ESG

Calculating baseline carbon footprint: Facilitated emissions for capital markets

April 2024

Executive Summary

Capital markets play a key role in the **transition** to a **net zero economy**. **PCAF*** has released guidance for **calculating facilitated emissions** associated with capital market activities. In this paper we highlight the **challenges and practical considerations** for financial institutions in baselining their facilitated emissions.

What are capital markets?

Capital markets are financial highways where **companies and governments** go to **raise funds**. It's where stocks, bonds, and other securities are bought and sold by investors and hence these markets **facilitate** the **flow of funds between issuers and investors**.

What is the role of capital markets in the net zero journey?

Capital markets have the potential to **drive the allocation of financial resources** towards **sustainable and climate-friendly investments**. This creates a positive feedback loop that **supports** the **transition** to a **net-zero economy**. Facilitators play a **key role** in the **issuance of these transactions** and hence the **transition to net zero**. By **mobilising funds**, **encouraging transparency**, and providing **market incentives**, capital market participants such as **banks facilitating these transactions** play a **vital role in achieving the climate goals set out in the Paris Agreement**.

What are facilitated emissions?

To provide a comprehensive picture of their environmental impact, facilitators in the capital market are looking to **identify, measure** and **address** the **indirect emissions** resulting from **servicing (rather than financing**) these capital transactions, i.e facilitated emissions.

How are facilitated emissions measured?

As part of our independent benchmarking based on a set of 2022 Sustainability-related disclosures, we note that the **majority of institutions** still have **not disclosed** the **emissions facilitated** through their capital market activities.

Given the increasing scrutiny from key stakeholders (i.e. management, investors, regulators), coupled with the **finalised approach** to calculating facilitated emissions published by PCAF in December 2023, we anticipate that **disclosing facilitated emissions** related to capital markets will be next on the agenda for these institutions.

The purpose of this document is to **highlight the key practical considerations** for financial institutions adopting PCAF when **calculating facilitated emissions**. In particular, the **scope of facilitated emissions**, how they **differ from financed emissions**, and **key insights into the challenges** which are involved in **modelling emissions** associated with the capital market activities.

**Launched in September 2019, PCAF (Partnership for Carbon Accounting Financials) is an international collaboration of financial institutions which provides a framework and guidelines to calculate and report carbon footprint. In December 2023 the Working Group published a final methodology for the measurement and disclosure of facilitated emissions following consultation.*

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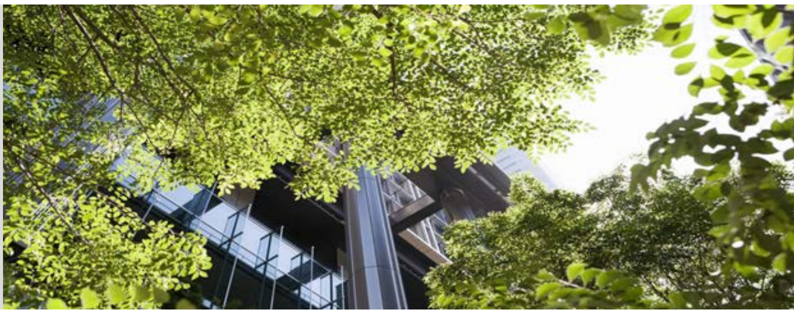
Overview and current landscape

How are facilitated emissions linked to issuers' emissions?

There are multiple players within capital markets including **issuers, investors and facilitators**. In the diagram below we have set out a high level example to illustrate the **different players in the market** as well as highlight the **difference** between **capital markets financing** and **traditional lending activities**.



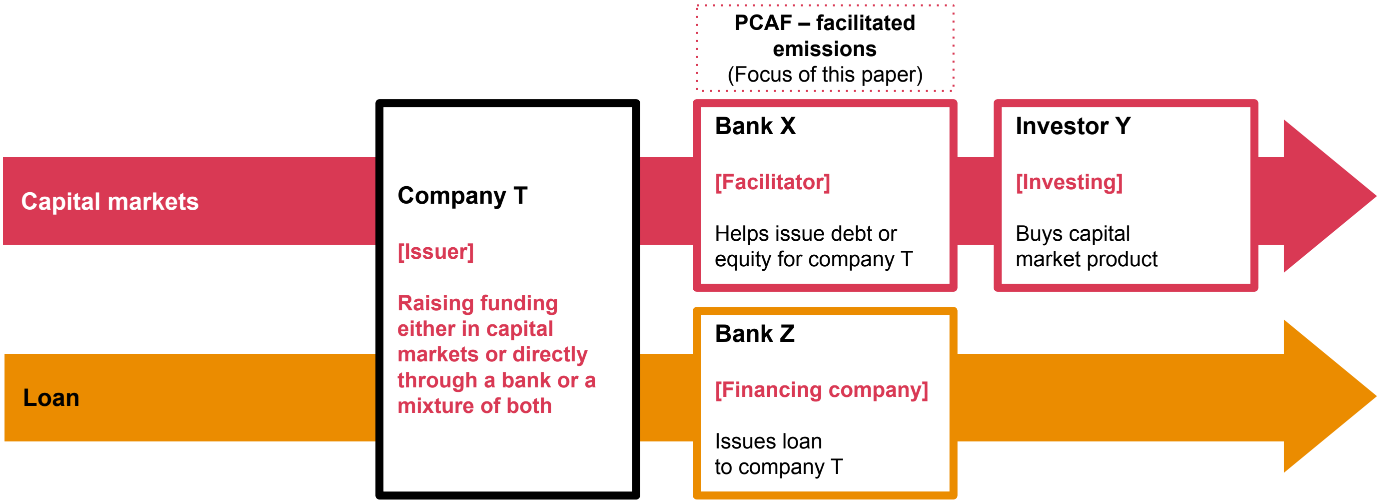


*Diagram illustrating the link between key players in emissions modelling**

> "Facilitators are mostly large international banks that conduct substantial capital markets facilitation activities including advising issuers on structure, pricing, and process; preparing materials for and engaging with investors; and arranging and guiding clients on roadshows.
>
> *[Source: PCAF - Facilitated Emissions Dec 2023]*

How do facilitated emissions differ from financed emissions?

As noted by PCAF, facilitated emissions differ from financed emissions in two key respects:

- They are **off-balance sheet** (services rather than financing) and often there is no financial risk taken (e.g credit risk)
- They take the form of a **flow* activity** (i.e temporary) rather than a **stock activity** (i.e held on book)

How are facilitated emissions measured?

As per PCAF guidance, an **attribution factor** is multiplied by the **annual emissions of the issuer** to calculate the facilitated emissions.

$$\text{Facilitated Emissions} = \underbrace{\text{Attribution factor}^{(1)} \times \text{Annual Emissions}^{(2)}}_{\textit{Aligned with financed emissions calculations}} \times \text{Weighting factor}^{(3)}$$

(1) Attribution factor

The **attribution factor** represents the split of emissions between the different facilitators of the transaction.This is calculated as follows:

$$\text{Attribution factor} = \frac{\text{Facilitated amount}}{\text{Company value}}$$

Where,

Facilitated amount is the **bank specific transaction amount** where **available**; otherwise the **league table credit** is used to **apportion the total transaction** amount to the bank. Please refer to Decision 4 in slide 5 for further details on how this is calculated.

(2) Annual Emissions

This is aligned with the financed emissions calculation and data considerations are covered in Decision 1 in slide 3.

(3) Weighting factor

This represents the **proportion** of emissions from an issuer which is the **responsibility of the facilitator** and is set to be 33% by PCAF in the finalised guidance in December 2023. Please refer to Decision 3 in slide 4 for further details.

The **key difference** between calculating financed and facilitated emissions is the **concept of the weighting factor**. We also note that the numerator of the attribution factor is driven by facilitated amount (as opposed to outstanding amount on financed emissions). The aforementioned nuances as well underpinning key considerations are the focus of this paper. Lastly we note that co managers are currently out of scope of the PCAF guidance.

Key Considerations

In this section we highlight the **key data and modelling decisions** as well as **practical considerations** for financial institutions with a **focus on the attribution factor** calculation.

Decision 1: Data and data quality

> Financial institutions should use the most recent, high-quality data available for calculations. Although high-quality data can be difficult to obtain, data limitations should not deter financial institutions from calculating and reporting facilitated emissions. In these instances, data quality scores can help institutions to develop a strategy to improve data over time.
>
> *[Source: PCAF - Facilitated Emissions Dec 2023]*

It is acknowledged that **data availability** is a **key challenge** given **level of disclosures** and **lags** associated with **emissions data** being reported. **PCAF data quality methodology** helps to bridge these data gaps through the use of proxies. This approach is finalised by PCAF and is aligned with the financed emissions methodology.

Practical considerations – Data and data quality

PCAF does **not recommend** a preferred data source and financial institutions face a number of **challenges** when **sourcing data**. We highlight below some key considerations when financial institutions are choosing data providers:

- Appropriate **due diligence** should be carried out on external data providers to ensure transparency around methodology and approach to data gathering from these third party sources.
- **Multiple providers** can be used to increase portfolio coverage and reduce reliance on data quality from one provider. Analysis can be carried out to identify most appropriate set of providers.
- Data should be selected to ensure **consistency** of **time periods** across each model component (i.e emissions, EVIC and transaction amount).
- The **stability** of data should be checked, i.e data being overridden and no history available.
- **Inclusions and exclusions** from data sources should be aligned with guidance. For instance type of facilitators (active and passive bookrunners) and asset types (short term products).
- Where facilitated emissions calculated using PCAF will also be used to meet **other sustainability reporting requirements** in the future, entities will need to take consider any relevant guidance in those other reporting requirements when assessing data sources.
- For the **league table** used in calculating transaction amount, we note that PCAF mentions 2 data sources namely **Dealogic and Bloomberg**. For further details please refer to Decision 4 for further details.

Decision 2: Time period

> …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.
>
> *[Source: PCAF - Facilitated Emissions Dec 2023]*

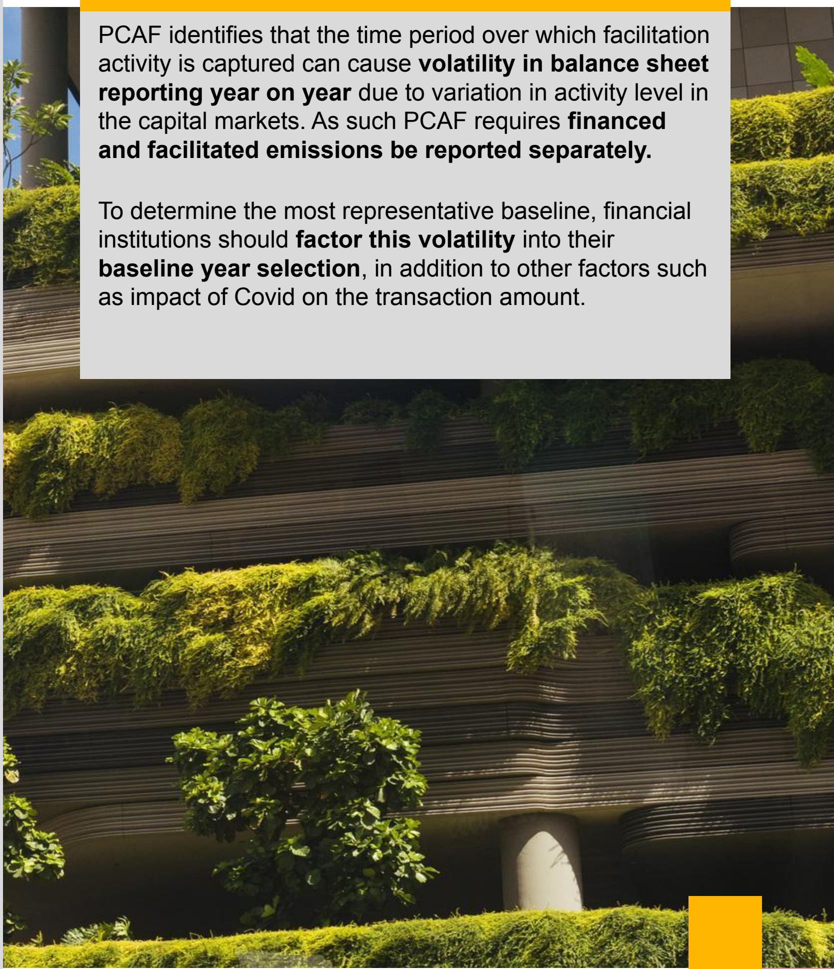
Facilitating an activity within the capital results in only a **temporary link** with a transaction (i.e **flow** activity). In contrast, a **loan** is usually held for **extended periods of time** on a balance sheet and is classified by PCAF as a **stock** activity.

PCAF **finalised** the decision to use the **flow approach** which requires facilitated emissions to be accounted for **only for the year in which the transaction takes place** to represent the short term association of facilitators to these transactions. PCAF **considered** the **averaging method** as part of consultation but the general consensus was to use a **fixed time period.**

Practical considerations – Time period

PCAF identifies that the time period over which facilitation activity is captured can cause **volatility in balance sheet reporting year on year** due to variation in activity level in the capital markets. As such PCAF requires **financed and facilitated emissions be reported separately.**

To determine the most representative baseline, financial institutions should **factor this volatility** into their **baseline year selection**, in addition to other factors such as impact of Covid on the transaction amount.



Key Considerations

Decision 3: Allocation of emissions between different market participants (i.e weighting factor = 33%)

This section of the methodology has recently been finalised by PCAF (December 2023 publication).

The **proportion** of emissions from an issuer which is the **responsibility of the facilitator** compared to the **investor** (i.e the weighting factor) needs to be determined.

> " … 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.
>
> *[Source: PCAF - Facilitated Emissions Dec 2023]*

In December 2023, following feedback from the working group, PCAF has finalised this decision and the weighting factor is set to be **33%.** This is **derived** from the Global Systemically Important Banks (**G-SIB**) classification which is a measure used by G-SIBs to classify the **relative importance of arranging activity** in the overall financial system, under the Basel Committee's methodology.

PCAF acknowledges that this is a **conservative weight** 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. For instance, we note that as part of consultation phase, PCAF suggested a weighting factor of **17%** which is the current weight while the **33%** is the weight used prior to 2018.

PCAF also notes that financial institutions can report the facilitated emissions using a **100% weighting** but this is **in addition to the 33% weighting and not instead of**. Furthemore this should be supported by **clear narrative**.

PCAF noted that the weighting factors are **simple to compute** and **transparent**. They can be applied across both **bonds and equity** and provide a **consistent approach across facilitators**.

PCAF contrasted the **33% weighting** and the **optional 100% weighting** which can be broadly summarised as follows (shaded light orange for where applicable across each respective option):

	G-SIB weighting : 33%	**Optional weighting: 100%**
Mitigates criticism of facilitators being accused of not taking full responsibility for their activity		
Allows for the differentiation between financed and facilitated emissions		
Requires periodic refresh of component		

Practical considerations – Weighting factor

- This decision was finalised in December 2023 and hence any financial institution which has **previously disclosed** their facilitated emissions number based a **weighting which is not 33%** might be looking to **restate prior year** values. In such instances, it is critical to have **clear narrative** in the disclosures for the reason for restatement to ensure **full transparency and reduce reputational risk** especially if this represents a reduction in disclosed emissions.
- PCAF also requires clear **disclosures** of the **weighting factor of 33%** in **reports** by financial institutions.
- Financial institutions are also **allowed** to report the facilitated emissions using **100% weighting** but this is in **addition to the 33% weighting**. Furthemore this should be supported by **clear narrative**.

Key Considerations

Decision 4: Allocation of emissions between facilitators of a 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.
>
> *[Source: PCAF - Facilitated Emissions Dec 2023]*

PCAF recommends that **bank specific transaction amount** is used where **available**; otherwise the **league table credit** is used to **apportion the total transaction** amount to the bank. The league tables rank the involvement of each bank in the total capital market transactions. This is calculated based on the fees or volume of transaction.

Furthermore PCAF excludes **co-managers** from scope because they are not accounted for in league table credit and their **fees** are **not considered material** compared to Lead Bookrunners (normally only 5-10% of total fees).

[Source: PCAF - Facilitated Emissions Dec 2023].

Practical consideration – Allocation of emissions between facilitators

- It is key for financial institutions to **benchmark** the **different providers** and identify the most appropriate set of providers based on portfolio coverage as well as consistency in time period with other model components.
- PCAF allows the use the **league table** information based on **either volume or fees**. However the **chosen approach** should be **clearly disclosed**.
- In some instances, the **credit league table excludes some capital market participants** and hence **alternative sources of data may need to be identified and clearly disclosed**.

Decision 5: Reporting

Facilitated emissions are to be **reported separately** from **financed** emissions. However, PCAF does not provide **specific guidance** around reporting and disclosure of facilitated emissions as they noted the lack of industry guidance on target setting for capital markets.

> Facilitated emissions shall be reported separately from financed emissions reporting. 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).
>
> *[Source: PCAF - Facilitated Emissions Dec 2023]*

Practical considerations – Reporting

PwC carried out a benchmarking exercise on sustainability disclosures across a set of market participants and noted the following **best practices**:

- Disclosing both **absolute and intensity** metrics.
- Reporting **year on year movement from baseline** emissions further **increases transparency.**
- Lastly, reporting information subject to **internal review and external assurance** will increase confidence in the disclosures

Please refer to the independent benchmarking for further details.

We also note that PCAF requires institutions to set up a **restatement policy** and **clear disclosure** of the **quantitative thresholds** underpinning the restatement.

How can PwC help?

We have extensive experience supporting our clients in the **Financial Services** sector in navigating the various challenges that comes with **emissions modelling and measuring climate related risks.** This includes: (Please refer to the right)

Across all these offerings, we have a number of **digital assets** including a PCAF compliant **cloud based tool (Portfolio Emissions Manager - PEM)** which supports financial services in **quantifying their carbon footprint** financed and facilitated emissions)**, forecasting their decarbonisation pathway and transition planning.**

Please reach out for a demo of the tool and how it can help your institution in the net zero journey.

1. **Data sourcing and processing** – selecting appropriate data based on defined criteria, sensitivity and benchmarking analysis, use of proxies when data not available

2. **Emissions modelling** – model design, development, validation and implementation

3. **Governance and monitoring** – defining and embedding, risk appetite, governance and monitoring framework as well as restatement policies

4. **Portfolio and counterparty management using analytics and insights** - support active portfolio and counterparty management as well as customer onboarding

5. **Decarbonisation strategy and optimisation** - including dynamic balance sheet and credibility assessment considerations

6. **Embedding financed emissions output into the business** – sustainability reporting, transition planning and sector deep dive analysis

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Glossary

Issuer	The entity that issues a debt or equity capital markets instrument.
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.
Facilitator	An institution (usually large international banks) that helps an entity to issue equity or debt instruments in the capital markets. The facilitator may carry out activities including advising the issuing entity on structure, pricing, and process; preparing materials for and engaging with investors; and arranging and guiding issuing entities on a roadshow. Formal roles encompassed by this term include Lead/Active/Passive Bookrunner(s) and Lead/Co-Manager(s).
Co-managers / 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
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
League tables	A number readily available sources from third-party providers, such as Bloomberg or Dealogic, which is used to rank participants in the league table, higher credits indicate better performance. League table credit numbers will determine what proportion of the 'facilitated' part of the transaction each facilitator takes responsibility for.
Flow activity	Transactions can be accomplished within weeks or even days and then completed and often there is no financial (credit) risk taken.
Stock activity	A loan can be held for years on a balance sheet and exposes the facilitator to credit risk – this is classified as a stock activity

Source: PCAF - Facilitated Emissions Dec 2023