Facilitated Emissions

The GLOBAL GHG ACCOUNTING & REPORTING Standard / PART B

PCAF

Partnership for Carbon Accounting Financials

First Version

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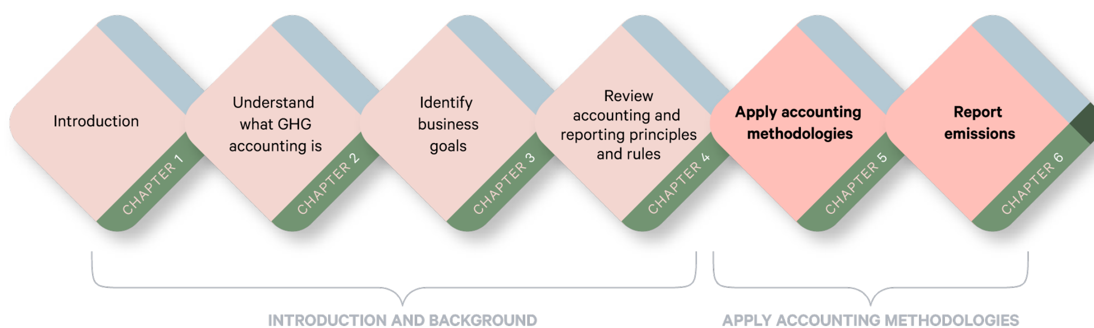


Acknowledgements

In September 2019, the Partnership for Carbon Accounting Financials (PCAF) was launched globally to harmonize greenhouse gas (GHG) accounting methods and to enable financial institutions to consistently measure and disclose the GHG emissions associated with financial activities. In 2020, the first version of The Global GHG Accounting and Reporting Standard for the Financial Industry (the 'Financed Emissions Standard') was launched.

As an industry-led partnership, PCAF is governed by a Board of Directors of which the 2023 members are ABN AMRO, Amalgamated Bank, the Global Alliance for Banking on Values, Morgan Stanley, NMB Bank, and Nordea. At the time of publishing this document, more than 431 financial institutions, including banks, investors, asset managers, re/insurers, participated in PCAF.[1]

A PCAF working group was initiated in early 2021 to co-create a separate Global GHG Accounting and Reporting Standard for facilitated emissions, particularly those associated with services provided by financial institutions to support the issuance of capital market instruments. This Facilitated Emissions Standard is Part B of the overall Global GHG Accounting and Reporting Standard for the Financial Industry (the Standard).

The PCAF Secretariat facilitated the Working Group's activities by moderating the technical discussions, reviewing the content, and compiling and editing this document. The PCAF Secretariat is operated by Guidehouse, a global consultancy firm specializing in energy, sustainability, risk, and compliance for the financial industry.

The Working Group first published a discussion paper in November 2021, which looked at key design choices in developing a methodology for the accounting of facilitated emissions associated with the arranging of capital market issuances (when the facilitation activity should be captured; how the responsibility should be split between the facilitators; and allocating emissions), as well as proposed options. The Working Group gathered feedback from both the public consultation held at the end of 2021 and from additional targeted discussions the Working Group held with third-party experts. However, there was one open question that the Working Group required specific feedback on: what portion of the capital market issuance is the responsibility of the facilitator? In October 2022, the Working Group published a public consultation paper to determine the percentage weighting of GHG emissions to facilitators. Throughout the development of this Facilitated Emissions Standard, PCAF has also engaged with stakeholders to solicit feedback and discuss PCAF methodological approaches and considered their comments and suggestions. These points have been considered and appropriately incorporated in this first version of The Global GHG Accounting and Reporting Standard Part B: Facilitated Emissions.

1 The full list of PCAF participants can be found at: https://carbonaccountingfinancials.com/financial-institutions-takingaction#overview-of-institutions

Executive Summary

The Partnership for Carbon Accounting Financials (PCAF) is an industry-led initiative that helps financial institutions assess and disclose their indirect greenhouse gas (GHG) emissions related to their financial activities (Scope 3 emissions classified as category 15). GHG accounting refers to the processes required to consistently measure and report the amount of GHGs generated, avoided, or removed by an entity, allowing it to track and report these emissions over time. It enables financial institutions to disclose these emissions at a fixed point in time and in line with financial accounting periods.

Until now, there has not been a globally accepted standard for measuring and reporting emissions associated with capital market activities. This new Standard constitutes PCAF (2023) The Global GHG Accounting and Reporting Standard Part B: Facilitated Emissions for the Financial Industry. As such, these Standards supplement the requirements of the GHG Protocol 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'.

This document is the first version of the Facilitated Emissions Standard. It provides detailed methodological guidance for the measurement and disclosure of GHG emissions associated with capital market transactions. It is anticipated that the Facilitated Emissions Standard will be reviewed again once the revised GHG Protocol Corporate Standards have been published. This will allow experiences of implementing the Standard and expected updates to the GHG Protocol Corporate Standards to be incorporated.

The Facilitated Emissions Standard provides detailed guidance to calculate the facilitated emissions resulting from capital market activities. By following the methodologies, financial institutions can measure GHG emissions for each segment and produce disclosures that are consistent, comparable, reliable, and clear.

Limited data is often the main challenge in calculating facilitated emissions; however, data limitations should not deter financial institutions from starting their GHG accounting journeys. The Facilitated Emissions Standard provides guidance on data quality scoring per segment, facilitating data transparency and encouraging improvements to data quality in the medium and long term.

This Facilitated Emissions Standard also provides recommendations and requirements for reporting. Any requirements not fulfilled must be accompanied by an explanation.

This Facilitated Emissions Standard equips the financial industry with standardized, robust methods to measure and disclose facilitated emissions.

1. Introduction

PCAF's Standard enables the financial industry to measure and report emissions associated with financial activities. GHG accounting provides the starting point to assess and disclose climate-related risks, set science-based targets, and inform climate strategies and actions that direct capital in support of the alignment of financial flows with the Paris Agreement's goals. Although PCAF's Standard for Financed Emissions accounting (Part A) continues to grow to cover additional asset classes and the Insurance-Associated Emissions Standard (Part C) continues to be used more frequently, there has been increasing global interest for additional GHG accounting guidance. More precisely, a specific interest to cover those activities that may be classified as facilitated emissions, such as capital market activities.

Within the financial sector, Capital Markets (where companies and governments raise debt and equity) play a crucial role in fueling economic activity and providing needed funding. In 2022 alone, global long-term bond issuance was $22.5 trillion and global equity issuance was $0.4 trillion, meaning that total capital market issuance was $22.9 trillion.[2] This first version of the Facilitated Emissions Standard (Part B) now covers the emissions associated with primary capital market issuance activities (see chapter 5). It is expected that this Facilitated Emissions Standard will be expanded with additional financial sector activities and products that are associated with facilitating emissions in the coming years.

THE IMPORTANCE OF CAPITAL MARKETS

Capital Markets sit at the nexus of financial flows that must increasingly be directed towards more sustainable practices if we are to avoid the worst effects of climate change. Furthermore, a capital market issuances that occurs in a particular year will impact the climate for many subsequent years. Actors within these markets have an opportunity to help those financial flows move into activities that minimize climate impact. These actors include the following:

- Those who raise funding in Capital Markets (the issuers), such as governments and private sector companies.
- The investors in Capital Market instruments who are the providers of this funding.
- Those who facilitate and enable these complex multi-party transactions, i.e., facilitators.

For two of these three actors, there are already GHG accounting methodologies in place. For issuers, the GHG Protocol Corporate Accounting and Reporting Standard can be applied (also applicable for non-corporate organizations). For investors, Part A of the PCAF Global GHG Accounting and Reporting Standard for the Financial Industry[3] has been available since November 2020. However, no harmonized accounting standard is yet in place for actors facilitating capital market transactions.

WHO ARE FACILITATORS AND WHAT IS THEIR ROLE

Facilitators are mostly large international banks that conduct substantial capital market facilitation activities including advising issuers on structure, pricing, and process; preparing materials for, and engaging with, investors; and arranging and guiding clients on roadshows. These facilitation services are critical to the functioning of Capital Markets. Through this facilitation role, banks are in a unique position to help their clients meet the growing sustainability demands and climate considerations of investors. To help limit climate change and achieve net-zero emission targets by 2050, Capital Markets need to redistribute a large amount of capital to green and sustainable companies that follow GHG emissions protocols with net-zero targets with projects, products, and services to support

2 Securities Industry and Financial Markets Association, Capital Markets Fact Book, 2023
3 PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition

decarbonization on the real economy. Financial institutions can take up several roles as facilitators. These roles vary by product and market, and are summarized as follows:[4]

- **Lead Bookrunner:** This includes both active and passive bookrunners. Lead bookrunners typically lead on the largest percentage of a deal's economics. Active bookrunners are responsible for most deal support (i.e., investor book, allocations, roadshow) and they are compensated with the highest fees. Passive bookrunners do not have access to the investor order book.
- **Co-Manager/Lead Manager:** These institutions are invited into a deal by the active bookrunners but the activities they undertake are less significant. Economics for lead/co-managers are typically smaller in relationship to the bookrunners. Given their passive role, co-managers are not captured in the Standard.

WHICH FACILITATING ACTIVITIES ARE COVERED

This Facilitated Emissions Standard is based on the facilitation activity of the bookrunners and managers in a capital market issuance. Although these financial institutions do not provide the capital directly, they play a key role in an issuer's capacity to expand or transition. Crucially, this activity can include a material part of business activities. Therefore, the influence of financial institutions on Capital Markets and the associated financial flows can be substantial. If Capital Markets are to channel more financing into climate-friendly projects and businesses, all actors in these markets need to be as transparent as possible to the market and wider stakeholders about their role and the impact of these activities on climate change.

This Facilitated Emissions Standard includes the primary issuance of capital market instruments and loan syndication. Loan syndication involves a group of lenders that fund portions of a loan for a single borrower. A primary issuance includes new securities to provide debt-based or equity-based financing. For the purposes of this Facilitated Emissions Standard, primary issuances are those issuances where a financial institution may propose a beginning price range for a given security and oversee its sale to investors on a best-efforts basis. This Facilitated Emissions Standard only covers the portion of primary issuances that are sold to investors. In the case of an under-subscribed issuance, any unsold securities are not accounted for within the scope of this Facilitated Emissions Standard. The scope of this Facilitated Emissions Standard includes:

- Facilitated issuance of new:
  - Public debt: all types of bonds issued for general purposes (including sustainability-linked bonds, corporate bonds, and corporate medium-term notes[5])
  - Public equity: common stock (IPOs and follow-on issuances) and preferred shares
- Facilitated equity investments in private companies (including private placements)
- Facilitated debt investments in private companies (including private credit)
- Syndicated loans[6]

Sovereign bonds,[7] securitized products (including asset-backed securities), covered bonds, derivative financial products (e.g., futures, options, swaps) and advisory services such as mergers and acquisitions (M&A) are not covered by the scope of this Facilitated Emissions Standard.

4 Capital Market Instruments Proposed Methodology for Facilitated Emissions 2022
5 Medium-term notes are excluded when issued by government agencies.
6 A syndicated loan transaction is defined as a loan made available by two or more providers under a common loan agreement and ranking credit is assigned upon signature of the loan documentation. If these fundamental tests cannot be applied, it will not be considered for inclusion.
7 US agency, non-US agency, supranational and subnational bonds are excluded as well.

The same holds for green bonds since no PCAF method exists yet to calculate the emissions associated with green bonds and other known use of proceeds bonds. PCAF has prioritized the development of a method covering green bonds moving forward.

THE PURPOSE OF REPORTING FACILITATED EMISSIONS OF PRIMARY CAPITAL MARKET ISSUANCE

As the intermediary between organizations seeking debt or equity capital and investors looking for more investment opportunities, financial institutions need to develop a mechanism to provide transparency about the GHG emissions associated with capital distributed via capital market activities. Several key stakeholders including the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) and the UN-convened Net-Zero Banking Alliance (NZBA) have asked for more transparency around capital market activities.

This proposed methodology provides a GHG accounting methodology for the facilitation of capital market activities. This method creates a mechanism that helps provide transparency and accountability and will enable the following:

- The ability to consistently define the quantity of GHG emissions associated with financial institutions' facilitation of capital market activities.
- The incentive for FIs engaged in facilitation to assess/compare the GHG emissions profile of (potential) issuers, allowing for more informed decisions.
- More informed analysis and comparison of the financial institutions engaged in facilitation activity by their investors and other stakeholders.

Box 1-1. Sustainable finance reporting and PCAF

Many financial institutions have commitments to raise financing for sustainable and climate-related activities. These commitments have been made to demonstrate the role financial institutions can play in scaling climate solutions. Sustainable finance reporting is a separate and distinct concept where financial institutions are simply reporting the actual amount of financing that is either directly lent to, invested in, or arranged for the purpose of sustainable activity – it does not involve the attribution of emissions or avoided emissions to that financing as would be the case for calculating financed and facilitated emissions.

PCAF does not offer guidance on reporting requirements for sustainable or any type of financing where there is no attribution of emissions involved. However, financial institutions **may** consider, as appropriate, how to best align the methodologies for how they account for these activities relative to facilitated and financed emissions so that they can communicate in a consistent manner what their contribution is to any loan or transaction.

HOW FACILITATED EMISSIONS ARE DIFFERENT FROM FINANCED EMISSIONS

Facilitated emissions differ from financed emissions in two respects: they are rarely held on a financial institution's balance sheet (representing services rather than financing); and a financial institution's association with the transaction is temporary. PCAF views facilitation as a separate but important metric, which exerts a material impact on the direction of capital towards economic activities that will enable the transition to net-zero by 2050.

The Financed Emissions Standard (Part A) is based upon on-balance sheet exposure (i.e., financed emissions), which allows financial institutions to account for their share of a corporate client's emissions based on the client's enterprise value (or equivalent in the case of non-corporate actors). On-balance sheet exposure (e.g., loans and investments) are usually held for relatively long time periods (typically years) on a financial institution's balance sheet and exposes the financial institutions to credit risk. By contrast, capital market transactions are rarely held on a financial institution's balance sheet. They are facilitated, using various services the facilitating institution provides, rather than financed, because the institution is not providing financing directly to the issuer. This leads to a temporary association with transactions (usually days or weeks) and where usually no financial (credit) risk taken by the financial institution. As a result, there is a distinction in the concept of emissions ownership.

Although facilitation and lending/investing are commercial activities, which will earn revenue, they are fundamentally different in nature and the financial institution's role differs in these activities.

This proposed methodology does not cover how targets should be set for facilitated emissions. We expect this work to be covered by other bodies concerned with target setting – PCAF is focused exclusively on GHG accounting and disclosure.

STANDARDIZING GHG ACCOUNTING IN CAPITAL MARKETS

This document is the first version of the 'Global GHG Accounting and Reporting Standard for Facilitated Emissions'. Throughout this document, it will be referred to as the Facilitated Emissions Standard. This Facilitated Emissions Standard constitutes Part B of the 'Global GHG Accounting and Reporting Standard for the Financial Industry'. The purpose of this Facilitated Emissions Standard is to provide financial institutions with transparent, standardized, and robust methodologies to measure and report facilitated emissions, as a supplement to the requirements of the GHG Protocol "Corporate Value Chain (Scope 3) Accounting and Reporting Standard".

PCAF first published a discussion paper in November 2021, which looked at key design choices in developing a methodology for the accounting of facilitated emissions associated with the arranging of capital market issuances (when the facilitation activity should be captured; how the responsibility should be split between the facilitators; and allocating emissions), as well as proposed options. Then, in October 2022, PCAF published a public consultation paper to determine the percentage weighting of GHG emissions to facilitators. Throughout the development of this Facilitated Emissions Standard, PCAF has engaged with stakeholders to solicit feedback and discuss PCAF methodological approaches and considered their comments and suggestions.

BUILT ON THE GHG PROTOCOL

This Facilitated Emissions Standard is based on the GHG Protocol standards for corporate reporting, such as the 'GHG Protocol Corporate Accounting and Reporting Standard'[8], the 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'[9], and the supplemental 'Technical Guidance for Calculating Scope 3 Emissions'[10]. More specifically, this Facilitated Emissions Standard will supplement the GHG Protocol 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'

8 https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf
9 https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf
10 https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf

by providing additional detailed guidance as to how financial institutions can report on facilitated emissions under Scope 3 category 15.

Capital Market activities are part of “Managed Investments and Client Services” as listed in Table 1.1 below. The accounting guidance provided by the GHG Protocol on these types on investments is very limited. The protocol only states that “Companies may account for emissions from managed investments and client services in scope 3 category 15 (investments)”. In absence of additional guidance, PCAF has taken the 5 core principles of the GHG Protocol and the derived PCAF requirements (see chapter 4) as starting point for the developing this Facilitated Emissions Standard (see chapter 4).

Table 1-1. Overview of GHG Protocols' optional categories for accounting for emissions from investments

Financial investment/service	Description	GHG accounting approach (optional)
Debt investments (without known use of proceeds)	General corporate purposes debt holdings (such as bonds or loans) held in the reporting company's portfolio where the use of proceeds is not specified	Companies may account for scope 1 and scope 2 emissions of the investee that occur in the reporting year in scope 3, category 15 (Investments)
Managed investments and client services	Investments managed by the reporting company on behalf of clients (using clients' capital) or services provided by the reporting company to clients, including: • Investment and asset management (equity or fixed income funds managed on behalf of clients, using clients' capital • Corporate underwriting and issuance for clients seeking equity or debt capital • Financial advisory services for clients seeking assistance with mergers and acquisitions or requesting other advisory services	Companies may account for emissions from managed investments and client services in scope 3, category 15 (Investments)
Other investments or financial services	Other investments, financial contracts, or financial services not included above (e.g., pension funds, retirement accounts, securitized products, insurance contracts, credit guarantees, financial guarantees, export credit insurance, credit default swaps, etc.)	Companies may account for emissions from other managed investments in scope 3, category 15 (Investments)

Source: (WRI and WBCSD, 2011), adapted by PCAF, 2023

Beyond reporting the scope 3 category 15 emissions covered by this Facilitated Emissions Standard, financial institutions **shall** also measure and report their scope 1 and 2 emissions as well as any other relevant categories of scope 3 emissions in line with the GHG Protocol's standards.

ABOUT PCAF

The Partnership for Carbon Accounting Financials (PCAF) is an industry-led initiative which was created in 2015 by 14 Dutch financial institutions. In 2018 PCAF expanded into North America and went global in September 2019. PCAF aims to standardize the way financial institutions measure and report financed emissions, insurance-associated emissions, and facilitated emissions. In addition, it aims to increase the number of financial institutions that commit to measuring and disclosing these scope 3 emissions in line with the methods it develops.

In 2020, the first edition of the "Global GHG Accounting and Reporting Standard for the Financial Industry" covering financed emissions ("Financed Emissions Standard") was published. Since then, financial institutions have asked to expand the standard with more methods, also covering other activities of the financial industry. From 2021 onwards, PCAF started the work on three parts under the umbrella of the Global GHG Accounting and Reporting Standard for the Financial Industry:

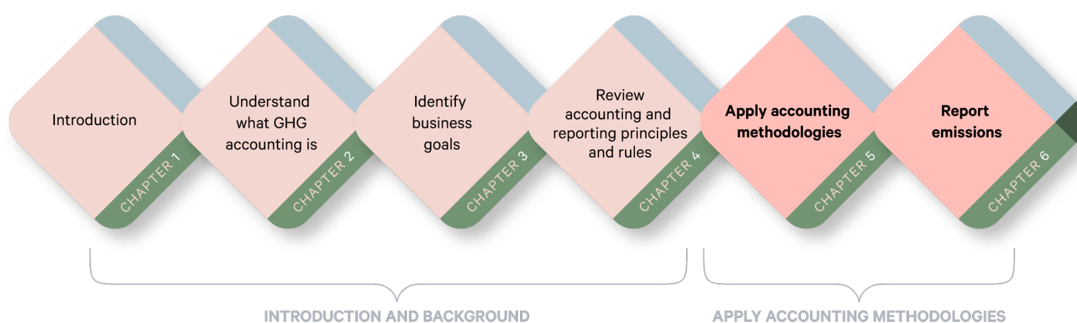
- **Part A:** update of the first version standard on measuring and reporting financed emissions ("Financed Emissions Standard - second version")
- **Part B:** development of a standard for measuring and reporting the GHG emissions associated to the capital market facilitation activities ("Facilitated Emissions Standard")
- **Part C:** development of a standard for measuring and reporting the GHG emissions associated to re/insurance underwriting portfolios ("Insurance-Associated Emissions Standard")

HOW TO READ THIS FACILITATED EMISSIONS STANDARD

This Facilitated Emissions Standard uses the following language to indicate which provisions are requirements, which are recommendations, and which are allowable options that financial institutions may choose to follow. The following terms are used throughout this Facilitated Emissions Standard:

- "**Shall**" or "**required**": indicates what is required for a GHG inventory to conform with this Facilitated Emissions Standard.
- "**Should**": indicates a recommendation but not a requirement.
- "**May**": indicates an allowed option.
- "**Needs**", "**can**", and "**cannot**": provide guidance on implementing a requirement or to indicate when an action is or is not possible.

Figure 1-1. Overview of the Standard and steps for disclosing facilitated emissions



2. GHG accounting in Capital Markets

WHAT IS GHG ACCOUNTING

GHG emissions accounting ("GHG accounting") refers to the processes required to consistently measure the amount of GHGs generated, avoided, or removed by an entity, allowing it to track and report these emissions over time. The emissions measured are the seven gases mandated under the Kyoto Protocol and needed to be included in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC)—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). For ease of accounting, these gases are usually converted to and expressed as carbon dioxide equivalents (CO_2e).

GHG accounting is commonly used by governments, corporations, and other entities to measure the direct and indirect emissions that occur throughout their value chains as a result of organizational and business activities. According to the GHG Protocol Corporate Accounting and Reporting Standard,[11] direct emissions are emissions from sources owned or controlled by the reporting company. Indirect emissions are emissions that are a consequence of the operations of the reporting company, but that occur at sources owned or controlled by another company.

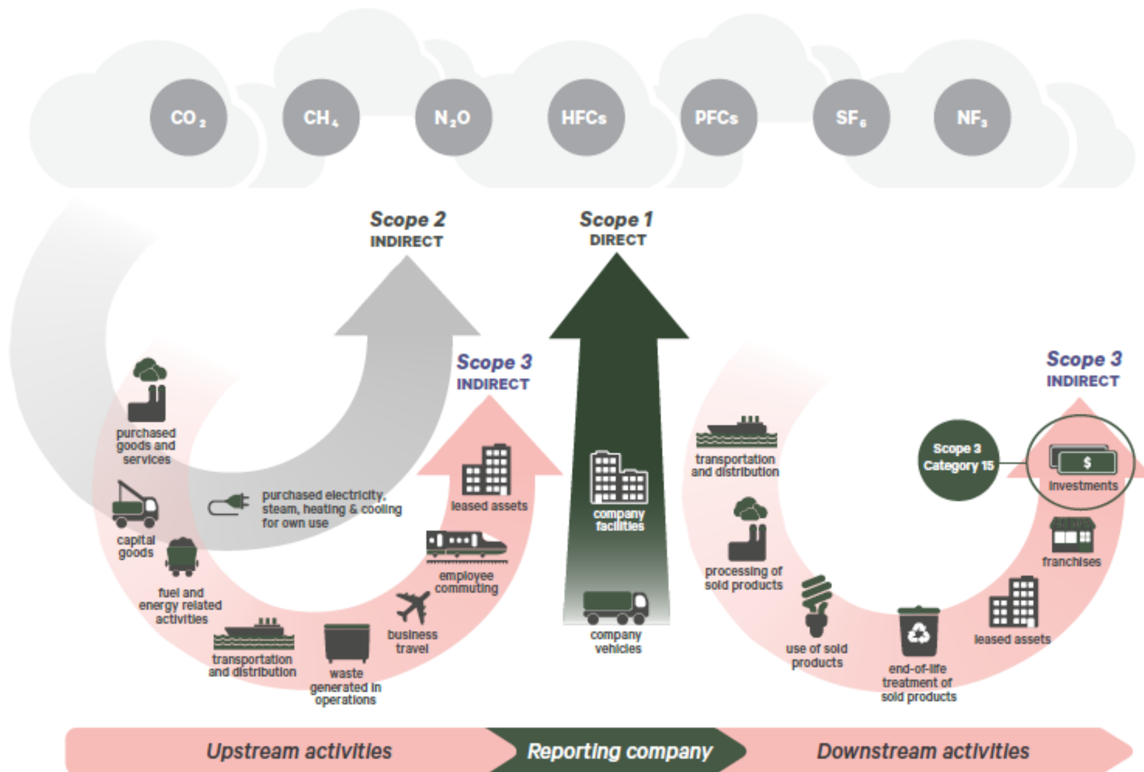
Direct and indirect emissions are further categorized by scope and distinguished according to the source of the emissions and where in an organization's value chain the emissions occur. The three scopes defined by the GHG Protocol—scope 1, scope 2 and scope 3—are briefly described below and are illustrated in Figure 2-1.

- **Scope 1:** Direct GHG emissions that occur from sources owned or controlled by the reporting company—i.e., emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.
- **Scope 2:** Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company. Scope 2 emissions physically occur at the facility where the electricity, steam, heating, or cooling is generated.
- **Scope 3:** All other indirect GHG emissions (not included in scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions that occur in the supply chain (for example, from production or extraction of purchased materials) and downstream emissions that occur as a consequence of using the organization's products or services.

The GHG Protocol 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'[12] categorizes scope 3 emissions into 15 categories, as shown in Figure 2-1. According to the GHG Protocol, accounting and reporting on emissions associated with a reporting company's capital market related activities are optional under scope 3 category 15 (Investments, other investments, or financial services). This Facilitated Emissions Standard now clarifies and requires that capital market facilitated emissions are to be reported as a separate and supplementary accounting note within scope 3 category 15 (Investments). Please see Chapter 6 for more details on reporting recommendations.

11 WRI and WBCSD, 2004
12 WRI and WBCSD, 20011

Figure 2-1. Overview of GHG Protocol scopes and emissions across the value chain



Source: (WRI and WBCSD, 2011) adapted by PCAF, 2023

GHG ACCOUNTING HELPS MEASURE THREE TYPES OF CLIMATE IMPACT: GENERATED EMISSIONS, EMISSION REMOVALS, AND AVOIDED EMISSIONS

Facilitated emissions can be measured as the amount of GHGs generated, avoided, or removed by a financial institution in the reporting year. The total volume of GHG emissions emitted and facilitated by a financial institution is commonly referred to as its **generated (absolute) emissions**. The core focus of this Facilitated Emissions Standard is the aggregated GHG emissions emitted and facilitated over the reporting year by the financial institution itself or its facilitated parties.

However, not all capital market activities are associated with generated facilitated emissions. Facilitation can also contribute to the deployment of emission removal solutions that absorb CO_2e from the atmosphere and store it in durable materials, terrestrial carbon sinks, or in geological reservoirs deep underground. For instance, issuing green bonds for sustainable forestry projects is likely to increase the forest carbon stock through diversification of tree species, more underbrush, and healthier forest soils. Other examples are Direct Air Capture technologies that can capture CO_2 directly from the atmosphere and durably store it, for instance into carbonate minerals locked inside concrete blocks. The volume of CO_2e absorbed and durably stored is considered an **emission removal** that can also be quantified and reported.

Carbon removal activities will become important to achieve global net-zero, namely, to neutralize (balance) residual emissions. Currently, though, there are no final international rules for carbon removals accounting. Final guidance by the GHG Protocol on emissions removals is expected to be

published late 2023.[13] While PCAF acknowledges that emissions removals are integral to combatting climate change,[14] this Facilitated Emissions Standard does not provide specific guidance on how to measure and report facilitated emissions removals. For the time being, PCAF refers to the forthcoming guidance from the GHG Protocol. Future versions of this Facilitated Emissions Standard may potentially include more specific guidance on emissions removals.

Lastly, emissions accounting in the real economy sometimes compares actual emissions of a zero- or low-emission project (project emissions) to the hypothetical emissions of high-emission alternatives (baseline emissions). The difference between the two is referred to as **avoided emissions**. *This Facilitated Emissions Standard does not cover methods to quantify avoided emissions, in absence of credible and widely accepted standards for corporate and financed emissions.*

When a financial institution chooses to report on emission removals or avoided emissions they **shall** always do so separately from the financial institution's scope 1, 2, and 3 GHG inventories, **shall** apply the same accounting principles (including attribution and weighting) as for its generated facilitated emissions, and **shall** report their methodological formula for calculating these types of emissions (i.e., emission removals and avoided emissions) in accordance with the guidance contained in Chapter 6.

13 The GHG Protocol's 'Land Sector and Removals Guidance' is currently being developed through a multi-stakeholder development process. The draft guidance is published for both pilot testing and review in June 2022. Final publication is expected in 2023. https://ghgprotocol.org/land-sector-and-removals-guidance

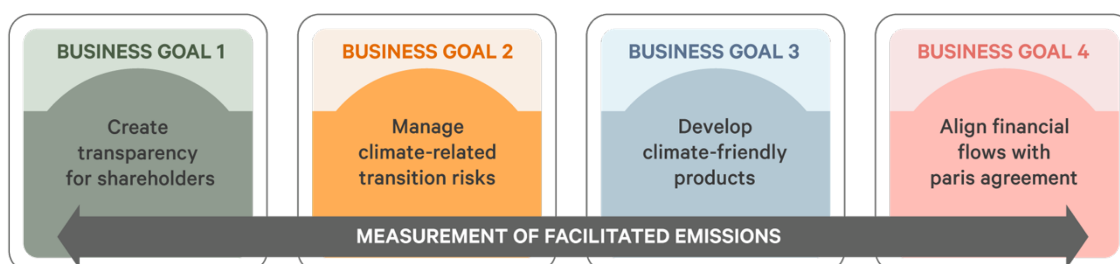
14 IPCC WGIII 6th Assessment Report, 2022.

3. GHG accounting can be used as a basis to achieve business goals

MEASUREMENT OF FACILITATED EMISSIONS FROM PRIMARY ISSUANCE OF CAPITAL MARKET INSTRUMENTS SERVES FOUR BUSINESS GOALS

Understanding the climate impact of financial activities makes good business sense for financial institutions. GHG accounting of capital market instruments can help financial institutions achieve multiple objectives, such as creating transparency for stakeholders, managing financial risks associated with climate policies and regulations, creating new financial instruments to further the transition to net-zero, and aligning financial flows with the goals of the Paris Agreement (Figure 3-1). Financial institutions cite these business goals as the key reasons for assessing emissions associated with their financial activities, but this list is by no means exhaustive. This chapter will elaborate on these goals in greater detail.

Figure 3-1. GHG accounting can help financial institutions meet multiple business goals



The level of detail captured in the assessment of facilitated emissions could dictate how well the inventory can meet the business goals of the financial institution. For example, if a financial institution uses the inventory to manage risk, it **may** consider measuring and recording sector-level emissions to identify emission-intensive industry activities in its portfolios. Other financial institutions **may** want to structure their inventory in a way that helps them track their facilitated emissions reduction goals year-over-year. In the end, what is captured in the GHG inventory should serve the business goals of the financial institution.

BUSINESS GOAL 1: CREATE TRANSPARENCY FOR STAKEHOLDERS

Financial institutions motivated to be more transparent about their climate impact can use GHG accounting to measure and report the facilitated emissions. Transparency, especially around readiness for the low-carbon transition and risk of stranded assets, can help companies and financial institutions identify how capital expenditure may be re-allocated to provide risk-adjusted returns as decarbonization occurs. In response to demand and the consensus that climate change poses a considerable threat to the global economy, the Financial Stability Board (FSB) launched the industry-led Task Force on Climate-related Financial Disclosures (TCFD) in 2015. The TCFD framework[15] has expanded since the first recommendations were launched in 2017 to be the global guidance on how companies should disclose their climate-related risks and opportunities. At the time of the publication of this edition of the Facilitated Emissions Standard, TCFD-recommended disclosures are mostly voluntary.[16] However, with strong backing from central banks, the Supervisors Network for Greening the Financial System (NGFS), and the industry itself, companies will likely face new regulatory requirements in this related to the emissions associated with financial activities in the future.

15 TCFD, 2017

16 Except in New Zealand, where the government introduced mandatory TCFD disclosures in September 2020: https://bit.ly/2TWUxwm. The UK also hopes to enshrine mandatory climate disclosures in line with TCFD recommendations in a new law which would take effect as soon as April 2022, subject to Parliamentary approval. https://bit.ly/35B0rwF

Creating transparency for internal stakeholders can also be a business goal for financial institutions. Assessing facilitated emissions allows the board members and senior management of financial institutions to get a better picture of their organization's impact on the climate and how to facilitate activities toward the goals of the Paris Agreement. By measuring and disclosing facilitated emissions, and thereby creating opportunities for climate disclosure, financial institutions can internally align on their role, as well as the financial sector's responsibility, in the transition to a net-zero economy.

BUSINESS GOAL 2: MANAGE CLIMATE-RELATED TRANSITION RISKS

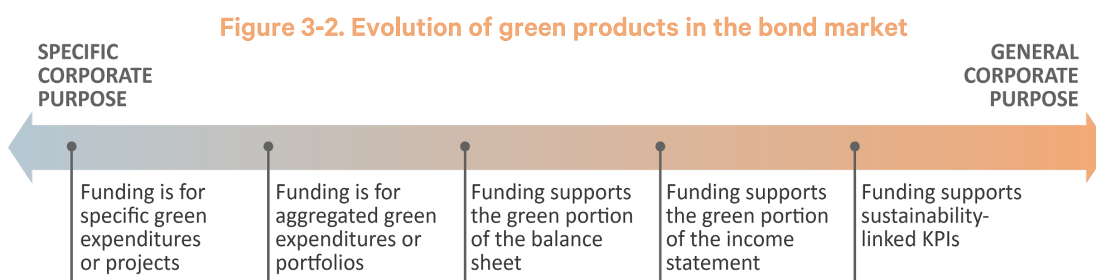
Financial institutions are increasingly comprehending the exposure of their activities to risks posed by climate-related policies and regulations. GHG accounting helps these institutions screen and identify areas of their financial activities that fall under emission-intensive assets. Such financial activities could suffer setbacks resulting from the introduction of carbon prices, policies and regulations that are aimed at reducing emissions in carbon-intensive sectors.

In addition, financial institutions that do not disclose their climate-related risks could face reputational risk, especially if peers are increasingly doing so. Measuring and disclosing facilitated emissions according to the Facilitated Emissions Standard is a way for financial institutions to manage their climate-related reputational risk. By applying the GHG accounting methods in this Facilitated Emissions Standard, financial institutions can identify areas of significant exposure to emission-intensive assets across their financial activities and use this information as the basis to assess climate risk scenarios. By disclosing in line with the requirements and recommendations in Chapter 6 of this Facilitated Emissions Standard, financial institutions can show that they are serious about climate action.

BUSINESS GOAL 3: DEVELOP CLIMATE-FRIENDLY FINANCIAL PRODUCTS

For financial institutions, significant opportunities exist in the development of financial instruments that aid in achieving their own and their clients' climate ambitions.

Figure 3-2. Evolution of green products in the bond market



With the transition to a low-carbon economy, financial institutions can develop innovative products and services that enable their clients to decarbonize their business activities. By measuring facilitated emissions, financial institutions can see which sectors and businesses require the most help in their decarbonization efforts, and how best to support them in their transition to a net-zero future.

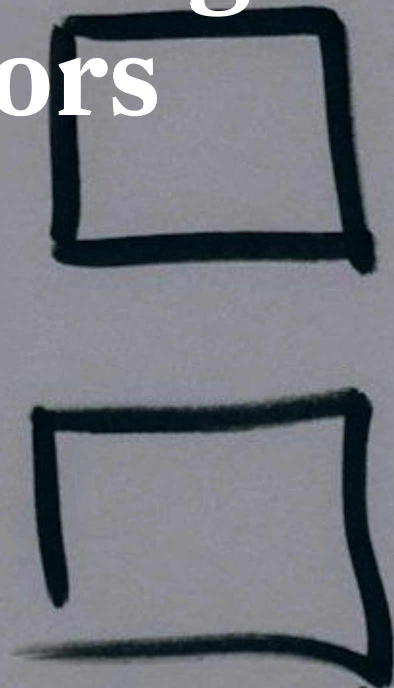
BUSINESS GOAL 4: ALIGN FINANCIAL FLOWS WITH THE PARIS AGREEMENT

Financial institutions that want to align their financial activities with the goals of the Paris Agreement implement portfolio GHG accounting to understand the absolute emissions they facilitate in the real economy. These institutions use this information as the basis for analyzing decarbonization scenarios and setting emission-based targets at the asset class or sector level. While other climate initiatives focus on scenario analysis and target setting, PCAF has been established to focus solely on the GHG accounting of financial activities. Undertaking GHG accounting equips financial institutions with a metric that can help track absolute emissions year over year and compare it with their facilitated emissions goals.

Financial institutions' commitments to set science-based targets,[17] transition their activities to net-zero GHG emissions by 2050 (e.g., Net-Zero Asset Owner Alliance[18]), and align their financial activities with the objectives of the Paris Agreement (e.g., Net-Zero Banking Alliance[19]) are examples of this business goal.

17 Information about SBTs for financial institutions can be found at: https://sciencebasedtargets.org/financial-institutions/
18 Information about the Net-Zero Asset Owner Alliance can be found at: https://www.unepfi.org/net-zero-alliance/
19 Information about the Net-Zero Banking Alliance can be found at https://www.unepfi.org/net-zero-banking/

4. Principles and requirements of GHG accounting for facilitators



4.1 GHG accounting requirements derived from the GHG protocol's principles

Like financial accounting and reporting, GHG accounting and reporting follow generally accepted principles to ensure that an organization's disclosure represents an accurate, verifiable, and fair account of its GHG emissions. The core principles of GHG accounting are set out in the **'GHG Protocol Corporate Accounting and Reporting Standard'**[20] and the GHG Protocol 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'.[21]

Table 4-1. Additional PCAF requirements of GHG accounting and reporting are derived from the GHG Protocol's five principles

GHG Protocol principles for scope 3 inventories[22]	Additional PCAF requirements for facilitated emissions of Capital Markets
Completeness Account for and report on all GHG emission sources and activities within the inventory boundary. Disclose and justify any specific exclusions.	**Recognition** Financial institutions **shall** account for all facilitated emissions from the primary issuance of capital market instruments[23] under scope 3 category 15,[24, 25] as defined by the GHG Protocol 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'. Any limitations or restrictions **shall** be disclosed.
Consistency Use consistent methodologies to allow for meaningful performance tracking of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.	**Measurement** Financial institutions **shall** measure and report their absolute facilitated emissions from capital market issuance by "following the money" and using the PCAF methodologies and guidance provided in the Facilitated Emissions Standard. If data availability and methodologies allow, avoided, and removed emissions **may** also be measured and reported.
Relevance Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users — both internal and external to the company. An important aspect of relevance is the selection of an appropriate inventory boundary that reflects the substance and economic reality of the company's business relationships.	**Attribution** The financial institution's share of facilitated emissions **shall** be proportional to the share of its exposure to the total value of the issuance, per the methodology outlined in chapter 5.
Accuracy Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable confidence as to the integrity of the reported information.	**Data quality** Financial institutions **shall** use the highest data quality available for capital market issuance and the underlying assets/companies and improve the quality of the data over time.
Transparency Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.	**Disclosure** Public disclosure of the results of the PCAF assessment is crucial for external stakeholders, and financial institutions using the methodology, to have a clear, comparable view on how capital market activities of financial institutions contribute to the Paris Agreement's climate goals.

20 WRI and WBCSD, 2004
21 WRI and WBCSD, 2011
22 https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf, p.7
23 Capital market instruments are financial assets that are sold by companies or governments who seek capital.
24 Category 15 of the 'Technical Guidance for Calculating Scope 3 Emissions' does not explicitly refer to capital markets. It solely focuses on "investments" and providing such "financial services" and "client services". I.e., the reporting of any kind of capital market facilitated emissions is considered to be a voluntary broadening of the interpretation of the Technical Guidance due to the facilitator's own ambitions and goals.
25 As described, the reported figures in the context of capital market facilitated emissions might, however, not be at all comparable with emissions being reported for the facilitator's own or financed emissions. Any voluntary reporting might depend on the further specifics to be defined.

The GHG Protocol's five core principles are completeness, consistency, relevance, accuracy, and transparency. This Facilitated Emissions Standard follows these five core principles and provides five additional requirements for the application of these principles that are directly relevant for facilitators wishing to assess their capital market facilitated emissions (Table 4-1).

4.2 Additional requirements for accounting and reporting emissions from capital market activities

This section describes the additional requirements for GHG accounting for Capital Markets and its facilitators and how these requirements guide accounting for and reporting of facilitated emissions.

RECOGNITION

Financial institutions **shall** account for all emissions that are associated with capital markets instrument and justify any exclusions. They **shall** be reported separately under scope 3 Category 15 [26,27] as defined by the 'GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard'. They **shall** be measured and reported as a supplementary accounting note and **shall** not be aggregated with financed emissions. Any limitations or restrictions **shall** be explained and disclosed.

MEASUREMENT

"Follow the money" is a key tenet for GHG accounting, meaning that the money **should** be followed as far as possible to understand and account for the climate impact in the real economy, i.e., emissions caused by the financial institution's financial activities.

Financial institutions **shall** measure and report their facilitated emissions using the methodologies set out in this Facilitated Emissions Standard and covering the seven GHGs required under the Kyoto Protocol. As a minimum, financial institutions **shall** measure the absolute GHG emissions resulting from facilitating activities (scope 3 category 15 emissions) in the reporting year. When relevant, emission removals **should** be measured and reported separately. Avoided emissions **may** also be measured and reported separately. However, in absence of credible accounting guidance, financial Institutions **shall** disclose the methodology and formulas adopted in calculating such emissions.

As a basis for reporting emissions, financial institutions **shall** choose a fixed point in time to determine their financial data needed to calculate an attribution factor, such as the last day of its fiscal year (e.g., June 30 or December 31). The GHG accounting period **shall** align with the financial accounting period.

ATTRIBUTION

The financial institution's share of facilitated emissions **shall** be proportional to the share of its exposure relative to the total value of the intended borrower or investee. The Standard applies the same attribution principles for all parts. It is crucial for financial institutions to consider equity and debt equally important in calculations and avoid double counting.

26 Category 15 of the 'Technical Guidance for Calculating Scope 3 Emissions' does not explicitly refer to capital markets. It solely focuses on "investments" and providing such "financial services" and "client services". I.e., the reporting of any kind of capital market facilitated emissions is considered to be a voluntary broadening of the interpretation of the Technical Guidance due to the facilitator's own ambitions and goals.

27 As described, the reported figures in the context of facilitated emissions for capital markets might, however, not be at all comparable with emissions being reported for the facilitator's own or financed emissions. Any voluntary reporting might depend on the further specifics to be defined.

Box 4-1. Facilitated emissions and double counting

Double counting, which occurs when GHG emissions are counted more than once in the facilitated emissions calculation of one or more institutions, or across different parts of the Standard, **should** be minimized as much as possible. This can be done by splitting-out emissions reporting by the different emission scopes and financial activities that inherently have the potential for overlapping emissions. Beyond the double counting of facilitated emissions itself, there will also be double counting between financed (Part A), facilitated (Part B) and insurance associated (Part C) emissions. However, given the very different nature of these activities and different ways to influence decision making, this is not considered an issue when emissions are clearly reported separately.

Even though double counting is a frequent and inherent aspect of GHG accounting it does not need to be as seen as problematic, if:

- double counting does not interfere with stated decarbonization goals and;
- methodologies and limitations are stated transparently as part of the disclosure.

One of PCAF's goals is to develop harmonized and transparent methodologies to measure and report emissions associated with loans, investments, provision of insurance, and other financial products and services. Methodologies are developed with attention to help minimize double counting. All financial institutions using the methodologies in this Facilitated Emissions Standard will be subject to the same exposure to double counting and with none being more significantly affected than others.

DATA QUALITY

Financial institutions **shall** ensure that their GHG accounting appropriately reflects the GHG emissions associated with their facilitation activities. To safeguard these outcomes, financial institutions **shall** use the highest-quality data that is reasonably available for each facilitated emissions calculation, and, where relevant, improve the quality of the data over time. PCAF recognizes that high-quality data can be difficult to obtain when calculating facilitated emissions, particularly for sectors with less data availability. However, data limitations **should** not deter financial institutions from taking the first steps toward preparing their inventories. Even estimated or proxy data can help them identify GHG-intensive hotspots, which in turn can help to determine their climate strategies. Where data quality is low, financial institutions can design approaches to improve it over time.

For measuring facilitated emissions for each facilitation activity, various data inputs are needed to calculate the financial institutions attribution factor and the client's total emissions. The data needed to calculate an attribution factor can typically come from the financial institution and its clients, although the data required to calculate the client's emissions might not be readily available and must be sought out by the financial institution. The quality of this data can vary depending on assumptions relating to its assuredness, specificity, and other variables.

PCAF recognizes that there is often a lag between financial reporting and required data becoming available, such as emissions data for a client. In these instances, financial institutions **should** use the most recent data available, even if it represents different years. For example, it would be expected and appropriate that financial institutions reporting in 2023 for its 2022 financial year would use 2022

financial data alongside 2021 emissions data. More information on considerations related to data quality and how to employ the hierarchy for each line of business can be found in Chapter 5.

DISCLOSURE

The public disclosure of aggregated absolute facilitated emissions is important for external stakeholders to have an analogous view of the climate impact of financial institutions. To this end, financial institutions that intend to conform to the Facilitated Emissions Standard **shall** report absolute facilitated emissions. To support their disclosures, financial institutions **shall** follow the requirements and recommendations listed in Chapter 6 on how to report information relating to methodology, calculations, time frames, and data quality (as scored using the hierarchies provided in Chapter 5).

5. Methodology to measure facilitated emissions

This chapter describes the methodology used to account for the GHG emissions related to capital market activities. Financial institutions, in their role as facilitators, play a critical role in the issuance of capital market instruments. The GHG emissions associated with capital market issuances are known as “facilitated emissions”. This methodology aims to balance the fair attribution of emissions to the facilitator with due consideration given to practical implementation.

This chapter includes guidance on the following elements as a part of the method to measure capital market instruments:

- Attribution of emissions
- Emission scopes covered
- Formulas to calculate facilitated emissions
- Data required
- Limitations

5.1 Scope of capital market activities and coverage of roles

This Facilitated Emissions Standard includes the primary issuance of capital market instruments and loan syndication. Loan syndication involves a group of lenders that fund portions of a loan for a single borrower. A primary issuance includes new securities to provide debt-based or equity-based financing. For the purposes of this Facilitated Emissions Standard, primary issuances are those issuances where a financial institution may propose a beginning price range for a given security and oversee its sale to investors on a best-efforts basis. This Facilitated Emissions Standard only covers the portion of primary issuances that are sold to investors. In the case of an under-subscribed issuance, any unsold securities are not accounted for within the scope of this Facilitated Emissions Standard. The scope of this Facilitated Emissions Standard includes:

- Facilitated issuance of new:
  - Public debt: all types of bonds issued for general purposes (including sustainability-linked bonds, corporate bonds, and corporate medium-term notes[28])
  - Public equity: common stock (IPOs and follow-on issuances) and preferred shares
- Facilitated equity investments in private companies (including private placements)
- Facilitated debt investments in private companies (including private credit)
- Syndicated loans[29]

Sovereign bonds[30], securitized products (including asset-backed securities), covered bonds, derivative financial products (e.g., futures, options, swaps) and advisory services such as mergers and acquisitions (M&A) are not covered by the scope of this Facilitated Emissions Standard.
The same holds for green bonds since no PCAF method exists yet to calculate the emissions associated with green bonds and other known use of proceeds bonds. PCAF has prioritized the development of a method covering green bonds moving forward.

28 Medium-term notes are excluded when issued by government agencies.
29 A syndicated loan transaction is defined as a loan made available by two or more providers under a common loan agreement and ranking credit is assigned upon signature of the loan documentation. If these fundamental tests cannot be applied, it will not be considered for inclusion.
30 US agency, non-US agency, supranational and subnational bonds are excluded as well.

Additionally, this method currently is aimed at the roles of lead bookrunners only. The roles of co-managers/lead managers are less significant, and the economics are typically smaller in relationship to the lead bookrunners. Given their more passive role, co-managers are currently not captured in this Facilitated Emissions Standard. More information on the classification of the different roles can be found in Chapter 1.

5.2 Attribution of emissions

To quantify and attribute the facilitated emissions from primary issuance of capital market instruments three key elements need to be considered.

- i **Annual emissions:** What is the time period over which the facilitation activity is captured?
- ii **Attribution factor (facilitated amount/company value):** How are emissions allocated between the different facilitators of an issuance?
- iii **Weighting factor:** How is the responsibility of a facilitator for the issuer's emissions valued?

An accounting method **should** therefore carefully consider and define these three elements. The section below explains how this Facilitated Emissions Standard defines these elements of the methodology.

Formula for calculating facilitated emissions

Facilitated emissions from primary issuances of capital market instruments are calculated using the formula below:

$$Facilitated\ emissions = \sum_{c} \underbrace{\frac{Facilitated\ amount_c}{Company\ value}}_{ii} \times \underbrace{Weighting\ factor}_{iii} \times \underbrace{Annual\ emissions_c}_{i}$$

$$(Faciliated\ amount = Total\ raised\ amount \times League\ table\ credit)$$

c = *The issuing company*

1. **Facilitated amount:**
   Defined as the product of the total amount raised and volume attributed to the financial institution (or league table credit, see Box 5.1.).
2. **Company value:**
   For all listed companies this is the company enterprise value including cash (EVIC) of the respective client. Only for private companies EVIC **should** be replaced by the sum of the total company equity[31] and debt[32] when no market value for equity is available.[33]

31 In cases where the total company equity value according to the client's balance sheet is negative, the financial institution **shall** set total equity to 0; this means that all emissions are attributed to debt only, while no emissions are attributed to equity investments. Such cases can happen when the retained earnings are negative while at the same time being higher than the other equity components on the balance sheet of the client—e.g., this often holds for startups that have high negative profits during their first years of operation. By this approach, for those companies that are doing well (i.e., they have high retained earnings), financial institutions attribute more emissions to equity providers; for those companies doing poorly (i.e., they have high retained losses), financial institutions attribute more emissions to debt providers. This is in line with the attribution factor rationale for listed companies, where the equity part of EVIC (i.e., market capitalization) also implicitly reflects retained earnings and losses (e.g., if retained earnings increase, the share price and market capitalization also increase).

32 Total debt includes both current and long-term debt on the balance sheet.

33 If total debt or total equity cannot be obtained from a client's balance sheet for whatever reason, financial institutions are allowed to fall back to the total balance sheet value (i.e., the sum of total equity and liabilities, which is equal to the client's total assets) with the intention of improving this data quality in the future.

The values for EVIC, or total equity and debt, collected by the financial institution for its annual facilitated emissions reporting **should** be based on the most recent available results reported by the client at the financial institution's annual emission reporting date (regardless of timing of all individual issuances in the reporting year).

For listed companies:

$$Attribution\ factor_c = \frac{Faciltated\ amount_c}{Enterprise\ Value\ Including\ Cash\ (EVIC)_c}$$

For unlisted companies:

$$Attribution\ factor_c = \frac{Faciltated\ amount_c}{Total\ equity + debt_c}$$

Box 5-1. How EVIC is defined

EVIC is defined as the sum of the market capitalization of ordinary shares at fiscal year-end, the market capitalization of preferred shares at fiscal year-end, and the book values of total debt[34] and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values[35].

PCAF chose to align the definition of EVIC with the common definition provided by both the:

1. EU TEG in its Handbook of Climate Transition Benchmarks, Paris-Aligned Benchmark and Benchmarks' ESG Disclosure[36]; and
2. Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 Supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, which says EVIC should be used to determine the GHG intensities for the benchmarks.

Box 5 in the Financed Emissions Standard further clarifies the rationale for using EVIC in the attribution factor.

34 In its EVIC definition, the EU TEG refers to "the book values of total debt," including all debt as listed on the company balance sheet. This is different from some accounting definitions of book value of debt, which exclude some elements like non-interest-bearing debt (also see next footnote on precautionary principle).

35 This is the standard definition of EVIC as provided by the EU TEG. For consistency reasons, PCAF decided to align with this definition to ensure maximum alignment on metrics in the market, which also enables data providers to collect data in a consistent way. Specific elements of EVIC might not be readily available because data providers are still working on aligning their data with this definition. For cases where data is missing, the EU TEG (pg. 16 in its handbook of climate-related benchmarks) recommends conducting corporate GHG data estimations based on the UN's (1992) Precautionary principle: "If in doubt, err on the side of the planet not the side of the company." Following this precautionary approach for EVIC calculations, financial institutions can decide to exclude elements of the EVIC (e.g., minority interests or certain elements of the book value of debt) as this would lead to a slightly lower EVIC and higher attribution of financed emissions to their own outstanding amount. These slight deviations from the standard EVIC definition are allowed as long as: (1) they are in line with this precautionary principle, and (2) the basis of the EVIC definition still includes the market value of equity (market capitalization) plus the total book value of debt of any given company.

36 EU Technical Expert Group on Sustainable Finance, 2019

WHAT IS THE PERIOD OVER WHICH THE FACILITATION IS CAPTURED?

Context

Unlike the role financial institutions undertake with lending and investing activities, capital market facilitation involves arranging transactions and does not usually involve capital exposure for the financial institution. This arranging activity leads to what is classified as facilitated emissions.

Lending, investing, and financed emissions: Where a financial institution lends funds, it puts at risk its own capital and this exposure remains on its balance sheet for the life of the loan, leading to financed emissions over that period.

Capital market activities and facilitated emissions: Where a financial institution facilitates a capital market issuance, the financial institution generally does not put any of its own capital at risk and so there is no transaction recorded on the financial institutions' balance sheet. The exception is if the facilitator of a capital market instrument has underwritten any part of the issuance – where a financial institution provides an underwriting facility that puts the institution's capital at risk, this **should** be treated separately from the role they provide in arranging and facilitating an issuance. Underwriting facilities are not covered by the scope of this Facilitated Emissions Standard. Note: these underwriting activities are not the same as the underwriting by the re/insurance sector. For more details on these activities, we refer to the PCAF Standard Part C: Insurance-Associated Emissions.[37]

Methodology

As facilitators of capital market instruments, financial institutions are only involved when the transaction is being arranged and launched, they will take no (or limited) capital risk. Given the temporary association with transactions, capital market facilitations are treated differently than lending and investing.

Using this approach, the association with the capital market transaction **shall** be accounted for in the year the facilitation occurs, using the reported or estimated annual emissions of the issuer in that year. All the transactions during the year are then aggregated over that one year to calculate the total facilitated emissions. This annual period is selected to be in line with other parts of the PCAF Standard. PCAF acknowledges that there may be a time lag in data availability given that emissions data will typically be available 12-15 months after the calendar year-end. Please see the limitations section of this chapter.

The assumption is that — in line with Part A of the PCAF Standard — buyers of the facilitated instruments (both equity and debt) will report their financed emissions separately and for each year that they are invested in the instrument (i.e., assuming there will always be an investor or lender reporting the emissions associated with the issuance until its maturity). In contrast, the facilitator will only report its association with the instrument in the year that the instrument is issued, and the facilitation takes place.

When reporting facilitated emissions next to financed emissions, facilitators **shall** use the same reporting period. In practice, this means that the facilitator reports the attributed share of the annual emissions of all companies it facilitated for in the same reporting year up until prior to the same fixed point in time chosen to disclose financed emissions.

37 See also PCAF Standard Part C: Insurance-Associated Emissions https://carbonaccountingfinancials.com/files/downloads/pcaf-standard-part-c-insurance-associated-emissions-nov-2022.pdf

ii HOW ARE EMISSIONS ALLOCATED BETWEEN THE DIFFERENT FACILITATORS OF AN ISSUANCE (ATTRIBUTION)?

Context

Given that there is typically more than one facilitator in a transaction, it is important to split the responsibilities between the facilitators (e.g., lead/active/passive bookrunners and lead/co-managers), in a consistent manner.

Methodology

The facilitators' responsibility **shall** be split based on the proportion of the issuance that is allotted to each facilitator for each transaction. As a first preference and if the data is readily available, the specific volume facilitated by the individual financial institution **shall** be used to determine what proportion of the 'facilitated' part of the transaction each facilitator takes responsibility for. If this data is not readily available, league table credit **shall** be used.

League tables rank financial institutions based on their total capital market activities, by summing up the credit allotted to each facilitator based on their role in an individual transaction. The facilitated amount can be calculated by multiplying the proportion of the issuance assigned to the facilitator by the amount of debt or equity raised. League tables used to track the issuance of capital market issuances generally fall in to one of two categories – league tables based on fees or league tables based on the value of the volume. This Facilitated Emissions Standard allows the use of either league tables based on fees or the value of the volume, but financial institutions **shall** be transparent about which method they are using in their public reports. As mentioned, economics for co-managers are typically smaller in relationship to the bookrunners, and co-managers are also not accounted for consistently in all league tables – co-managers will therefore currently not be captured in this Facilitated Emissions Standard. Data can be obtained from third-party providers, such as Bloomberg or Dealogic, and financial institutions **shall** disclose the data source used. Please see an example of applying the league table credit in box 5-2.

Box 5-2. Recommended approach for calculating facilitated emissions when using league table credit

Three facilitators – two lead bookrunners and one co-manager – support a listed Company X with raising capital in the debt market in August 2022. In total, $200 million was raised. Company X reported emissions of 1,000 kt CO_2e over the past year. The Enterprise Value Including Cash (EVIC) of Company X on 31st December 2022 is reported as $2 billion.

The total facilitated emissions for each facilitator is as follows – showing the option for both fee-based and volume-based league tables:

	Financial Institution		Lead Bookrunner 1	Lead Bookrunner 2	Co-manager
i	**1. Annual emissions of company**		1,000 kt CO_2e		
	2. League table credit	1. Based on fees	50%	45%	5%
		2. Based on volume	50%	50%	0%
	3. Facilitated amount	1. Based on fees	\$200m x 50% = \$100m	\$200m x 45% = \$90m	N/A
		2. Based on volume	\$200m x 50% = \$100m	\$200m x 50% = \$100m	N/A
ii	**4. Attribution factor (facilitated amount/ Company value)**	1. Based on fees	\$100m/\$2bn = 0.05	\$90m/\$2bn = 0.045	N/A
		2. Based on volume	\$100m/\$2bn = 0.05	\$100m/\$2bn = 0.05	N/A
iii	**5. Weighting factor**		33%	33%	N/A
	6. Facilitated emissions (kt CO_2e)	1. Based on fees	1,000 kt CO_2e x 0.05 x 0.33 = **16.5**	1,000 kt CO_2e x 0.045 x 0.33 = **14.85**	N/A
		2. Based on volume	1,000 kt CO_2e x 0.05 x 0.33 = **16.5**	1,000 kt CO_2e x 0.05 x 0.33 = **16.5**	N/A

iii

HOW IS THE RESPONSIBILITY OF A FACILITATOR FOR THE ISSUER'S EMISSIONS VALUED (WEIGHTING)?

Context

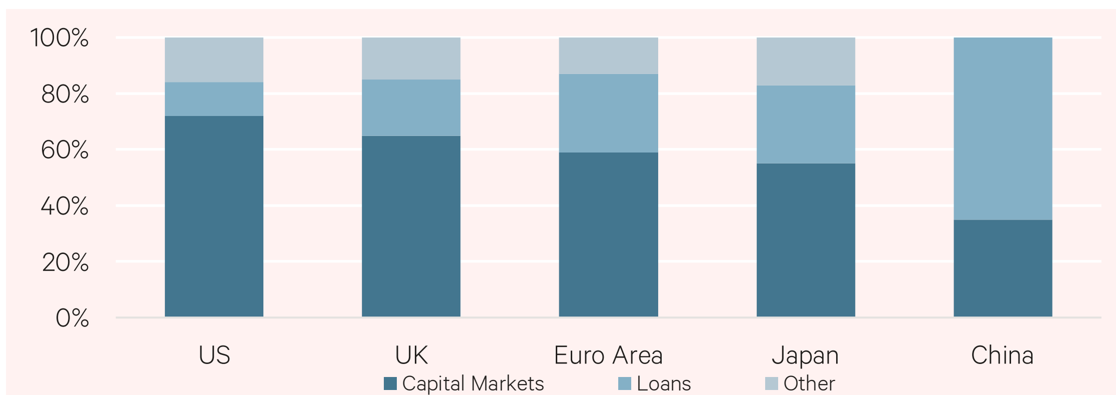
A financial institution's role in arranging capital market activities is distinct from its role as a provider of capital to a company.

Although it is important to capture the emissions associated with capital market activities, adjustments **should** be made to help communicate to stakeholders the different roles in lending or investing versus facilitation. As described in Chapter 1, the role that a facilitator plays in helping a company to issue capital market instruments to investors (i.e., facilitated transactions) is not directly equivalent with the provision of capital by a financial institution when it uses its balance sheet to extend loans and equity (i.e., financed emissions). Using the "follow the money" principle upon which prior PCAF methodologies are built, facilitated emissions are therefore clearly distinct from financed emissions.

Because of the distinct role facilitators play, PCAF includes a "weighting" factor to the facilitated emissions calculation to help distinguish between the two types of emissions – facilitated emissions and financed emissions – acknowledging that a unit of facilitated emissions is not equal to a unit of financed emissions (or insurance-associated emissions) given that no direct funding is provided by the financial institution to the company producing emissions in the real economy; combined with the very short-term role facilitators have in their roles as arrangers.

Several dynamics were considered when determining the appropriate weighting to be used. One such consideration was the fact that the portion of financing that comes from lending versus the portion of financing that comes from capital market activities varies widely across jurisdictions – capital market issuance can represent anywhere between 20% to 80% of total financing (loans and capital markets).

Figure 5-1. Illustration of volume of capital markets vs. lending activity across regions [38]



A further consideration is that, when comparing fees that arrangers earn to the coupon received by investors, typically fees earned by arrangers represent approximately 10% to 15% of the combined fee and coupon total for the full first year. This is true when looking across markets.

The Basel Committee on Banking Supervision's Basel Framework from 2021 includes a description of the Committee's indicator-based measurement approach for assessing the systemic importance of global systemically important banks (G-SIB).[39] In this approach, the Committee has assigned percentage weightings for the relative importance of certain key activities that banks undertake. These activities include underwritten transactions in debt and equity markets (which includes arranging debt and equity capital market instruments) and total exposures (which includes loans). The relative weighting of these two activities implies the Basel approach weights balance sheet exposures as six times more consequential than underwriting activity – put another other way underwriting (leading to facilitated emissions) is only ~17% as impactful as balance sheet exposures (leading to financed emissions). However, this methodology has been developed to establish which banks are of consequence to global systemic risk and does not consider the broader roles that banks may play in the issuance of a capital market instrument – including acting as a broker between the user and the investors, which is a challenging role to replicate and quantify. Further, these percentage weightings assigned by the Basel Committee are subject to regular review and change. Earlier in 2018, the Basel approach weighted balance sheet exposures as only three times more consequential than underwriting, specifically ~33% as impactful as balance sheet exposures.

Methodology

To ensure consistency in facilitated emissions reporting and reflect the fact that a financial institution's role in facilitating capital market activities is different from its role as a lender, PCAF decided a 33% weighting for all capital market issuances in scope for this Facilitated Emissions Standard to appropriately distinguish between the relative importance of a financing activity versus a facilitation activity. It is also a conservative option as it equals the highest weighted relative importance of underwriting activities versus balance sheet exposure according to the Basel Committee on Banking Supervision's Basel Framework in the 11 years since the G-SIB assessment reports began in 2012.[40] This weighting also considers all factors and viewpoints explained in Capital Market Instruments Proposed Methodology for Facilitated Emissions 2022.[41] Therefore, financial institutions **shall** report their facilitated emissions using a 33% weighting factor and disclose the

38 Source: OECD, Federal Reserve, ECB, Bank of Japan, National Bureau of Statistics of China, SIFMA estimates
39 Basel Framework SCO40: https://www.bis.org/basel_framework/chapter/SCO/40.htm
40 The past annual G-SIB assessment reports archive: https://www.bis.org/bcbs/gsib/reporting_instructions.htm
41 https://carbonaccountingfinancials.com/files/downloads/pcaf-capital-market-instruments-proposed-methodology-2022.pdf

applied weighting factor clearly in their public reports. Financial institutions **may** additionally report their facilitated emissions without weighting[42] as long as this is reported separately, and the rationale is clearly disclosed – this would be in addition to reporting the 33% weighting, not instead of.

The weighting factor **should** be applied consistently across transactions, regardless of the use of proceeds. This weighting would apply to the facilitation of a bond where use of proceeds is for a carbon-intensive issuer or activity, as well as to a bond where use of proceeds is for a low-carbon or renewable issuer or activity – financial institutions would be expected to apply the same treatment to facilitation when calculating facilitated emissions to any type of activity.

In terms of disclosure, this Facilitated Emissions Standard is transparent about the percentage weighting used for capital market activities (33%) and financial institutions are required to report facilitated emissions separately from financed emissions (see next chapter on Reporting for more details). As such, if required by any user of the information, different percentage weightings can be derived from this methodology by simple extrapolation from the numbers disclosed.

Box 5-3. How this methodology related to setting facilitated emissions targets

PCAF's remit as an organization is to develop carbon accounting rules for scope 3, category 15 for financial institutions reporting in line with the GHG Protocol. GHG accounting and emissions inventories can act as a baseline from which financial institutions can develop targets to help manage their emissions. However, target setting methodologies are a distinct topic, and not the remit of PCAF. Please see annex 3.

Differences between equity and debt Capital Markets

This Facilitated Emissions Standard applies the same calculation and approach for debt and equity Capital Markets. This offers the benefit of methodological simplicity across the most common facilitated emissions transactions. It is noted, however, that equal treatment of both equity and debt capital market activities means that the permanence of equity versus the recycling of debt is not accounted for. More research is required to assess whether grouping these two distinct capital market products is an accurate representation of emissions attribution and may need to be revisited in future iterations of this Facilitated Emissions Standard.

5.3 Emission scopes covered

Financial institutions **shall** report their attribution of absolute scope 1 and scope 2 emissions of issuers they raise capital for across all sectors. This Facilitated Emissions Standard relates to primary markets (new issuances) and does not cover the secondary markets and the trading of existing capital market instruments.

For reporting the scope 3 emissions of capital markets issuers, PCAF follows a phase-in approach which requires scope 3 reporting for lending to and making investments in companies depending on the sector in which they are active, i.e., where they earn revenues. For sectors where scope 3 emissions reporting is required, the financial institutions **shall** separately disclose these absolute scope 3 emissions, including the specific sectors covered. Separate reporting allows for full

42 Applying no weighting is equal to applying a weighting of 100%.

transparency while acknowledging potential double counting issues when adding these to the scope 1 and 2 emissions of issuers.

PCAF acknowledges that, to date, the comparability, coverage, transparency, and reliability of scope 3 data still varies greatly per sector and data source. By requiring scope 3 reporting for selected sectors over time, PCAF seeks to make scope 3 emissions reporting more common by improving data availability and quality over time.

Financial institutions **shall** explain if they are not able to report the required scope 3 emissions because of data availability or uncertainty. For all sectors where PCAF does not yet require scope 3 emissions reporting, financial institutions **should** follow the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard and only account for scope 3 emissions where relevant.

PCAF provides a sector list detailing where scope 3 emissions of issuers are **required** to be reported (see Table 5-1). The sector list of PCAF aligns with the scope 3 phase-in approach as defined by the EU TEG, which was included in Article 5 of the Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020, *Supplements the Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks*. The year indication in Table 5-1 refers to the reporting year, meaning that the phased-in measurement **shall** start over the year prior.

The above requirement for all FIs to start reporting on the scope 3 emissions of issuer companies in the referenced sectors is a PCAF requirement.

Table 5-1. List of sectors with required scope 3 emissions inclusion

Phase-in period	NACE Level 2 (L2) sectors considered
For reports published in 2021 onwards	At least energy (oil & gas) and mining (i.e., NACE L2: 05-09, 19, 20)
For reports published in 2023 onwards	A least transportation, construction, buildings, materials, and industrial activities (i.e., NACE L2: 10-18, 21-33, 41-43, 49-53, 81)
For reports published in 2025 onwards	Every sector

The facilitated emissions from primary issuance of capital market instrument instruments can be calculated in different ways depending on the availability of financial and emissions data specific to the issuer company. Overall, PCAF distinguishes three different options to calculate the facilitated emissions from listed equity and corporate bonds depending on the emissions data used:

- **Option 1:** reported emissions, where verified or unverified emissions are collected from the issuer company directly (e.g., company sustainability report) or indirectly via verified third-party data providers (e.g., CDP) and then allocated to the reporting financial institutions using the attribution factor.

- **Option 2:** physical activity-based emissions, where emissions are estimated by the reporting financial institution based on primary physical activity data collected from the issuer company (e.g., megawatt-hours of natural gas consumed, or tons of steel produced) and then allocated to the reporting financial institution using the attribution factor. The emissions data **should** be estimated using an appropriate calculation methodology or tool with verified emission factors expressed per physical activity (e.g., tCO_2e/MWh or tCO_2e/t of steel) issued or approved by a credible independent body.
- **Option 3:** economic activity-based emissions, where emissions are estimated by the reporting financial institution based on economic activity data collected from the issuer company (e.g., euro/dollar of revenue or euro/dollar of sectoral assets) and then allocated to the reporting financial institution using the attribution factor. The emissions data **should** be estimated using official statistical data or acknowledged environmentally extended input-output (EEIO) tables providing region- or sector-specific average emission factors expressed per economic activity (e.g., tCO_2e/€ or $ of revenue or tCO_2e/€ or $ of sectoral assets).

DATA REQUIRED

PCAF distinguishes three options to calculate the facilitated emissions from capital market transactions depending on the emissions data used:

- **Option 1:** reported emissions
- **Option 2:** physical activity-based emissions
- **Option 3:** economic activity-based emissions

While Options 1 and 2 are based on company-specific reported emissions or primary physical activity data provided by the issuer or third-party data providers, Option 3 is based on region- or sector-specific average emissions or financial data obtained from public data sources such as statistics or data from other third-party providers.[43]

Options 1 and 2 are preferred over Option 3 from a data quality perspective because they provide more accurate emissions results to a financial institution. Due to data limitations, financial institutions might use Options 1 or 2 for certain companies and Option 3 for others. The data quality mix **shall** be reflected in the average data quality score, as Chapter 6 illustrates.

Table 5-2 provides data quality scores for each of the described options and sub-options (if applicable) that can be used to calculate facilitated emissions.

43 Option 1 and Option 2 were called “Approach 1: company specific approach” and Option 3 was called “Approach 2: Sector/region average approximation” in the report produced by the PCAF Dutch team: (PCAF, 2019).

Table 5-2. General description of the data quality score table

(score 1 = highest data quality; score 5 = lowest data quality)

Data quality	Options to estimate the facilitated emissions		When to use each option
Score 1	**Option 1: reported emissions**	**1a**	Facilitated amount and EVIC or total equity plus debt are known. **Verified emissions** of the company are available.
Score 2		**1b**	Facilitated amount and EVIC or total equity plus debt are known. **Unverified emissions** calculated by the company are available.
	Option 2: physical activity-based emissions	**2a**[44]	Facilitated amount and EVIC or total equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data of the **company's energy consumption** and emission factors[45] specific to that primary data. Relevant process emissions are added.
Score 3		**2b**	Facilitated amount and EVIC or total equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data of the **company's production** and emission factors specific to that primary data.
Score 4	**Option 3: economic activity-based emissions**	**3a**	Facilitated amount, EVIC or total equity plus debt, and the **company's revenue**[46] are known. Emission factors for the sector per unit of revenue are known (e.g., tCO_2e per euro or dollar of revenue earned in a sector).
Score 5		**3b**	Facilitated amount is known. **Emission factors** for the sector per unit of asset (e.g., tCO_2e per euro or dollar of asset in a sector) are known.
		3c	Facilitated amount is known. **Emission factors** for the sector per unit of revenue (e.g., tCO_2e per euro or dollar of revenue earned in a sector) and **asset turnover ratios** for the sector are known.

A detailed summary of the data quality score table, including data needs and equations to calculate facilitated emissions, is provided in Chapter 10 (Annex). Data for all three options in Table 5-2 can be derived from different data sources.

Data providers (Option 1)

For Option 1 (reported emissions), PCAF recommends either collecting emissions from the issuer company directly (e.g., company sustainability report) or third-party data providers, such as CDP, Bloomberg, MSCI, Sustainalytics, S&P/Trucost, and ISS ESG.

44 The quality scoring for the Option 2a is only possible for/applicable to scope 1 and scope 2 emissions as scope 3 emissions cannot be estimated by this option. Other options can be used to estimate the scope 3 emissions, however.

45 Supplier-specific emission factors (e.g., from electricity provider) for the respective primary activity data are always preferred over non-supplier-specific emission factors.

46 If revenue is not deemed a suitable financial indicator for estimating the emissions of a company in a certain sector, one can apply other suitable financial indicators as a proxy. If an alternative indicator is used, the reasoning for the selection of this alternative indicator **should** be made transparent. The data quality score will not be affected.

Data providers typically make scope 1 and 2 emissions data available. PCAF encourages using the most recent available data and to mention the data source, reporting period, or date of publication. Data providers collect emissions data as reported by the companies themselves, either through a standardized framework such as CDP or through a company's own disclosures in official filings and environmental reports. They often have their own methodologies to estimate calculate companies' emissions, especially if emissions are not reported. In this case, the calculation would be in line with Options 2 or 3, assuming the methodology used is in line with the GHG Protocol. Data providers **should** transparently disclose the calculation method they use conform the GHG Protocol and financial institutions **should** ask their data providers to provide this. This will enable financial institutions to apply the proper score to the data. PCAF also encourages data providers to apply the PCAF scoring method to their own data, which would allow them to share the data quality scores directly with their clients.

PCAF does not recommend a preferred data vendor. PCAF recommends using data providers that use the standardized CDP framework and suggests data providers disclose the data quality score according to the scoring hierarchy in Table 5-2.[47] When using data providers, PCAF recommends using the same provider due to variability of scope 1 and 2 emissions observed between providers.

Estimation models (Option 2 and 3)

Not all companies disclose their emissions data in official filings or through data providers. Reporting in emerging markets often lags that of developed markets. To maximize the coverage of emissions data, the remaining gaps are often filled with estimates.

For Option 2 (physical activity-based emissions), PCAF recommends using actual energy consumption (e.g., megawatt-hours of natural gas consumed) or production (e.g., tons of steel produced) data reported by companies, given the data fully covers the company's emissions generating activities. The emission factors expressed per physical activity used **should** be based on appropriate and verified calculation methodologies or tools issued or approved by a credible independent institution. Example data sources for retrieving emission factors are ecoinvent[48], Defra[49], IPCC[50], GEMIS[51], and FAO[52]. The most recent available data **should** be used, including a mention of the data source, reporting period, or publication date.

For Option 3 (economic activity-based emissions), PCAF recommends using official statistical data or acknowledged EEIO tables providing region- or sector-specific average emission factors expressed per economic activity (e.g., tCO_2e/€ or $ of revenue or tCO_2e/€ or $ of sectoral assets). Financial institutions **should** use emission factors that are as consistent as possible with the primary business activity facilitated. For example, for a business loan to a paddy rice farmer, the financial institution **should** seek to find and use a sector-specific average emission factor for the paddy rice sector and not an emission factor for the agricultural sector in general. Example EEIO databases that can be used to obtain such emission factors are EXIOBASE[53], GTAP[54], and WIOD[55].

47 More information about CDP can be found at: https://www.cdp.net/en
48 More information can be found at: https://www.ecoinvent.org/
49 More information can be found at: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversionfactors-2021
50 More information can be found at: https://www.ipcc-nggip.iges.or.jp/EFDB/find_ef.php
51 More information can be found at: http://iinas.org/gemis-download.html
52 More information can be found at: http://www.fao.org/partnerships/leap/database/ghg-crops/en
53 More information can be found at: https://www.exiobase.eu
54 More information can be found at: https://www.gtap.agecon.purdue.edu
55 More information can be found at: http://www.wiod.org

PCAF's web-based emission factor database provides a large set of emission factors for Option 2 and Option 3 above. The database, which is only available to PCAF signatories, can help financial institutions get started with estimating the facilitated emissions of their loans and/or investments.

PCAF expects that the facilitated emissions for most capital market transactions can be derived through either reported emissions (Option 1), physical activity data (Option 2), or economic activity data (Option 3). However, PCAF allows the use of alternative options to calculate emissions if none of the specified options can be used or in the case that new options are developed. The reporting financial institution **shall** always explain the reasons for using an alternative option if it deviates from the three options defined above.

LIMITATIONS

Generalized nature of Option 3

One limitation of Option 3, economic activity data, is the generalized nature and necessary assumptions made in applying region- or sector-specific average values (both for emissions and financial data). This makes calculations less robust and more uncertain than those based on data specific to the issuer, as the data for this option largely depends on assumptions and approximations derived from region and sector averages. In addition, statistical data or acknowledged EEIO tables for a given region need to be critically mapped to the sector classification used by the reporting financial institution. As the sectors may not map one-to-one, this may cause facilitated emissions to be over- or understated.

Market value fluctuations

When using EVIC as the denominator, calculated facilitated emissions may change as a result of fluctuating market prices throughout the reporting year. Given that EVIC will be reported as of year-end, there may be changes in the EVIC of a company from the date of transaction close to the reporting year-end date. Market price fluctuations may cause discrepancies in the annual facilitated emissions figures, however using fiscal year-end EVIC is the most consistent approach as it aligns with the year-end reporting for financed emissions.

Time lag in data availability

Another limitation of the described options stems from the fact that emissions data is typically available months after the calendar year-end. Given that the issuance is reported in the calendar year of occurrence, the facilitator could have to revert to emissions data from previous years in order to perform the GHG accounting calculations.

6. Reporting requirements, recommendations, and metrics

Introduction
CHAPTER 1
Understand what GHG accounting is
CHAPTER 2
Identify business goals
CHAPTER 3
Review accounting and reporting principles and rules
CHAPTER 4
Apply accounting methodologies
CHAPTER 5
Report emissions
CHAPTER 6

INTRODUCTION

A global, standardized methodology to measure and disclose the GHG emissions associated with capital market transactions (as part of Scope 3 category 15) is intended to create consistency and comparability in reporting.

PCAF has developed these reporting requirements and recommendations to complement existing frameworks such as 'GHG Protocol Corporate Accounting and Reporting Standard', the 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard', and the supplemental 'Technical Guidance for Calculating Scope 3 Emissions' as indicated in Chapter 1.

Reporting facilitated emissions associated with Capital Market Instruments is “optional” according to the GHG Protocol Scope 3 Standard at the time of the release of this first version of the Facilitated Emissions Standard, hence all financial institutions that decide to adopt and use the Facilitated Emissions Standard **shall** follow the requirements therein when publicly disclosing their facilitated emissions.

The requirements for disclosure of facilitated emissions describe a minimum disclosure level with room for financial institutions to report beyond this level. Any requirements not fulfilled must be accompanied by an explanation. Minimum reporting requirements are described in this chapter using the word "**shall**". Where certain aspects of reporting are not required but encouraged as best practice, the word "**should**" is used. An allowed optional recommendation is indicated using the word "**may**".

REPORTING FACILITATED EMISSIONS VS FINANCED EMISSIONS

Facilitated emissions **shall** be reported separately from financed emissions reporting.[56] PCAF explains the differences and similarities between financed emissions and facilitated emissions in Chapter 1. For the avoidance of doubt, facilitated emissions and financed emissions are not, and are not intended to be, directly comparable. Thus, facilitated emissions and financed emissions **shall** not be aggregated, but must be reported separately under the GHG Protocol scope 3 category 15 (Investments).

OVERALL REPORTING REQUIREMENTS AND RECOMMENDATIONS

- **Principles:** GHG accounting and reporting from financial institutions **shall** be based on the following principles: relevance, completeness, consistency, transparency, and accuracy.
- **Purpose:** A financial institution’s reporting **should** align with its specific business goals; for instance, for identifying and assessing climate-related transition risks and opportunities.
- **Frequency:** Financial institutions **shall** disclose at least annually and at a fixed point in time in line with the financial accounting cycle. Financial institutions **shall** ensure that the chosen point in time provides a representative view on the emissions for that reporting year and **shall** transparently disclose if results are affected by a significant threshold[57] close to (before/after) the reporting date.
- **Recalculation and significance threshold:** Financial institutions **shall**, in line with the 'GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard' requirement (page 104[58]), establish a baseline recalculation policy. This is to define under which circumstances recalculating (base year) facilitated emissions is necessary to ensure the consistency, comparability, and relevance of the reported GHG emissions data over time. As

56 In line with the requirements set forth in: The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition.

57 Definition according to the GHG Protocol: "A significance threshold is a qualitative and/or quantitative criterion used to define any significant change to the data, inventory boundaries, methods, or any other relevant factors."

58 (WRI and WBCSD, 2011)

part of the base year emissions recalculation policy, financial institutions **shall** establish and disclose the significance threshold[59] that triggers base year emissions recalculations.

- **Form of reporting:** Financial institutions **shall** disclose in publicly available reports such as (semi) annual reports, website articles or other publicly available sources as deemed appropriate by the financial institution. Table 10.2 (in Annex) provides an example template for how financial institutions can disclose their facilitated emissions.
- **Past performance:** Where appropriate and relevant for their business goals, financial institutions **should** disclose their facilitated emissions for multiple comparable time periods (e.g., years).

COVERAGE

- Financial institutions **shall** disclose all absolute facilitated emissions for all primary issuance of capital market instruments during the reporting year, in line with the scope defined in Chapter 5, and **shall** justify any exclusions and be transparent about their resulting coverage in the case of exclusions. Potential justification criteria for exclusion could include, by way of example:
  - Data availability: required data is not available to the financial institutions.
  - Size: the activities are insignificant to the institution's total anticipated facilitated emissions.

GASES AND UNITS

- Financial institutions **shall** account for the seven gases under the Kyoto Protocol that are also mandated under the UNFCCC to be included in national inventories if they are emitted in the value chain. These are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). Biogenic CO_2 emissions that occur in the value chain **shall** not be included in the scopes but **shall** be included and separately reported in the public report.
- These seven gases **shall** be converted to carbon dioxide equivalents (CO_2e) using the 100-year time horizon global warming potentials published by the IPCC; either the AR5 values published by the GHG Protocol[60] or the IPCC's most recently published assessment report.[61]
- Financial institutions **shall** express their facilitated emissions in metric tons of carbon dioxide equivalents (tCO_2e) or another appropriate metric conversion—e.g., kilotons ($ktCO_2e$), megatons ($MtCO_2e$). When emissions from a specific GHG (e.g., methane emissions) are material and relevant, financial institutions **should** consider a separate disclosure of these emissions.
- Financial institutions **shall** separately account for, and report, facilitated biogenic and non-biogenic CO_2 emissions, and facilitated biogenic and non-biogenic CO_2 removals (if applicable).

ABSOLUTE EMISSIONS

- Institutions **shall** disclose the absolute emissions (scope 1 and 2 combined) of their financial activities. If it serves the business goals of the financial institutions, absolute scope 1 and scope 2 emissions **should** be reported separately from each other.

59 Definition according to the GHG Protocol: "A significance threshold is a qualitative and/or quantitative criterion used to define any significant change to the data, inventory boundaries, methods, or any other relevant factors."

60 (GHG Protocol, 2014)

61 The IPCC reports can be found at: https://www.ipcc.ch/.

- Beyond the reporting of scope 3 category 15 emissions covered by this Facilitated Emissions Standard, financial institutions **shall** also measure and report their scope 1 and 2 emissions and any other relevant scope 3 emissions categories in line with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.
- Where required, financial institutions **shall** separately disclose the absolute scope 3 emissions of their financial activities. Financial institutions **shall** explain if they are not able to provide any required scope 3 information because of data availability or uncertainty.
- Financial institutions **should** disaggregate and disclose absolute emissions data at the sector level, particularly for the most emission-intensive sectors (e.g., energy, power, cement, steel, automotive).
- Absolute emissions **shall** be reported without taking into account carbon credits retired by clients to offset these emissions. Carbon credits retired by clients **may** be reported, and if so, **shall** be reported separately.

AVOIDED EMISSIONS AND EMISSION REMOVALS

- In addition to absolute generated emissions, financial institutions
  - **May** report emission removals where relevant to their facilitation activities when accounting for in line with the most recent GHG Protocol guidance.
  - **May** report avoided emissions. However, in absence of credible accounting guidance it **shall** disclose the methodology and formulas adopted in calculating such emissions. The methodology adopted, and any accompanying narrative, **should** reflect the principles of relevance, completeness, consistency, transparency, and accuracy.[62]
- If financial institutions choose to account for and disclose facilitated emission removals or avoided emissions, they:
  - **shall** apply the same accounting principles (including attribution and weighting) as for its generated facilitated emissions.
  - **shall** disclose absolute emission removals or avoided emissions separately from the financial institution's scope 1, scope 2, and scope 3 inventories.
- Avoided emissions and emission removals **shall** be reported without considering carbon credits generated for these same emissions. Carbon credits generated by clients **should** be reported, and if so, **shall** be reported separately.

EMISSION INTENSITY

- Financial institutions **may** report economic emission intensities if these values are relevant to their business goals.
- If reported economic emission intensities **shall** be expressed on a portfolio level in metric tons of carbon dioxide equivalents per million euro or dollar facilitated: tCO_2e/€M or tCO_2e/$M
- When relevant to their business goals, financial institutions **should** consider reporting physical emission intensities per sector using sector specifics.

DATA AND DATA QUALITY

- Financial institutions **shall** use the most recent or otherwise appropriate data reasonably available to them. PCAF recognizes there is often a lag between financial reporting and required emissions data, such as emission factors or emissions data from clients. In these instances, it is acceptable that the data represents different years.

62 PCAF will be considering to uptake newly developed methodologies on avoided emissions in the future.

- Financial institutions **should** provide a description of the types and sources of data, including activity data, assumptions, emissions factors, and all relevant publication dates, used to calculate emissions. The descriptions **should** be written to create transparency.
- Financial institutions **should** publish a weighted data quality score of the outstanding amount or **should** explain why they are unable to do so. An example is provided in Box 6-1 below.
- Where financial institutions are reporting scope 3 emissions, the weighted data quality score of these emissions **shall** be reported separately from that of scopes 1 and 2.
- The data hierarchy tables provided in Chapter 5 **should** be used as a guide for disclosing data quality. Financial institutions **should** explain how data quality is assessed, acknowledging that it will improve over time.
- Over time and where possible, data **should** be verified to at least a level of limited assurance. Financial institutions **should** disclose whether data is verified and to what level.

Box 6-1. Illustrative example of calculating weighted data quality scores

It is likely that data quality will differ across lines of business, sectors, companies and emission scopes. To disclose the best representation of data quality, the Facilitated Emissions Standard requires that financial institutions normalize the data quality scores for each business or sector to the facilitated amount.

The formula for calculating weighted averages for a business or sector is:

$$= \frac{\sum_{i=1}^{n} \text{Facilitated amount}_i \times \text{Data quality score}_i}{\sum_{i=1}^{n} \text{Facilitated amount}_i}$$

$$\text{with i} = \text{borrower or investee company}$$

An illustrative example of a financial institution's capital market activities is provided below:

Line of Business	Sector	Company	Facilitated amount	Attributed Scope 1/2 absolute emissions (tCO_2e)	Data quality score (1 = High, 5 = Low)
IPO	Oil and Gas	Company A	X_1	Y_1	Z_1
IPO	Power	Company B	X_2	Y_2	Z_2
IPO	Transport	Company C	X_3	Y_3	Z_3
IPO	Oil and Gas	Company D	X_4	Y_4	Z_4
IPO	Power	Company E	X_5	Y_5	Z_5
IPO	Transport	Company F	X_6	Y_6	Z_6

Weighted data score for Initial Public Offerings' Scope 1 and 2 emissions:

$$= \frac{\left((X1 \times Z1) + (X2 \times Z2) + (X3 \times Z3) + (X4 \times Z4) + (X5 \times Z5) + (X6 \times Z6)\right)}{(X1 + X2 + X3 + X4 + X5 + X6)}$$

Weighted data score for the Oil and Gas sector Scope 1 and 2 emissions:

$$= \frac{(X1 \times Z1) + (X4 \times Z4)}{(X1 + X4)}$$

7. Glossary

Absolute emissions: Volume of greenhouse gas (GHG) emissions expressed in tons CO_2e.

Arranger: This term refers to the facilitator roles mentioned below. This may be contrary to market terminology but is the way we chose to describe this activity in Part B of the Standard.

Asset manager: Manages capital and invests it into financial instruments on behalf of clients. In this role, the manager is not the owner of the assets.

Attribution factor: Share of the total annual GHG emissions from facilitated companies and activities associated with the relative share of the capital market issuances.

Bookrunner: The primary underwriter or coordinator when a company or government issues new equity, debt, or securities instruments. The bookrunner is also responsible for structuring the financing, and for designing and implementing the transaction.

Capital markets: This term refers to the venues where funds are exchanged between buyers (capital suppliers) and sellers in the form of equity securities, bonds, or other financial assets. Suppliers in capital markets are typically banks and investors, while those who seek capital are companies and governments.

Carbon dioxide equivalent (CO_2e) emissions: The amount of CO_2 that would cause the same integrated radiative forcing (a measure for the strength of climate change drivers) over a given time horizon as an emitted amount of another GHG or mixture of GHGs. Conversion factors vary based on the underlying assumptions and as the science advances. As a baseline, PCAF recommends using 100-year global warming potentials without climate-carbon feedback from the most recent IPCC Assessment report.

Co-manager/Lead manager: The secondary underwriter or coordinator when a company or government issues new equity, debt, or securities instruments. The co-manager/lead manager plays a more passive role in the transaction relative to a bookrunner.

Credit facility: A type of loan that borrowers can access on an ongoing basis over an extended period.

Facilitator: An institution that directly or indirectly influences or supports another actor's capacity to operate/perform/own/dispose of a certain economic activity or product/good or service. The actions that a financial institution may take to influence or support another actor, are subject to different variants specific to each situation/transaction, including, but not limited to, business and legal considerations.

Emission factor: The average mass of CO_2 emitted by an entity in one year usually expressed in tCO_2/year.

Emission intensity: The average mass of GHG of CO_2 emitted by a vehicle when it drives one unit of measure, usually expressed in gCO_2/km.

Financed emissions: Absolute emissions that financial institutions finance through their loans and investments.

GHG emissions accounting: GHG emissions accounting refers to the processes required to consistently measure the amount of GHGs generated, avoided, or removed by an entity, allowing it to track and report these emissions over time.

Greenhouse gas (GHG) emissions: The seven gases mandated under the Kyoto Protocol and to be included in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC)—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). For ease of accounting, these gases are usually converted to and expressed as carbon dioxide equivalents (CO_2e).

Investor: A private person or an institutional investor (e.g., pension fund) who invests capital into a financial instrument. They either manage investments alone or delegate this task to an asset manager via a mandate or by investing into an investment fund.

Issuer: The entity (in this Facilitated Emissions Standard involving only corporates) that issues a debt or equity capital markets instrument.

Lead bookrunner: The lead underwriter or coordinator when a company or government issues new equity, debt, or securities instruments. The bookrunner is also responsible for structuring the financing, and for designing and implementing the transaction.

Scope 1 emissions: Direct GHG emissions that occur from sources owned or controlled by the reporting company—i.e., emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.

Scope 2 emissions: Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company. Scope 2 emissions physically occur at the facility where the electricity, steam, heating, or cooling is generated.

Scope 3 emissions: All other indirect GHG emissions (not included in scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions that occur in the supply chain (for example, from production or extraction of purchased materials) and downstream emissions that occur because of using the organization's products or services.

Syndicated loan: Defined as a loan made available by two or more providers under a common loan agreement and ranking credit is assigned upon signature of the loan documentation.

8. Acronyms

CDP	Carbon Disclosure Project
CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CRE	Commercial real estate
EEA	European Environment Agency
EEIO	Environmentally extended input-output
EU	European Union
EU TEG	European Commission Technical Expert Group on Sustainable Finance
EVIC	Enterprise value including cash
FAO	Food and Agriculture Organization of the United Nations
FSB	Financial Stability Board
GAAP	Generally accepted accounting principles
GEMIS	Global Emissions Model for integrated Systems
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GTAP	Global Trade Analysis Project
HFC	Hydrofluorocarbon
ICCT	International Council on Clean Transportation
IEA	International Energy Agency
IFI	Internal Financial Institution
IFRS	International Financial Reporting Standards
IPCC	Intergovernmental Panel on Climate Change
IPO	Initial public offering
ISIC	Industrial Classification of All Economic Activities
ISSB	International Sustainability Standards Board
ITF OECD	International Transport Forum at the Organization for Economic Co-operation and Development
$ktCO_2e$	1,000 metric tons of carbon dioxide equivalent
L2	Level 2 (NACE)
$MtCO_2e$	1,000,000 metric tons of carbon dioxide equivalent
MWh	Megawatt-hour
N_2O	Nitrous oxide
NACE	Statistical Classification of Economic Activities in the European Community
NDC	Nationally determined contribution
NEDC	New European Driving Cycle
NF_3	Nitrogen trifluoride
NGO	Nongovernmental organization
PCAF	Partnership for Carbon Accounting Financials
PFC	Perfluorocarbon
SASB	Sustainability Accounting Standards Board
SBT	Science-based targets
SBTi-FI	Science Based Targets initiative for Financial Institutions
SDA	Sectoral Decarbonization Approach
SF_6	Sulphur hexafluoride
TCFD	Task Force on Climate-related Financial Disclosures
tCO_2e	Metric tons of carbon dioxide equivalent
UNEP FI	United Nations Environment Program Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
WACI	Weighted Average Carbon Intensity
WBCSD	World Business Council for Sustainable Development
WIOD	World Input-Output Database

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10. Annex

Annex 1: Detailed summary of data needs and equations to calculate facilitated emissions

Table 10-1. Detailed description of the data quality score table[63]

Option	Description: Attribution (Financial data)		Description: Emission factor (Emission data)		Description: Facilitated emissions calculation (Equations)	Highest to lowest
Option 1a	Facilitated amount	EVIC for listed companies and total equity plus debt for private companies	Verified GHG emissions data from the company in accordance with the GHG Protocol		**For listed companies:** $\sum_c \frac{Facilitated\ amount_c}{EVIC_c} \times Weighting\ factor \times Verified\ company\ emissions_c$ **For private companies:** $\sum_c \frac{Facilitated\ amount_c}{Total\ equity + debt_c} \times Weighting\ factor \times Verified\ company\ emissions_c$	**Score 1**
Option 1b			Unverified GHG emissions data calculated by the company in accordance with the GHG Protocol		**For listed companies:** $\sum_c \frac{Facilitated\ amount_c}{EVIC_c} \times Weighting\ factor \times Unverified\ company\ emissions_c$ **For private companies:** $\sum_c \frac{Facilitated\ amount_c}{Total\ equity + debt_c} \times Weighting\ factor \times Unverified\ company\ emissions_c$	**Score 2**
Option 2a[64]			Primary physical activity data for the company's energy consumption by energy source (e.g., megawatt-hours of electricity) plus any process emissions	Emission factors specific to that primary data (e.g., energy source-specific emission factors)[65]	**For listed companies:** $\sum_c \frac{Facilitated\ amount_c}{EVIC_c} \times Weighting\ factor \times Energy\ consumption_c^{66} \times Emission\ factor$ **For private companies:** $\sum_c \frac{Facilitated\ amount_c}{Total\ equity + debt_c} \times Weighting\ factor \times Energy\ consumption_c^{67} \times Emission\ factor$	**Score 3**
Option 2b			Primary physical activity data for the company's production (e.g., tonne of rice produced)	Emission factors specific to that primary data (e.g., emission factor per tonne of rice)	**For listed companies:** $\sum_c \frac{Facilitated\ amount_c}{EVIC_c} \times Weighting\ factor \times Production_c \times Emission\ factor$ **For private companies:** $\sum_c \frac{Facilitated\ amount_c}{Total\ equity + debt_c} \times Weighting\ factor \times Production_c \times Emission\ factor$	**Score 3**
Option 3a		Revenue of the company	GHG emissions per sector	Revenue per sector[68]	**For listed companies:** $\sum_c \frac{Facilitated\ amount_c}{EVIC_c} \times Weighting\ factor \times Revenue_c \times \frac{GHG\ emissions_s}{Revenue_s}$ **For private companies:** $\sum_c \frac{Facilitated\ amount_c}{Total\ equity + debt_c} \times Weighting\ factor \times Revenue_c \times \frac{GHG\ emissions_s}{Revenue_s}$	**Score 4**
Option 3b		N/A	GHG emissions per sector	Assets per sector	**For listed companies and private companies:** $\sum_c Facilitated\ amount_c \times Weighting\ factor \times \frac{GHG\ emissions_s}{Assets_s}$	**Score 5**
Option 3c		Asset turnover ratio per sector	GHG emissions per sector	Revenue per sector	**For listed companies and bonds to private companies:** $\sum_c \text{Facilitated amount}_c \times \text{Weighting factor} \times \text{Asset turnover ratio}_s \times \frac{\text{GHG emissions}_s}{\text{Revenue}_s}$	

63 Where c = company and s = sector.

64 The quality scoring for Option 2a is only possible for/applicable to scope 1 and scope 2 emissions as scope 3 emissions cannot be estimated by this option. Other options can be used to estimate the scope 3 emissions, however.

65 Supplier-specific emission factors (e.g., from an electricity provider) for the respective primary activity data are always preferred over non-supplier-specific emission factors.

66 Where this option is used, process emissions must be added to the calculated energy consumption emissions before multiplying by the attribution factor.

67 Where this option is used, process emissions must be added to the calculated energy consumption emissions before multiplying by the attribution factor.

60 If revenue is not deemed a suitable financial indicator for estimating the emissions of a company in a certain sector, one can apply other suitable financial indicators as a proxy. If an alternative indicator is used, the reasoning for the selection of this alternative indicator should be made transparent. The data quality score will not be affected.

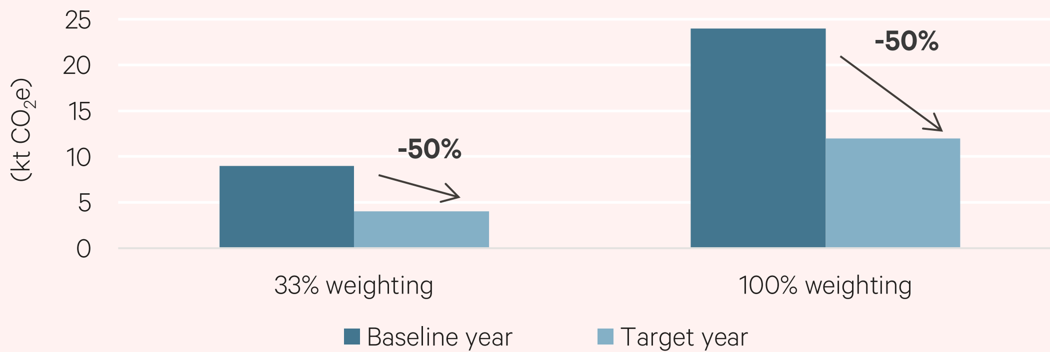
Annex 2: Table for reporting facilitated emissions

Activity	Total facilitated amount covered (x € 1,000)	Scope 1+ Scope 2 emissions (tCO_2e)	Scope 3 emissions (tCO_2e)	Emission intensity (tCO_2e/€M)	Weighted data quality score (High Quality = 1 Low Quality = 5)
Absolute emissions					
Primary capital market issuances					
Absolute emissions per sector (if reporting by sector)					
Oil & Gas					
Steel					
Total					

Annex 3: How this methodology may be used to track changes in facilitated emissions

PCAF's remit as an organization is to develop carbon accounting rules for scope 3, category 15 for financial institutions reporting in line with the GHG Protocol. While tracking emission fluctuations and target setting are distinct topics, and not the remit of PCAF as standard, as a point of context, it is worth noting that whether a financial institution applies a 33% weighting, or any other level of weighting to its attributed share of capital markets volumes, the rate of change in overall facilitated emissions reported between time periods should not be impacted. This point is pertinent for target setting and also subsequent reporting against targets. Typically, a financial institution will identify a baseline, from which targets would be established and progress measured. If, by way of example, the target is to reduce facilitated emissions (intensity) purely from the arranging of capital market issuances by 50% by a target year, compared to the baseline year, then the weighting factor is inconsequential to reaching the target. The financial institution will need to halve their facilitated emissions (intensity) no matter what the weighting factor is. This explanation is demonstrated in Figure 10-1.

Figure 10-1. Illustration of how different weightings show the same decline in facilitated emissions



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