

Portfolio Climate Change Impact Metrics for Financial Services Companies

CDP Corporate Questionnaire



Version

Version number	Release/Revision date	Revision summary
1.0	07 January 2021	First release.
2.0	21 January 2022	Minor revisions and question numbers updated to align with the 2022 CDP climate change questionnaire.
3.0	25 January 2023	Minor revisions and the addition of avoided emissions, emission removals, insurance-associated emissions, and sovereign debt.
4.0	28 June 2024	Addition of facilitated emissions, addition of asset class mapping, removal of worked examples, other simplifications, more references directly to PCAF standards, documentation and methodologies.
5.0	21 May 2025	Minor revisions referring to ongoing PCAF and SBTi consultations.
6.0	20 April 2026	Restructured technical note to reflect recent updates from PCAL and to explain the role financed emissions play in transition planning.

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About this technical note

This technical note provides references to specific guidance on the methodologies used to calculate portfolio climate change impact metrics requested by CDP. It is aimed at banks, asset managers, asset owners and insurers responding to CDP's Corporate questionnaire. The technical note should be used alongside [CDP's 2026 reporting guidance](#) and additional information available on CDP's [Question Bank website](#).

The technical note is comprised of this introduction and four further sections:

Section 1: Introduction

Section 2: A mapping of asset classes listed in CDP's Corporate questionnaire to asset classes referenced in the Partnership for Carbon Accounting Financials (PCAF) standard.

Section 3: A brief explanation of the differences between absolute financed emissions and emission intensity metrics.

Section 4: Guidance on breaking down portfolio impact metrics by asset class, by industry, and by scope.

Section 5: A discussion on how financial institutions can go further in using these metrics once they have measured their portfolio impact. For example, setting targets to reduce the climate change impact of their portfolio.

1. Introduction

1.1 Why measure portfolio impact?

Achieving alignment with a 1.5°C pathway will require a major redirection of capital toward sustainable solutions and low-carbon technologies, a shift that can be facilitated by the financial service sector. Under the GHG Protocol Corporate Standard, emissions from financing activities are classified as Scope 3, Category 15 (Investments). Because financial institutions exert their greatest influence on climate change through lending and investment rather than their own operations, their climate impact is concentrated in their portfolios. [CDP's 2023 report](#) found that financed emissions are on average over 750x greater than operational emissions. These financed emissions are associated with a financial institution's lending, investment and insurance activities, attributed to the institution based on its proportional economic involvement in the companies or projects it finances and would otherwise be excluded from the institution's emissions inventory. Measuring financed emissions is therefore essential to understanding and managing portfolio-level climate impact and identifying priority sectors and assets for targeted action and engagement.

Financial institutions hold a variety of different asset classes in their portfolios. Reflecting this, there is no single, globally approved methodology for measuring portfolio impact that applies to all financial institutions and all financing activities. Financed emissions are calculated by attributing investee emissions to financial institutions in proportion to their share of financing and aggregating across the portfolio. This approach has been formalized by the PCAF, which builds on the GHG Protocol. CDP's Financial Services (FS) sector pathway is aligned with the PCAF standard, ensuring consistency, comparability and robustness in financed emissions and portfolio impact metric disclosure.

The Partnership for Carbon Accounting Financials (PCAF) provides the most widely adopted standard for calculating and reporting these financed emissions metrics. PCAF continues to expand its scope to cover a broader range of asset classes, making it particularly relevant for commercial banks, asset owners, investors, and insurers. CDP has aligned with PCAF, ensuring that reporting of portfolio-level emissions and related metrics is consistent, comparable, and actionable, and provides a credible foundation for setting targets, managing risk, and supporting the low-carbon transition. The importance of portfolio-level climate measurement is reinforced by several leading environmental standards and frameworks, such as the IFRS S2 and EFRAG, which recommend that financial institutions disclose metrics used to assess and manage climate-related risks and opportunities.

In addition to measuring emissions associated with financial activities, financial institutions can introduce a wider suite of metrics that can be used in assessing and managing climate-related risks and opportunities. These metrics allow financial institutions to evaluate both exposure to carbon-intensive sectors and progress toward transitioning the real economy to net-zero, integrating forward-looking indicators such as portfolio alignment, sectoral decarbonization pathways, and engagement outcomes. By combining absolute and intensity-based measures with risk and engagement indicators, institutions can gain a more comprehensive view of climate risk, identify priority areas for action, and strategically allocate capital toward low-carbon solutions

1.2 What does that mean for your CDP response?

The CDP Financial Services sector pathway provides a structured framework for financial institutions to disclose the environmental impacts associated with their financing and insurance activities. Portfolio-level impacts are quantified using a comprehensive set of standardized metrics and are disclosed in Module 12 of

the FS Sector pathway. CDP’s questionnaire allows financial institutions to report the impact of their portfolio on climate change choosing from a variety of metrics. Measuring and reporting portfolio impacts, including financed emissions, is a critical prerequisite for effective environmental risk management, performance monitoring, and the assessment of progress against portfolio decarbonisation pathways and net zero commitments.

Financial institutions that are leaders in carbon accounting of portfolio impacts should be:

- Disclosing financed, facilitated and insurance-associated emissions of their portfolios.
- Disclosing additional intensity-based metrics alongside financed, facilitated and insurance-associated emissions.
- Working with data providers and regulators to improve emissions data quality across the market.
- Requesting disclosure from their investees and counterparties to improve access to primary data and reduce the reliance on proxy data and increase the portfolio coverage of their calculations.
- Reporting comprehensively as to the methodological assumptions taken, as well as explaining any mismatches in emissions year on year.

Absolute financed and insurance-associated emissions as well as additional metrics can be disclosed through the following questions:

12.1	Financial institutions are asked to disclose whether they measure the impact of their portfolio on the climate, on forests and water. In addition, Financial Institutions are requested to select the metrics they use to track the impact of their portfolio on the climate.
12.1.1	Financial institutions are asked to disclose their Scope 3 Category 15 “Investments” total financed emissions of their portfolios.
12.1.2	Financial institutions are asked to disclose financed emissions for previous years. This allows for meaningful emissions data comparison across time.
12.1.3	Financial institutions are asked to provide details of other metrics used to track the impact of the organization’s portfolio on the environment.
12.2	Financial institutions are asked to disclose whether they can provide a breakdown of the organization’s financed emissions and other portfolio carbon foot printing metrics.
12.2.1	Financial institutions are asked to break down the organization’s financed emissions and other portfolio carbon foot printing metrics by asset class, by industry, and/or by scope. This can help financial institutions identify emissions throughout the value chain of companies in their portfolio and can provide a useful indicator for making comparisons between the organization’s financial activities in different industries.

1.3 Purpose of this document

This technical note aims to familiarize the reader with the way financed emissions should be reported through the CDP FS Sector pathway. It provides an overview of how the asset classes that PCAF recommends financial institutions use to measure climate impact map to the asset classes used in the CDP questionnaire. It includes brief explanations of the difference between financed emissions and other portfolio carbon accounting metrics.

This technical note is not a step-by-step guide on how to calculate financed and insurance-associated emissions. For that, existing methodologies can be used, such as those detailed in the [PCAF standards A-C](#). Organizations unfamiliar with reporting financed and insurance-associated emissions are encouraged to refer to these standards to gather data and calculate their emissions. This technical note can then be used to

understand how this information can be converted to the right type of metric for reporting in the CDP Financial Services sector pathway.

1.4 Technical basis of this document

This technical note has been heavily informed by the standards published by the Partnership for Carbon Accounting Financials (PCAF). PCAF is an industry-led initiative created in 2015 by Dutch financial institutions that is formed by a global group of bank and investor members. The partnership works together to develop and implement a harmonized approach to assessing and disclosing the GHG emissions associated with financial activities. PCAF has developed its accounting methods into the [Global Carbon Accounting Standard](#) for the financial industry covering the following asset classes: Listed equity and corporate bonds, business loans, use of proceeds structure, project finance, commercial real estate, mortgages, motor vehicle loans, and sovereign debt, sub-sovereign debt and securitised and structured products. In addition, PCAF has developed methodologies to measure facilitated emissions through capital Market activities as well as insurance-associated emissions for underwriting activities of the following lines of business: commercial lines, project insurance, personal motor lines and treaty reinsurance.

Financial institutions can join PCAF by committing to assess and disclose the GHG emissions of its portfolio using the methodology. Financial institutions that join receive technical support in implementing carbon accounting, can access the PCAF emission factor database and can join one of five regional teams which will adapt the Global Carbon Accounting Standard to their regional context. Core team members have the opportunity to contribute towards methodology development.

2. CDP questionnaire asset classes

Like financial accounting and reporting, GHG accounting and reporting follows generally accepted principles to ensure that an organization’s disclosure represents an accurate, veritable, and fair account of its emissions. For PCAF reporting, financial institutions shall use the operational control or the financial control approach. Financial institutions shall measure and report their financed emissions for each asset class in their portfolio. The general approach to accounting for portfolio emissions is to determine the emissions of the investees in the portfolio and then allocate those emissions based on the proportional share of the investment in the investee. While the allocation method may vary by asset class, the principle of proportional share applies in all cases. Summing across all investments in the portfolio yields the total portfolio emissions in tons CO₂e.

CDP’s Financial Services sector pathway is aligned with the PCAF standard, ensuring consistency, comparability and robustness in financed emissions disclosure. The list of asset classes used in the FS sector pathway corresponds to those used in the [IFRS Sustainability Disclosure Standard](#) for climate-related disclosures. When calculating the financed emissions of your portfolio, select the appropriate PCAF methodology for each relevant asset class. For disclosure, match these to the corresponding CDP/IFRS asset classes as specified in the mapping below and disclose the financed emissions of your portfolio as calculated.

You will have to select the corresponding asset classes your portfolio consists of in the following questions:

- (12.1.1) Provide details of your organization's financed emissions in the reporting year and in the base year.
- (12.2.1) Break down your organization’s financed emissions and other portfolio carbon footprinting metrics by asset class, by industry, and/or by scope.

The table below maps the asset classes used by CDP to the asset classes used in the [PCAF Global GHG Accounting & Reporting Standard](#). Additional information on the definitions for all asset class listed, can be found in the glossary at the beginning of this document.

CDP Questionnaire Asset Classes (Based on IFRS Asset Classes)	PCAF Asset Classes	PCAF Standard
Loans	Business loans and unlisted equity;	Part A
	And all loan categories with known Use of Proceeds (UoP)	Part A
	Motor vehicle loans	Part A
Project finance	Project finance	Part A
Bonds	Listed equity and corporate bonds	Part A
Equity investments	Listed equity and corporate bonds	Part A

	Business loans and unlisted equity	Part A
Undrawn loan commitments	<i>Not applicable¹</i>	-
Fixed income	Listed equity and corporate bonds	Part A
	Sovereign debt	Part A
	Sub-sovereign debt	Part A
	Securitized and structured products	Part A
Cash equivalents/money market instruments	<i>Not yet specified</i>	-
Real estate	Commercial real estate	Part A
	Mortgages	Part A
Commodities	<i>Not yet specified</i>	-

¹ PCAF provides guidance for reporting undrawn loan commitments in Standard A (V3). According to PCAF undrawn loan commitments can't be mapped to an asset class, because they are determined by the use of proceeds.

3. Absolute financed emissions vs intensity metrics

The emission metrics developed by PCAF allow financial institutions and data users to draw different conclusions from the calculations and analysis. Measuring emissions in absolute terms (i.e. absolute or financed emissions) allow for a consistent baseline for analysis and disclosure. However, absolute financed emissions at a portfolio level are not a good metric to compare or benchmark financial institutions due to the potential differences between financial institutions in terms of size, product portfolio, exposure to sectors and regions, etc. To allow for comparability and benchmarking, absolute financed emissions need to be transformed into emission intensity metrics. Emission intensity metrics can be divided into two main categories: Economic emission intensity and physical emission intensity metrics. Economic intensity metrics allow data user to understand a portfolio’s carbon footprint per amount invested. Physical emission intensity metrics allow data users such as regulators, investors and other stakeholders to understand the portfolio’ level of efficiency of production per unit of output. The disclosure of intensity-based metrics enables the analysis of a financial institution’s link between its financed emissions to its climate-related portfolio risks. This is particularly relevant for banks as Pillar 3 guidance expects banks to disclose both absolute and intensity-based metrics, showing how high-emitting exposures contribute to overall climate risk and how mitigation or transition strategies are being applied. Information on how different economic and physical emission intensity metrics can be calculated are available in the PCAF Standard A.

The metric weighted average carbon intensity (WACI) measures a portfolio’s exposure to carbon-intensive companies by normalizing each investee’s emissions by its revenue (tCO₂e/Million revenue) and weighting these intensities by the share of the holding in the portfolio. Portfolios with greater exposure to carbon intensive companies will therefore have higher WACI values. A key advantage of this metric is that it does not rely on attributing emissions between the investors in the same company. Instead, portfolio weights (the current value of the investment relative to the current portfolio value) are used, which means the same calculation can be used for listed equity, listed bonds, corporate loans and private equity.

The accuracy of these metrics depends on the availability and quality of company-level emissions data or estimates. Financial institutions should use the best data available and engage with investees and clients to improve emissions disclosure over time. The table below includes a list of the most common metrics.

Metric	Purpose	Description
Absolute emissions	To measure the emissions associated with financial activities and establish a baseline for disclosure and performance tracking.	The total GHG emissions of an asset class or portfolio.
Economic emission intensity	To understand how the emission intensities of different portfolios (or parts of portfolios) compare to each other per monetary unit.	Absolute emissions divided by the loan or investment volume in EUR or USD, expressed as tCO ₂ e/€M or tCO ₂ e/\$M loaned or invested.
Physical emission intensity	To understand the efficiency of a portfolio (or parts of a portfolio) in terms of total GHG emissions per unit of a common output.	Absolute emissions divided by a value of physical activity or output, expressed as, e.g., tCO ₂ e/MWh, tCO ₂ e/tonne product produced.
Weighted average carbon intensity (WACI)	To understand exposure to emission-intensive companies	Portfolio’s exposure to emission-intensive companies, expressed as tCO ₂ e/€M or \$M company revenue

4. Breaking down portfolio impact metrics

In addition to calculating and disclosing portfolio impact metrics for their entire financing portfolio, financial institutions should break down these metrics to identify where climate-related risks are concentrated. CDP requests portfolio impact breakdowns by asset class, industry, and scope. Other breakdowns may also be used where relevant to an organization's business model and risk management objectives. Breakdowns should be disclosed in questions 12.2 and 12.2.1, with question 12.2.1 allowing multiple portfolio metrics to be broken down. Organizations should add one row per portfolio and one row per category within each metric. Where multiple emissions scopes apply to a single portfolio, asset class, or industry, each scope should be reported in a separate row. For example, an asset manager with two portfolios would report separate rows for each portfolio, asset class, emissions scope, and/or industry, as applicable.

When describing calculation methodologies, organizations should clearly explain portfolio coverage, the emissions scopes included or excluded, data sources used, and any estimation approaches applied where primary data was unavailable (e.g. physical activity-based or economic activity-based modelling).

5. Turning insights into impact

Calculating and disclosing portfolio impact metrics is not in itself an end-goal. Metrics such as those requested by CDP provide a snapshot of portfolio emissions at a given point in time, but they do not, on their own, drive the low-carbon transition. In order to drive meaningful change in the real economy, financial institutions must commit to transition planning, which provides a framework for linking metrics to concrete actions across a financial institution's portfolio. For most financial institutions, the journey starts with a high-level commitment to act through international initiatives that provide guidance on net-zero transition planning and portfolio alignment. Transition planning then enables institutions to translate these commitments into science-aligned targets, identify and manage climate-related risks and exposures, and implement structured engagement strategies with clients and investees. Financial institutions can go further once they have calculated portfolio impact metrics by using the metrics to set targets for reducing their climate change impact and to inform actions they can take to reduce their impact. Each of the metrics requested by CDP in Module 12 could be used to construct a target for reducing the climate change impact of financial portfolios over time.

Climate target-setting in the financial sector is fundamentally metric driven. Leading frameworks define how metrics must be selected, constructed, applied, and disclosed to ensure scientific credibility, comparability, and alignment with sector transition pathways. The Transition Plan Taskforce (TPT) as well as the guidance from the Glasgow Financial Alliance for Net Zero (GFANZ) offer integrated guidance for selecting metrics and setting targets. The International Sustainability Standards Board standard IFRS S2 requires disclosure of climate-related targets, the metrics used to assess progress, and consistency with strategy and financial planning. The [Science Based Targets initiative](#) (SBTi) further defines how metrics must be used to demonstrate alignment with 1.5° C pathways. In 2025 SBTi has published the Financial Institution Net Zero (FINZ) Standard, which builds directly on portfolio emissions metrics. It specifies how financial institutions must use emissions metrics to demonstrate alignment with 1.5°C pathways. In line with science-based target setting, financial institutions should prioritize reducing absolute financed emissions above other forms of mitigation, such as avoided emissions or removals. Recent developments from industry standard setters such as PCAF and NZBA, also highlight the growing expectation to expand the scope of their emissions accounting by including facilitated emissions. This will require institutions to adapt their methodologies, data collection processes, and reporting frameworks, as well as to improve data quality. Reporting on progress through effective environmental disclosures is important at every stage of the journey.

Disclosing on climate-related risks helps financial institutions to identify, measure and manage exposures before they become material losses. Investors, regulators, and the public are increasingly demanding transparency about how institutions are managing environmental impacts. By disclosing environmental performance, markets can price sustainability risks more accurately, which ultimately directs vast amounts of capital towards genuinely sustainable activities, thereby shaping the real economy and improving the stability of the financial system. Measuring financed emissions and disclosing environmental performance transforms sustainability from a marketing exercise into an accountable, measurable commitment, which is essential for accelerating the transition to a sustainable economy. Financial institutions can report on their climate change target setting in module 7 of the CDP FS sector pathway.

Beyond target setting, third-party verification represents another way to strengthen reporting. Verification has long been considered best practice in environmental disclosure and is increasingly relevant as focus shifts to the emissions financed across portfolios. Information on verification can be reported in modules 7 and 13 of the CDP FS sector pathway.

Ultimately, it is the coordinated use of the tools, commitments, targets, metrics, risk management, assessment of exposure and financed emissions, and engagement, that allows financial institutions to direct capital toward low-carbon investments, reduce financed emissions, and support the broader real-economy transition toward a net-zero future.

Appendix: Glossary

Asset managers	Also known as investment managers, asset managers are hired by clients to invest assets on their behalf.
Asset owners	Includes public- and private-sector pension plans, (re)insurance companies, endowments, foundations, high-net worth clients and family offices that invest assets on their own behalf or on behalf of their beneficiaries.
Avoided emissions	The reduction in emissions achieved by a project compared to a baseline of what would have been emitted in the absence of the project.
Banks	Financial institutions that mostly undertake lending, deposit taking and other financial intermediary activities.
Carbon footprinting metrics	Metrics for assessing the greenhouse gas emissions associated with a portfolio, depending on the metric emissions are expressed either in absolute terms or as an intensity.
Carbon intensity	Volume of carbon emissions per million of revenue in unit currency (carbon efficiency of a portfolio), expressed in tons CO ₂ e/Million revenue.
Commercial real estate	For the purpose of this technical note, commercial real estate is on-balance-sheet loans for the purchase, refinance, construction, or rehabilitation of commercial real estate. This definition implies that the property is used for commercial purposes.
Corporate loans	For the purpose of this technical note, corporate loans are on-balance sheet loans and lines of credit with unknown use of proceeds to businesses, non-profits, and any other structure of organization. Revolving credit facilities and overdraft facilities as well as corporate loans secured by real estate, such as commercial real estate-secured lines of credit, are also included in this asset class.
Double counting	Double counting occurs when a GHG emission or emission reduction is counted more than once towards attaining mitigation pledges or financial pledges for the purpose of mitigating climate change.
Emission removals	The action of removing GHG emissions from the atmosphere and store it through various means, such as in soils, trees, underground reservoirs, rocks, the ocean, and even products like concrete and carbon fiber.
EVIC	The sum of the market capitalization of ordinary and preferred shares at fiscal year-end, and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values.

Exposure metrics	Metrics for assessing the exposure to fossil fuel assets in a portfolio, depending on the metric exposure is expressed either in currency terms or as a percentage.
GHG emissions	For the purposes of this technical note, GHGs are the seven gases covered by the UNFCCC: carbon dioxide (CO ₂); methane (CH ₄); nitrous oxide (N ₂ O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulfurhexafluoride (SF ₆), and nitrogen trifluoride (NF ₃).
GHG Protocol	Comprehensive global standardized framework to measure and manage GHG emissions established by World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
Insurance-associated emissions	GHG emissions in the real economy, which are associated with specific re/insurance policies aggregated in the re/insurance portfolio. This definition is for accounting purposes only. It is not intended, and should not be interpreted as, an admission of liability by any re/insurer for any emissions caused, or contributed to, by an insured or an insured activity.
Insurers	Financial institutions that provide and sell insurance underwriting products and services to their policyholders. Please note that where references are made to “insurance”, these are also applicable to reinsurance unless otherwise specified.
Investees	For the purposes of this technical note, investees means the underlying companies and assets a financial institution is invested in or lending to.
Facilitated emissions	GHG emissions associated with capital market transactions, i.e. those associated with services provided by financial institutions to support the issuance of capital market instruments.
Financed emissions	Financed emissions: The absolute greenhouse gas emissions associated with a portfolio, expressed in tons CO ₂ e. For financial institutions, the indirect emissions caused by their financing activities are relevant and their emissions inventory would be incomplete without accounting for them. The GHG Protocol classifies these emissions in Scope 3 Category 15 Investments. They are also known as portfolio emissions or financed emissions. Put simply, they are emissions that occur at sources owned or controlled by other organizations, but which are made possible because those organizations are financed by the lending and investment of financial institutions; and therefore are indirect to the financial institution and should be included in the financial institution’s Scope 3 inventory.
Mortgages	For the purpose of this technical note, mortgages are on-balance sheet loans used to purchase residential property, including multifamily properties with no limit on the number of units. This definition implies that the property is used for residential purposes.

Motor vehicle loans	For the purpose of this technical note, motor vehicle loans are on-balance sheet loans that are used to finance one or several motor vehicles.
PCAF	Partnership for Carbon Accounting Financials.
Portfolio	The entire collection of a financial institution's core financing activities - loans, investments and insurance policies. For bank lending, this is the entire collection of products and loans held on the balance sheet for which the receivable stream is owned. For asset owners, this is the entire collection of products, funds and investments owned and controlled. For asset managers, this is the entire collection of products and investments held and/or managed on behalf of clients. For insurance underwriting, this is the entire collection of products and insurance policies provided to clients.
Portfolio carbon footprint	Total carbon emissions for a portfolio normalized by the market value of the portfolio, expressed in tons CO ₂ e/Million of unit currency invested.
Private equity	For the purpose of this technical note, private equity is all equity holdings in non-listed companies held on the balance sheet and/or actively managed by the financial institution.
Project finance	For the purpose of this technical note, project finance is on-balance sheet loans or equity with known use of proceeds that are designated for a clearly defined activity or set of activities, such as the construction of a gas fired power plant, a wind or solar project or energy efficiency projects.
Scope 1 emissions	Emissions from operations that are owned or controlled by the reporting company.
Scope 2 emissions	Indirect emissions from the generation of purchased or acquired electricity, steam, heat or cooling consumed by the reporting company.
Scope 3 emissions	All indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.
Securitization and structured products	Income-producing assets that are bundled together in a pool, have various types of underlying collateral and are ringfenced in a special purpose vehicle (SPV), ringfencing them from the corporate risk of the originator.
Sovereign debt	Sovereign debt is issued by a country's government to borrow money. Sovereign debt is also known as government debt, public debt, and national debt.
Sub-sovereign debt	Sub-sovereign debt refers to all funding provided to regional, city or local governments. Sub-sovereign entities are defined as issuers with jurisdiction and influence over a specific territory within a country below sovereign levels.

Weighted average carbon intensity

Portfolio's exposure to carbon-intensive companies, expressed in tons CO₂e/Million of revenue in unit currency.