



# ESG and Impact Indicators – Definitions and Methodology

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

## A. 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 are given in the next section.

Metric	Definition	Values	Source
<p>GHG emissions</p> 	<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>	tCO <sub>2</sub> -eq	<p>Trucost</p> <p><a href="https://www.trucost.com/">https://www.trucost.com/</a></p>
ESG score	<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]	<p>Candriam</p> <p><a href="https://www.candriam.com/en/private/market-insights/sri-publications/#transparency">https://www.candriam.com/en/private/market-insights/sri-publications/#transparency</a></p>
<p>Freedom House Index (FHI)</p> 	<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]	<p>Freedom House</p> <p><a href="https://freedomhouse.org/">https://freedomhouse.org/</a></p>

<p>Environmental Performance Index (EPI)</p> 	<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>	<p>Score [0-100]</p>	<p>Yale EPI <a href="https://epi.yale.edu/">https://epi.yale.edu/</a></p>
<p>Green Bond</p>	<p>Reflects issuer’s intended use of the capital raised by the offering to finance clean energy plants and projects such as wind and solar</p>	<p>Binary value 0 or 1</p>	<p>Bloomberg <a href="https://www.bloomberg.com">https://www.bloomberg.com</a></p>
<p>High Stake</p>	<p>Sectors listed in Article 3 of EU Climate Transition and EU Paris-aligned Benchmark regulation</p>	<p>Binary value 0 or 1</p>	<p>Delegated regulation (EU) C(2020) 4757</p>
<p>% Women Board</p> 	<p>Percentage of female board members at the issuer company</p>	<p>Ratio [0-100%]</p>	<p>Oekom <a href="https://www.issgovernance.com">https://www.issgovernance.com</a></p>
<p>Gender Diversity Score</p> 	<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>	<p>Score [0-100]</p>	<p>Equileap, Candriam <a href="https://equileap.com/">https://equileap.com/</a></p>
<p>Carbon Impact Analysis (CIA) Overall rating</p> 	<p>Rating that seeks to assess the company’s impact on climate change and its contribution to reducing GHG emissions, while taking into account induced emissions, emissions savings, and a forward-looking analysis.</p> <p>It takes into account quantitative as well as qualitative information specific to the underlying corporate</p>	<p>Score [1-5]</p>	<p>Carbon4Finance <a href="http://www.carbon4finance.com">http://www.carbon4finance.com</a></p>
<p>Net exposure</p>	<p>Physical positions: market value of the position Derivatives: market value of the equivalent position in the underlying asset</p> <p>The exposures are not duration-adjusted for fixed income products</p>	<p>M€</p>	<p>Candriam</p>
<p>Enterprise value</p>	<p>Financial issuers: AverageMarketCap6M Non-financial issuers: AverageMarketCap6M + Short&amp;LongTerm Debts</p>	<p>M€</p>	<p>Bloomberg <a href="https://www.bloomberg.com">https://www.bloomberg.com</a></p>

## B. Portfolio aggregation formulas

Metric	Formula	Scope
Carbon Footprint per M€ invested	$\frac{\sum_i \left( \frac{\text{net exposure}_i}{\text{enterprise value}_i} \times \text{GHG emissions}_i \right)}{\sum_i \text{net exposure}_i}$	Corporate issuers
ESG Score	$\frac{\sum_i \text{net exposure}_i \times \text{ESG score}_i}{\sum_i \text{net exposure}_i}$	3 versions of the score are used: <ul style="list-style-type: none"> <li>• Corporates</li> <li>• Sovereigns</li> <li>• Corporates + sovereigns</li> </ul>
Percentage of Women on the Board	$\frac{\sum_i \text{net exposure}_i \times \% \text{ women board}_i}{\sum_i \text{net exposure}_i}$	Corporate issuers
Gender Diversity Score	$\frac{\sum_i \text{net exposure}_i \times \text{gender diversity}_i}{\sum_i \text{net exposure}_i}$	Corporate issuers
Freedom House Score	$\frac{\sum_i \text{net exposure}_i \times \text{FHI}_i}{\sum_i \text{net exposure}_i}$	Sovereign issuers
Environmental Performance Index Score	$\frac{\sum_i \text{net exposure}_i \times \text{EPI}_i}{\sum_i \text{net exposure}_i}$	Sovereign issuers
Percentage of High Stake Companies	$\frac{\sum_i \text{net exposure}_i \times \text{high stake}_i}{AUM}$	Corporate issuers
Percentage of Green Bonds	$\frac{\sum_i \text{net exposure}_i \times \text{green bond}_i}{AUM}$	Corporate + sovereign issuers
Portfolio temperature (°C)	<p>Carbon4Finance formula taking two primary inputs:</p> <ul style="list-style-type: none"> <li>• the average CIA overall rating of the portfolio</li> <li>• the percentage of issuers classified as high stake by Carbon4Finance</li> </ul> <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>	Corporates

## **C. Product coverage**

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

## **D. Limitations on metrics**

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### **Issuer coverage**

Certain metrics may not be available for all issuers in the portfolio 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 number 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 monthly 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.

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