taken for sovereign emissions accounting. The Territorial Approach meets this coverage requirement. Additionally, the official SFDR metric

does not specify whether GDP should be computed on a nominal, real or PPP-adjusted basis. The latter has been selected to align with PCAF

Corporate and agencies WACI

- 1. For each corporate-issued bond held in the portfolio or benchmark, the issuer is mapped to the most relevant entity for emissions reporting. This is an important step since, while in some cases the issuer coincides with the entity reporting emissions, in other cases bonds are issued by specific financing subsidiaries or subsidiaries of companies that only report emissions at group/ parent level.
- 2. Issuer scope 1, 2 and 3 GHG emission-intensity data (by revenue) is collected for each bond for the calendar year 2021, where available, or 2020 Where possible, we take reported emissions data, but if absent we take estimated emissions. Both types of data are supplied from one of our leading climate-data partners, S&P Trucost. Reported or estimated scope 2 emissions reflect location-based emissions, which leads to more conservative figures compared to using markets-based emissions.
- 3. For bonds where emissions data is available, the sum of scope 1 and 2, or scope 1, 2 and 3 GHG intensities for TCFD and Sustainable Finance Disclosure Regulation (SFDR) metrics respectively is multiplied by each bond's portfolio or benchmark annual average weight. The weighted intensities are then aggregated at the portfolio/benchmark level to produce the final corporate WACI figure.
- 4. Corporate WACI coverage is determined by summing up the portfolio or benchmark annual average weights for bonds covered by the WACI aggregated figure.

Sovereigns and regulators WACI

- 1. Sovereign-related entities are identified through the following screening process, using a combination of Bloomberg Fixed Income Classification System (BCLASS), security types, and manual checks:
- a. Issuers classified as "Treasury", "sovereigns" or, "Local Authority" according to the BCLASS) Level 2 are identified
- b. Bonds from issuers classified as "Local Authority" for which the security type is classified as "sovereign Debt", "Govt", and "Local/Regional Govt Debt" are manually checked to screen out any entities that are not local/regional government authorities, but are entities majority owned by local authorities.
- 2. All sovereign-related issuers (both at national and sub-national level) are mapped to their relevant country and are then assigned country-level emission intensities (tCO2 e/Purchase Power Parity-adjusted GDP) for calendar year 2021, based on data provided by S&P.
- 3. Sovereign emission intensities are calculated in line with the methodology and scopes outlined by the Partnership for Carbon Accounting Financials (PCAF). This approach is aligned with the SFDR requirements for calculating the "GHG intensity of sovereigns" metric as it covers the scope 1, 2 and 3 emissions and gives a holistic view of a sovereign's emissions intensity.
- a. Scope 1 emissions cover GHG emissions from sources located within the country territory and include emissions from domestic consumption and exports. This aligns with the UNFCCC approach used

- for the calculation of national inventories and is typically referenced by sovereigns in their Nationally Determined Contributions. There is a lack of broad consensus around whether country emissions from land-use, land-use change, and forestry (LULUCF) should be accounted for in emissions reporting, given high data uncertainty, high annual fluctuations, and impacts on a country's total emissions. For our calculations, we have aligned with PCAF's recommendation to report scope 1 emissions figures both with and without LULUCF.
- b. Scope 2 emissions cover GHG emissions occurring as a consequence of the domestic use of grid-supplied electricity, heat, steam and/or cooling that is imported from another territory.
- c. Scope 3 emissions cover emissions that are attributable to non-energy imports as a result of activities taking place within the country territory.
- d. Country Purchase Power Parity-adjusted (PPP) GDP: PPP-adjusted GDP is used as the denominator for country emission intensity as opposed to nominal or real GDP to facilitate comparisons of country outputs without taking into account the effects of market exchange rates, in line with PCAF recommendations. PPP-adjusted GDP, measured in current international US\$, is calculated by dividing a country's nominal GDP in local currency by the PPP exchange rate.1
- 4. For all sovereign-related bonds where emission intensity data is available, emission intensity is multiplied by portfolio/benchmark annual average weight and then aggregated to produce the final sovereign WACI figure.
- 5. Sovereign WACI coverage is determined by summing up portfolio/benchmark annual average weights for bonds covered by the sovereign WACI aggregated figure.

Aggregated WACI

- 1. While it is not required by either TCFD or SFDR, we report aggregated WACI figures for our portfolios and for the Bloomberg Global Aggregate Bond Index to
- a. Scope 1 and 2 aggregated WACI figure determined by summing the scope 1 and 2 corporate WACI and scope 1 and 2 sovereign WACI (both including and excluding LULUCF emissions).
- b.1, 2 and 3 aggregated WACI derived by adding up scope 1, 2 and 3 corporate WACI and scope 1, 2 and 3 sovereign WACI (both including and excluding LULUCF emissions).

About S&P Global Trucost

Since 2000, S&P Global Trucost has been providing data on multi-asset-class entities relating to climate change, natural-resource constraints, and broader ESG factors, including environmental performance profile encompassing carbon emissions and other pollutant impacts, water use, and natural-resource dependency.

¹Bloomberg, Bloomberg Fixed Income Index Methodology, 2021. Available at: https://assets.bbhub.io/professional/sites/27/Fixed-Income-Index-Methodology.pdf ²Corresponding SFDR metric name: GHG intensity of investee companies

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