

# ESG and Impact Indicators

## Definitions and Methodology




In this document we provide details on the calculation methodology for ESG and impact indicators, including data sources, formulas, and potential limitations of calculations.

### Table of contents.


- 1. **Definitions of issuer and position level metrics ..... 2**
- 2. **Portfolio aggregation formulas..... 4**
- 3. **Product coverage ..... 5**
- 4. **Limitations on metrics ..... 5**

## 1. Definitions of issuer and position level metrics

Metrics calculated at portfolio level use the following position and issuer level data as building blocs. Portfolio aggregation formulas a given in the next section.

Metric	Definition	Values	Source
<b>GHG emissions</b>   	<p>Company's carbon emissions measured in tons of carbon dioxide equivalent (tCO<sub>2</sub>-eq). Three scopes of carbon emissions can be distinguished:</p> <ul style="list-style-type: none"> <li>• Scope 1 emissions are direct emissions from owned or controlled sources</li> <li>• Scope 2 emissions are indirect emissions from the generation of purchased energy</li> <li>• Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions</li> </ul> <p>Candriam includes scope 1 and 2 GHG emissions in published figures. Scope 3 will be included as soon as we consider the data accurate and stable.</p> <p>Green bonds are excluded from calculations. They will be integrated once accurate and stable instrument level data is available regarding use of proceeds.</p>	tCO <sub>2</sub> -eq	Trucost <a href="https://www.trucost.com/">https://www.trucost.com/</a>
<b>ESG score</b>	<p>Score resulting from Candriam internal ESG analysis:</p> <ul style="list-style-type: none"> <li>• For corporate issuers, analysis is done from two angles: analysis of the impacts of business activities (products and services) and management of companies' key stakeholders.</li> <li>• For sovereign issuers, it incorporates the 4 essential dimensions of sustainability: human capital, natural capital, social capital and economic capital.</li> </ul> <p>More details on Candriam's ESG analysis methodology are available in the transparency code.</p>	Score [0-100]	Candriam <a href="https://www.candriam.com/en/private/market-insights/sri-publications/#transparency">https://www.candriam.com/en/private/arket-insights/sri-publications/#transparency</a>
<b>Freedom House Index (FHI)</b>  	<p>"Freedom in the World is an annual global report on political rights and civil liberties, composed of numerical ratings and descriptive texts for each country and a select group of territories. The 2021 edition covers developments in 195 countries and 15 territories.</p> <p>The report's methodology is derived in large measure from the Universal Declaration of Human Rights, adopted by the UN General Assembly in 1948."</p>	Score [0-100]	Freedom House <a href="https://freedomhouse.org/">https://freedomhouse.org/</a>

<b>Environmental Performance Index (EPI)</b>  	<p>"Environmental Performance Index (EPI) provides a data-driven summary of the state of sustainability around the world.</p> <p>Using 32 performance indicators across 11 issue categories, the EPI ranks 180 countries on environmental health and ecosystem vitality. These indicators provide a gauge at a national scale of how close countries are to established environmental policy targets."</p>	Score [0-100]	Yale EPI <a href="https://epi.yale.edu/">https://epi.yale.edu/</a>
<b>Green Bond</b>	Reflects issuer's intended use of the capital raised by the offering to finance clean energy plants and projects such as wind and solar	Binary value 0 or 1	Bloomberg <a href="https://www.bloomberg.com">https://www.bloomberg.com</a>
<b>High Stake</b>	Sectors listed in Article 3 of EU Climate Transition and EU Paris-aligned Benchmark regulation	Binary value 0 or 1	Delegated regulation (EU) C(2020) 4757
<b>R&amp;D expenditure</b>	Research and development expenditure as a proportion of the company's market capitalisation	% of market cap	Bloomberg <a href="https://www.bloomberg.com">https://www.bloomberg.com</a>
<b>% Doctorates</b>	Percentage of senior executives of the issuing company holding a doctorate	[0-100%]	Bloomberg <a href="https://www.bloomberg.com">https://www.bloomberg.com</a>
<b>% Women Board</b>  	Percentage of female board members at the issuer company	Ratio [0-100%]	Oekom <a href="https://www.issgovernance.com">https://www.issgovernance.com</a>
<b>Gender Diversity Score</b>  	<p>Score determined by Candriam internal analysis, based on 4 underlying categories of factors:</p> <ul style="list-style-type: none"> <li>• Gender parity within the company and at management level</li> <li>• Equal pay and professional-private life balance</li> <li>• Policies to promote gender equality</li> <li>• Engagement, transparency and responsibility</li> </ul>	Score [0-100]	Equileap, Candriam <a href="https://equileap.com/">https://equileap.com/</a>
<b>Carbon Impact Analysis</b>	Rating that seeks to assess the company's impact on climate change and its contribution to reducing GHG emissions, while taking into account induced	Score [1-5]	Carbon4Finance <a href="http://www.ca">http://www.ca</a>

<b>(CIA) Overall rating</b>  	emissions, emissions savings, and a forward-looking analysis.  It takes into account quantitative as well as qualitative information specific to the underlying corporate		<a href="http://rbon4finance.com">rbon4finance.com</a>
<b>Net exposure</b>	Physical positions: market value of the position  Derivatives: market value of the equivalent position in the underlying asset	M€	Candriam
<b>Enterprise value</b>	Financial issuers: AverageMarketCap6M  Non-financial issuers: AverageMarketCap6M + Short&LongTerm Debts	M€	Bloomberg  <a href="https://www.bloomberg.com">https://www.bloomberg.com</a>

## 2. Portfolio aggregation formulas

Metric	Definition	Scope
<b>Carbon Footprint per M€ invested</b>	$\frac{\sum_i \left( \frac{\text{net exposure}_i}{\text{enterprise value}_i} \times \text{GHG emissions}_i \right)}{\sum_i \text{net exposure}_i}$	Corporate issuers  Exclusion of green bonds (see section C)
<b>ESG Score</b>	$\frac{\sum_i \text{net exposure}_i \times \text{ESG score}_i}{\sum_i \text{net exposure}_i}$	3 versions of the score are used: <ul style="list-style-type: none"> <li>• Corporates</li> <li>• Sovereigns</li> <li>• Corporates + sovereigns</li> </ul>
<b>Percentage of Women on the Board</b>	$\frac{\sum_i \text{net exposure}_i \times \% \text{ women board}_i}{\sum_i \text{net exposure}_i}$	Corporate issuers
<b>Gender Diversity Score</b>	$\frac{\sum_i \text{net exposure}_i \times \text{gender diversity}_i}{\sum_i \text{net exposure}_i}$	Corporate issuers
<b>Freedom House Score</b>	$\frac{\sum_i \text{net exposure}_i \times \text{FHI}_i}{\sum_i \text{net exposure}_i}$	Sovereign issuers
<b>Environmental Performance Index Score</b>	$\frac{\sum_i \text{net exposure}_i \times \text{EPI}_i}{\sum_i \text{net exposure}_i}$	Sovereign issuers

<b>Percentage of High Stake Companies</b>	$\frac{\sum_i net\ exposure_i \times high\ stake_i}{AUM}$	Corporate issuers
<b>Percentage of Green Bonds</b>	$\frac{\sum_i net\ exposure_i \times green\ bond_i}{AUM}$	Corporate + sovereign issuers
<b>Portfolio temperature (°C)</b>	<p>Carbon4Finance formula taking as primary input the average CIA overall rating of the portfolio.</p> <p>The formula is calibrated to fit a floor scenario at +1.5°C, a cap at +6°C, and two benchmarks:</p> <ul style="list-style-type: none"> <li>• a business as usual reference is set in line with a +3.5°C trajectory</li> <li>• a +2°C trajectory is represented by the “Euronext Low Carbon 100” index</li> </ul>	Corporate issuers
<b>Portfolio percentage of doctorates</b>	$\frac{\sum_i net\ exposure_i \times \% \text{ doctorates}_i}{\sum_i net\ exposure_i}$	Corporate issuers
<b>Portfolio R&amp;D expenditure</b>	$\frac{\sum_i net\ exposure_i \times R\&D\ expenditure_i}{\sum_i net\ exposure_i}$	Corporate issuers

### 3. Product coverage

Calculations are made on eligible products i.e. products exposed to single name issuers (e.g. stocks, bonds, single name CDS, single name equity derivative). Therefore products such as cash and deposits, FX forwards, products linked to indexes, interest rate derivatives and external funds are excluded.

Certain sub-sovereign issuer categories, being equivalent to neither sovereign nor corporate issuers, are excluded (Iboxx categories Agencies, Public Banks and Other Sub-Sovereigns). Supra-national issuers are also excluded. For carbon footprint, green bonds are excluded.

Data coverage ratios are calculated as:

- the sum of net exposures on eligible products with data, divided by
- the sum of net exposures on eligible products

### 4. Limitations on metrics

#### Issuer data coverage

Certain metrics may not be available for all issuers in the fund or in the benchmark, implying that scores given at portfolio level may only be representative of a sub-portfolio of issuers for which data is available. It is therefore always important to consider coverage ratios when interpreting statistics.

## Data accuracy

In some areas, such as board composition and background of the directors, data is usually available and subject to quality and accuracy checks by company auditors or regulators. In many other areas however, our ESG analysts cannot rely on the same degree of systematic availability and data reliability. These limitations can be viewed as another limitation affecting Candriam's calculations.

In addition, for certain indicators such as temperature, the absence at this stage of common or harmonised definitions and hypothesis can make figures based on one provider's methodology hard to compare to figures based on other provider's methodologies.

The data used in the calculations is updated on a quarterly basis. Data completeness and data quality controls are put in place by Candriam and in case of a doubt submitted to the ESG team for further analysis.



Luxembourg - Brussels - Paris - London



Amsterdam - Dubai - Frankfurt - Geneva - Zurich - Madrid - Milan - New-York



**€158 B**

AUM as of  
31 December 2021



**600**

Experienced and  
committed professionals



**25 years**

Leading the way in  
sustainable investing

This document is provided for information purposes only, it does not constitute an offer to buy or sell financial instruments, nor does it represent an investment recommendation or confirm any kind of transaction, except where expressly agreed. Although Candriam selects carefully the data and sources within this document, errors or omissions cannot be excluded a priori. Candriam cannot be held liable for any direct or indirect losses as a result of the use of this document. The intellectual property rights of Candriam must be respected at all times, contents of this document may not be reproduced without prior written approval.

Candriam consistently recommends investors to consult via our website [www.candriam.com](http://www.candriam.com) the key information document, prospectus, and all other relevant information prior to investing in one of our funds, including the net asset value ("NAV") of the funds. This information is available either in English or in local languages for each country where the fund's marketing is approved.