

Methodology for the analysis of IFU's climate footprint in 2020

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Disclaimer:

This report has been produced in the context of the calculation of IFU's 2020 climate footprint, which was carried out by UNEP DTU Partnership between the end of 2020 and the start of 2021.

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1 Introduction

IFU has for the first time assessed the climate footprint of its outstanding portfolio, i.e. accounted for the total annual absolute emissions estimated, and assessed them at a fixed point in time, in line with the financial accounting period. The assessment is based on the methodology described in the PCAF Global GHG Accounting Standard¹. However, the methodology applied includes considerations that are specific to IFU, and expands on the PCAF standard, in order to allow for a full assessment of IFU's portfolio.

The emissions calculated are related to the Scope 1, 2 and 3ⁱ emissions of companies, projects, financial intermediaries and funds in which IFU is investing. The financed emissions are defined in alignment with the "follow the money" principle, meaning that the money from loans and investments should be followed as far as possible to understand and account for the climate impact in the real economy.

Furthermore, in order to avoid double-counting, the footprint results account for attribution in accordance with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard for category 15 (investment)². The attribution factor is defined so that GHG emissions from loans and investments are allocated to the reporting financial institutions based on the proportional share of lending or investment in the borrower or investee. The attribution factor is then multiplied with the annual emissions of the company or project.

This report includes a description of the methodology used for the calculation of IFU's climate footprint. The report is prepared by UNEP DTU Partnership, which has conducted the calculations on behalf of IFU.

2 Approach

As a general framework, the climate footprint methodology used and presented in this report attempts to align as much as possible with the PCAF Accounting Standard. However, due to the data availability, portfolio compositions and IFU's intended use of the footprint results, the approach was expanded to allow for the full analysis of IFU's portfolio. The methodology adopted as a result of that, is hereby explained.

This methodology document does not aim to substitute PCAF, but rather to complement it by explaining how the standard was applied in the context of the assessment of IFU's climate footprint. It provides a summary of the main steps of the approach and underlines the differences to PCAF. Readers should refer to the PCAF standard for more detailed information.

2.1.1 Asset class and general approach

Building upon the PCAF standard, three main approaches were used for this climate footprint to calculate the emissions of the portfolio companies, projects, financial intermediaries and funds, referring to three different asset classes. These asset classes are:

- Business loans and unlisted equityⁱⁱ (as defined by PCAF)
- Project finance (as defined by PCAF)
- Financial intermediaries (added, in comparison to PCAF)

ⁱ In accordance with the GHG Protocol Scope definition ⁸

ⁱⁱ The business loans and unlisted equity approach was used also for the asset class "listed equity and corporate bonds", since primary data on the EVIC (which is needed for the calculation of attribution for that asset class) was not available.

In order to categorize the investments in the three asset classes mentioned above, the diagram presented in Figure 11 was used. For more details regarding these asset classes, please refer to the PCAF standard.

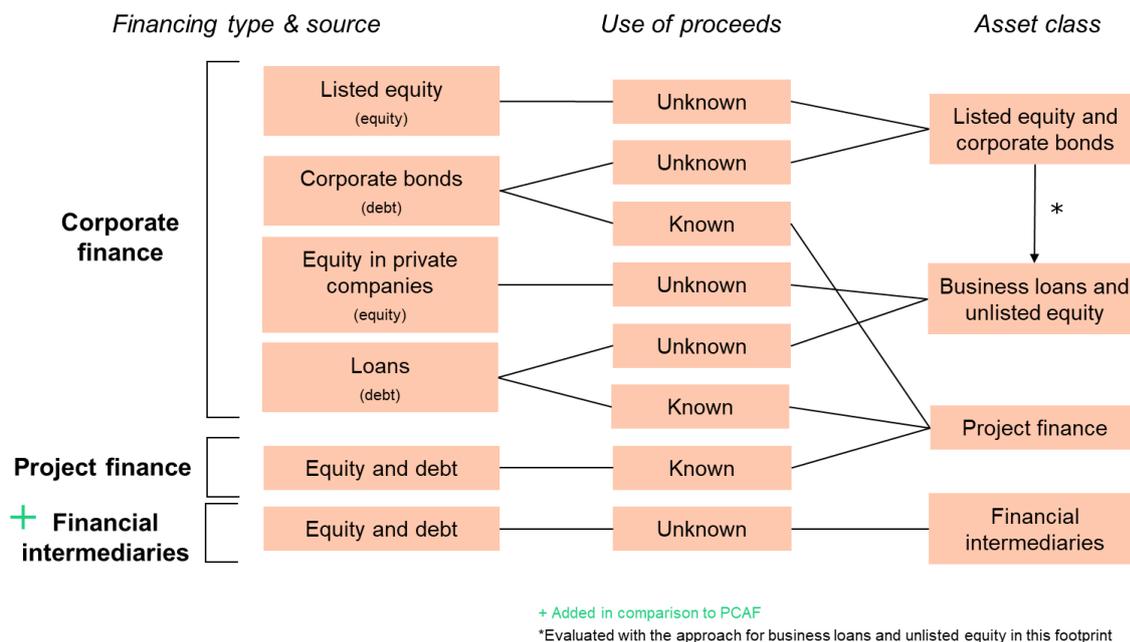


Figure 1. Guidance for choosing an approach to calculate financed emissions (adapted from PCAF).

In general, all greenfield projects are considered as project finance and assessed using the project finance approach. Establishment of new companies or facilities (such as healthcare facilities, production facilities, etc.) has also been considered as greenfield projects, and was therefore assessed using the project finance approach.

Corporate finance is generally brownfield projects. Here, the rule of thumb (as depicted in Figure 1) is that when the financial instrument is equity, the use of proceeds is unknown, and the investment is therefore assessed using the business loans and unlisted equity approach. When the financial instrument is debt, it should be evaluated whether the use of proceeds is known or unknown. The use of proceeds is considered “known” when both conditions below are met:

1. The activities where IFU's financing is provided, consists of an increase of the production capacity, and this is clearly defined.
2. It is possible to discern the emissions stemming from the activities financed by IFU and the rest of the activities.

On the other hand, the use of proceeds is considered unknown for investments entailing restructuring of companies, providing growth capital for expansions where the results of that (and GHG implications) are not measurable.

For corporate finance making use of a debt instrument, where the use of proceeds is known, the project finance approach is used, as illustrated in Figure 1. In the other cases, the business loans and unlisted equity approach is used.

In some exceptional cases, brownfield projects related to corporate finance, where the financial instrument is equity, may also use the project finance approach, in the event IFU explicitly states that the investment is provided for a particular purpose, such as the

construction of an extra production facility/line. This was considered similar to the case of the establishment of new companies or facilities described above.

The substantial difference between the business loans and unlisted equity and project finance approach is the way the assessment boundaries are set, which influences what activities are included for the calculation of emissions and attribution factors. In the project finance approach, the calculation of emissions includes only the emissions from the financed (ringfenced) activities. Emissions related to existing activities outside the financed project but within the financed organization are not considered. On the other hand, in the business loans and unlisted equity approach (and also in the listed equity and corporate bonds approach), the calculation of emissions includes all emissions from the company in which the financing is provided.

The calculation of the attribution factors follows the same logic. In the project finance approach, the calculation of the attribution factor includes only the financials from the financed (ringfenced) activities. On the other hand, the business loans and unlisted equity approach includes all the financials from the company in which the financing is provided.

2.1.2 Methodological consideration specific for financial intermediaries

PCAF does not yet include an approach for accounting for emissions of financial intermediaries such as funds, banks, microfinance institutions and similar. For this reason, it was necessary to develop an additional asset class, which would include investments in the above-mentioned financial institutions, as they represent a significant share of IFU's portfolio.

Therefore, the assessment relies on the approach illustrated in the Joint Impact Model (JIM) methodology developed by Steward Redqueen for calculating "finance-enabled" emissions, and related assessment tool available online ³.

In the JIM methodology, finance-enabled emissions are described as emissions "at companies, suppliers of companies, and their suppliers associated with the financial intermediary's lending". The need for assessing these emissions arises from the fact that financial intermediaries (FIs) invest in companies (or, more generally, clients), thereby enabling them (i.e. the end-beneficiaries) to increase capacity/economic activity. The approach taken by the JIM follows this logic, multiplying the amount invested by FIs into companies by a capital-to-output ratio expressing how much additional revenues a company will be able to generate because of the additional capital receives. This is then translated into GHG emission reductions using emission factors from an Environmentally Extended Input-Output (EEIO) database.

The JIM tool calculates all direct, supply chain and induced emissions of the clients of the FI and classifies them according to whether they are Scope 1, 2, or 3 of the clients. The Scope 1, 2 and 3 of the FI's clients were included in the footprint analysis and reported as Scope 3 emissions of the FI. In addition to that, information on whether the emissions from the clients were linked to Scope 1 and 2, or Scope 3, was provided separately, to allow for a more granular understanding of the emissions from FIs.

All impacts from these investments were modelled through the JIM methodology and tool by IFU, using the financial intermediary approach. Attribution of these emissions to IFU was calculated according to the methodology described in Section 2.1.3.

2.1.3 Attribution

When looking at the temporal aspect, there are essentially two ways of calculating attribution:

1. The commitment approach (for ex-ante estimations): attribution is based on the share of committed capital in a client's assets.
2. The outstanding approach (for ex-post and portfolio accounting): attribution is based on the share of outstanding capital in a client's assets.

The outstanding approach is the approach adopted by the PCAF standard for assessment of portfolio footprint. The approaches for calculation of attribution, except for the approach developed for financial intermediaries, are the ones presented in the PCAF standard. The three approaches and summarised in Table 1.

Information	Business loans and unlisted equity	Project finance	Financial intermediaries
Formula	$\text{Attribution factor}_c = \frac{\text{Outstanding amount}_c}{\text{Total equity} + \text{debt}_c}$	$\text{Attribution factor}_p = \frac{\text{Outstanding amount}_p}{\text{Total equity} + \text{debt}_p}$	$\text{Attribution factor}_{FI} = \frac{\text{Outstanding amount}_{FI}}{\text{Total assets}_{FI}}$
Numerator	The financial year-end outstanding amount of IFU in the investment. In the case of debt, the outstanding amount is defined as the value of the debt the borrower owes to IFU. In the case of equity, the outstanding amount is the outstanding value of equity IFU holds in the project/company.	The financial year-end outstanding amount of IFU in the investment. In the case of debt, the outstanding amount is defined as the value of the debt the borrower owes to IFU. In the case of equity, the outstanding amount is the outstanding value of equity IFU holds in the project/company.	The financial year-end outstanding amount of IFU in the financial intermediary. In the case of debt, the outstanding amount is defined as the value of the debt the financial intermediary owes to IFU. In the case of equity, the outstanding amount is the outstanding value of equity IFU holds in the financial intermediary.
Denominator	For loans and equity investments to/in private companies, this is the sum of total company equity and debt, which can be found on the client's balance sheet. Total debt includes both current and long-term debt on the balance sheet.	At the start of the project, the total equity and debt in the denominator is the total financing available for the project. In subsequent years the balance-sheet value of total equity and debt can be used to calculate the attribution factor.	The total assets of the financial intermediary in the reporting year. For this purpose, the funds' "total size" is used, while for other FIs, like banks or microfinance institutions, the total assets of the FI are used.
Comments	Since the total debt or total equity could not be obtained, the PCAF standard allowed to fall back to the total balance sheet value (i.e. the client's total assets). This information was used to calculate the value of the denominator instead of the total equity and debt.	Since the total debt or total equity could not be obtained, the PCAF standard allowed to fall back to the total balance sheet value (i.e. the client's total assets). This information was used to calculate the value of the denominator instead of the total equity and debt.	

Table 1. Description of the three approaches for the calculation of attribution.

For IFU, the total debt and equity figures of the portfolio companies and projects were not available. Therefore, as a fallback option, the assessment relied on the project's or company's total assets, as reported in the balance sheet of 2020. When balance figures were not available, the "expected total investment" reported in IFU's financial report was

used to calculate the attribution factor. For the more recent investments, where the balance or total assets of the company/project were reported in internal documents developed for the preparation of the investment, those were used, provided that the reference year was antecedent to 2019.

In cases where the attribution factor was found to be higher than 100% (i.e. cases in which the balance is lower than the outstanding loans and/or equity that IFU provides, due to underperforming investments), the attribution factor was set at 100%.

2.1.4 Data quality

The PCAF data quality hierarchy, codes and scoring system for input data were used. In some cases, "actual" measured data were not available, and the analysis had to rely on the expected revenues or expected production capacity data. To differentiate between the use of measured data and projected data, two new codes were introduced. The data hierarchy adopted is presented in Table 2.

Financial intermediaries do not follow this data quality hierarchy, as they are not addressed in PCAF.

Data quality	Option to estimate the financed emissions	When to use each option	Comments	
Score 1	Option 1: Reported emissions	1a	Outstanding amount in the company and total company equity plus debt are known. Verified emissions of the company are available	-
		1b	Outstanding amount in the company and total company equity plus debt are known. Unverified emissions calculated by the company are available.	-
Score 2	Option 2: Physical activity-based emissions	2a	Outstanding amount in the company and total company equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data for the company's energy consumption and emission factors specific to that primary data. Relevant process emissions are added.	-
Score 3		2b	Outstanding amount in the company and total company equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data for the company's production and emission factors specific to that primary data.	-
Score 4	Option 3: Economic activity-based emissions	3a	Outstanding amount in the company, total company equity plus debt, and the company's revenue are known. Emission factors for the sector per unit of revenue are known (e.g. tCO ₂ e per euro of revenue earned in a sector).	-
Score 5		3b	Outstanding amount in the company is known. Emission factors for the sector per unit of asset (e.g. tCO ₂ e per euro of asset in a sector) are known.	Not used in this footprint
		3c	Outstanding amount in the company is known. Emission factors for the sector per unit of revenue (e.g. tCO ₂ e per euro of revenue earned in a sector) and asset turnover ratios for the sector are known.	Not used in this footprint

Score 6	Option 4: Expected physical activity-based emissions	2b*	"Actual" measured data are not available. Emissions are calculated considering the expected production capacity for the forecasted most recent available year, or production data on the full capacity of the project, when this is expected to be achieved before the reporting year.	Added in comparison to PCAF
Score 7	Option 5: Expected economic activity-based emissions	3a*	"Actual" measured data is not available, and data on the expected production capacity is not available. Emissions are calculated considering the expected revenues from the project budget forecast for the most recent available year.	Added in comparison to PCAF

Table 2. General description of the data quality score table for the project finance and business loans and unlisted equity asset class, adapted from PCAF.

2.1.5 Modelling tools, "Scope" boundaries, and data representativeness

Primary physical data were converted into tCO₂e emissions using emissions factors from Life Cycle Assessment (LCA) databases such as Ecoinvent and Agri-footprint ^{4,5}. Economic activity-based emissions were converted into emissions using Environmentally Extended Input Output using the JIM or the EEIO databases Exiobase ⁶.

Calculations covered at least the Scope 1 and 2 emissions of the investment, and Scope 3 emissions where relevant. Relevant process-emissions, and Scope 3 emissions, otherwise not included in the primary data, were added using the physical activity approach 2b and the LCA databases.

Wind and solar energy projects, which have low or zero GHG emissions during the use stage (Scope 1 and 2 emissions) but have relevant construction and manufacturing emissions, were modelled according to the approach outlined by the GHG Protocol Scope 3 ⁷, according to which, emissions from capital goods were classified as Scope 3 emissions, and should be accounted in the year when they happen. The upstream Scope 3 emissions from these investments were therefore accounted in the period when the construction of the project happened, assuming an average construction period of two year.

The emission factors used from the LCA and EEIO databases reflect sectoral and geographical averages, with different levels of granularity that change from national level, to regional, to global. The time representativeness of the emission factors also varies, across processes and sectors.

In terms of temporal representativeness of the primary data, the data used for the GHG estimations came from different years, but follows the principles of considering always the information from the latest available year.

2.2 Investments not included in the footprint

The following investments have been excluded from the footprint: Project Development Programme (PDP) investments, inactive investments, indirect investments where the actual investments have been included elsewhere, as defined in dialogues with IFU. Moreover, investments where the project company was not yet operational have been excluded (except for renewable energy investments, which have been included when they are under construction).

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