Capital Market Instruments

Discussion Paper 2021

PCAF
Partnership for
Carbon Accounting
Financials

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1 Introduction

In September 2019, the Partnership for Carbon Accounting Financials (PCAF) was launched to standardise global greenhouse gas (GHG) accounting methods. PCAF also helps financial institutions consistently measure and disclose the GHG emissions financed by their loans and investments. Responding to global industry demand for a standardised GHG accounting approach, PCAF developed the Global GHG Accounting and Reporting Standard for the Financial Industry (the Standard), reviewed by the GHG Protocol and conforming to requirements set forth in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard for category 15 investment activities. This initial standard was released on 18 November 2020 following public consultation and covers six asset classes: Listed Equity and Corporate Bonds, Business Loans and Unlisted Equity, Project Finance, Commercial Real Estate, Mortgages, and Motor Vehicle Loans.

The current PCAF Standard is a tool for the financial industry to measure financed emissions, a metric that 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 methodology for financed emissions accounting continues to grow to cover additional asset classes, there is increasing global pressure for additional GHG accounting guidance to cover those activities that may be classified as facilitated emissions.

Facilitated emissions differ from financed emissions in two respects: they are off-balance sheet (representing services rather than financing) and they can take the form of a flow activity (temporary association with transactions) rather than a stock activity (held on book). PCAF views facilitation as a separate and significant metric when it comes to climate risk management decisions, and one that wields material impact on the direction of capital towards economic activities that will enable the transition to net zero to no later than 2050.

Members of PCAF have questioned how activities that result in facilitated emissions can and should be accounted for, particularly those associated with services provided by banks to support the issuance of capital markets instruments. The PCAF Working Group on Capital Markets Activities formed in early 2021 with the aim to collaborate on the answer to this question and on an appropriate approach to this among peers active in this activity. The Working Group includes the following banks, who developed this discussion paper:

- Barclays (co-chair)
- Morgan Stanley (co-chair)
- Bank of America
- Citi
- Deutsche Bank
- HSBC

The PCAF Secretariat supported the work by moderating their technical discussions, reviewing the content, and coordinating and editing this document. The PCAF Secretariat is operated by Guidehouse, a global consultancy firm that specialises in energy, sustainability, risk, and compliance for the financial industry.

About this Paper

This paper outlines PCAF's position on banks' roles related to capital markets instruments, and explores the topic of facilitated emissions. It is a product of the collaboration the PCAF Working Group on Capital Markets Activities engaged in over the past year. This is a discussion paper, not a proposal for a PCAF methodology, and its intent is to instigate wider engagement on this subject with other stakeholders.

We explain the difference between capital markets instruments and loans and investments and propose framing the GHG emissions assigned to capital markets activities as facilitated emissions rather than financed emissions. We then review the key choices necessary to develop guidelines for facilitated emissions and describe the complex challenges around making those choices. To conclude, we present the next steps for developing and publishing a GHG accounting methodology for capital markets activities in 2022.

Box 1. Definitions

The authors of this discussion paper used certain terms that may differ in use for other financial institutions or financial sector/market participants. The following definitions clarify how we used these terms and what we mean by them:

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

Asset Owner: Another word for investor.

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.

Facilitator: An institution (usually large international banks) that helps an entity (in this paper, generally corporates) 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).

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 paper, generally corporates) that issues a debt or equity capital markets instrument.

Key Takeaways

- This discussion paper highlights why capital markets are essential to the climate transition. It also introduces the concept of facilitated emissions and its associated challenges more broadly.
- Capital markets involve an added level of complexity due to the off-balance sheet dimension of facilitation.
- Capital markets have multiple players, including issuers, investors, and facilitators. Although GHG accounting methodologies are already in place for issuers and investors, no harmonised accounting standard yet exists for capital markets facilitators.
- Designing a standard for capital markets facilitated emissions entails numerous logistical choices, including timeframe of capture, determining what portion of issuance is the responsibility of a facilitator, splitting responsibility across multiple facilitators, allocating emissions, and designing appropriate treatments for equity versus debt capital markets.
- Key challenges include double counting, forward- and backward-looking capacity and attribution of capital markets facilitated emissions, among others.
- A standard for facilitated emissions should eventually extend beyond capital markets. This Working Group will consider a broader view of other types of facilitated emissions in 2022, when developing thoughts and feedback from this discussion paper into official guidance.

2 Why Capital Markets Are Important to the Climate Transition

Within the financial sector, capital markets (where companies and governments raise debt and equity) play a crucial role in fuelling economic activity and providing needed funding. In 2020 alone, global long-term bond issuance was US$27.3 trillion and global equity issuance was US$826.8 billion, meaning that total capital markets issuance was US$28.1 trillion.[1]

Capital markets sit at the nexus of financial flows that must be directed increasingly towards more sustainable practices if we are to avoid the worst effects of climate change. This is especially true since capital markets issuances in one year will have a climate impact in many years that follow. Actors within these markets have an opportunity to help those financial flows move into the right activities. 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 often long-term funding; and
- Those who facilitate and enable these complex multi-party transactions.

This list represents 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.

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 organisations). For investors, the PCAF Global GHG Accounting and Reporting standard for financed emissions has been available since November 2020. However, for actors facilitating capital market transactions no harmonised accounting standard is yet in place.

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, projects, products, and services.

1 Securities Industry and Financial Markets Association, Capital Markets Fact Book, 2021.

Banks can take up several roles as facilitators. These roles vary by product and market, and are summarised as follows:

1. 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.
2. Co-Manager/Lead Manager: These banks 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.

Banks can also be involved in providing backstop credit facilities, which can be drawn to meet a shortfall in funds raised from investors in the market, if appetite falls short of expectations. This paper does not discuss the role of underwriting bank(s) that provide a credit facility as this activity would lead to financed emissions, which differs in nature to the activity described here.

This paper focuses on the facilitation activity of the bookrunners and managers in a capital markets issuance. Although these banks do not provide the capital directly by facilitating and arranging access to capital, they play a key role in an issuer's capacity to expand or transition. Crucially, this activity can include a material part of a bank's business activities. Therefore, the influence of banks like these on capital markets and its associated financial flows can be substantial. If capital markets are to channel more financing into climate-friendly projects and products, all actors in these markets need to be as transparent as possible to the market and wider stakeholders on their role and the impact of these activities on climate change.

As the intermediary facilitator between organisations seeking debt or equity capital and investors looking for more investment opportunities, banks need to develop a mechanism to provide transparency about the climate impact of their capital markets activities. Several key stakeholders including the Financial Stability Board's Task Force on Climate-Related Financial Disclosures and the UN-convened Net-Zero Banking Alliance have asked for more transparency from banks around capital markets activities.

The aim is to develop a GHG accounting methodology for capital markets facilitation activities. This is important for creating a mechanism that helps banks provide transparency and accountability and will enable the following:

- Consistent quantification of the impact of banks' facilitation of capital markets issuances on climate change;
- Consistent reporting of this impact by banks engaged in annual reporting activities;
- Better and clearer comparison of issuers' impacts on emissions and climate change by banks who seek to facilitate capital markets issuance for them; and
- More informed analysis and comparison of the banks engaged in this activity by their investors and other stakeholders.

3 How Facilitated Financing Is Different from Direct Financing

Facilitated emissions differ from financed emissions in two key respects, as the following sub-chapters describe.

Off-Balance Sheet versus On-Balance Sheet

The current PCAF Standard is based upon on-balance sheet exposure, which allows financial institutions to account for their share of a client's emissions based on the client's enterprise value (or equivalent in case of non-corporate actors). This attribution element reduces the propensity for double counting across debt and equity holdings of financial institutions.

By contrast, capital markets transactions are rarely on bank balance sheets. They are facilitated using various services the bank provides rather than financed, because the bank is not providing financing directly to the issuer.

As a result, there is a distinction in the concept of emissions ownership. If banks were to account for and report the emissions associated with debt or equity capital they facilitate, one could argue that they may be double counting emissions that are reported by other financial institutions, such as investors holding these instruments for the long-term. Banks also often have significant lending relationships with the same clients for whom they facilitate capital markets transactions, and so there is a potential for overlap when banks are also accounting for their financed emissions for those clients.

Double counting is common when it comes to Scope 3 GHG accounting, and it should not necessarily mean that banks should avoid accounting for or reporting facilitated financing activities. The following chapters detail the reasons for this. Double counting does, however, potentially act as a reason to report this facilitation activity separately to make it clearer which emissions are directly financed by a bank and which are facilitated (and therefore financed by other institutions).

Flow versus Stock

Capital markets facilitation by banks lead to a temporary association with transactions. Transactions can be accomplished within weeks or even days and then completed. This is classified as flow activity for the bank. By contrast, a loan is usually held for years on a bank's balance sheet. This is classified as a stock activity and is accounted for differently.

Although both facilitation and lending are commercial activities for the bank, which will earn fees for both activities, they are fundamentally different in nature and the bank's role differs in both. It is not conceptually consistent or easy to add the two activities together.

Emissions related to capital market activities must be measured, but measurement and disclosure should not deter providing finance to highly emitting industries for which funds are needed to facilitate net zero transition.

4 A Proposed Separate Method: Facilitated Emissions

Introduction

As earlier chapters discussed, given the critical role of banks in the issuance of capital markets instruments, there are strong reasons to consider accounting for the capital markets activities that banks can facilitate for clients through their roles as bookrunners and managers in these transactions and, in so doing, capture the emissions that can be associated with this activity.

This chapter outlines key design choices we may consider if we are to measure the facilitated emissions that banks with capital markets activities should account or be responsible for. We focus on possible choices to fairly attribute emissions to the facilitator and touch on practical considerations for and against each choice.

When should we Capture Capital Markets Activities?

Unlike lending, capital markets transactions generally do not remain on banks' balance sheets for the life of the instrument, and the bank will not be required to extend or put at risk its own capital for the instrument to be successfully issued—the exception being if the bank has underwritten any part of the issuance. Where a bank provides an underwriting facility, this should be treated separately from the role they provide in arranging and facilitating an issuance.

As facilitators and arrangers of capital markets instruments, banks are only involved when the transaction is being arranged and launched and will take no (or limited) capital risk. We consider the following four options as to how facilitators could choose to account for capital markets issuances over various timeframes.

Option A (Flow)

Facilitated emissions from capital markets issuance are (only) recognised or reported in the year it occurs. In such a point-in-time approach, the bank's commitment to the capital markets transaction is accounted for only in the year the facilitation occurs using the reported or estimated emissions of the issuer in that year only. The assumption is that—in line with the existing PCAF Standard—financed emissions investors will report the instrument separately and for each year that they are invested in the instrument (i.e. there will always be an investor reporting the emissions associated with the issuance until its maturity). For a long-dated instrument, this means investors take responsibility for most of the emissions from inception to maturity, while for a shorter instrument they take less responsibility.

This approach is more reflective of the arranger's short-term involvement in an actual transaction/issuance, and has the positive of more closely aligning with the following:

- The time period of an arranger's involvement in a capital markets issuance; this approach may be more easily defended from a conceptual point of view.
- When a facilitator generates revenue; for example, if it is a one-off fee that will be reported in that year's profit and loss (P&L) rather than a continuously paid coupon/interest reported in future year P&Ls.

There are several possible drawbacks to this approach. Recognition or reporting of (typically) large issuances only occurs in the year the transaction is facilitated, which can mean large swings in reporting for any individual client given that companies tend to go to market every few years. This makes the approach harder to operationalise and big issuances would dwarf any ongoing lending to the same company. However, this can be balanced by separate reporting of facilitated emissions from financed emissions. This method can also be more impacted by macro, political, and economy-wide events that cause occasional market fluctuations. A more extreme example of such a fluctuation occurred during the COVID-19 pandemic when the volume of capital markets transactions were higher in certain sectors.

Option B (Stock)

This approach treats a capital markets issuance as stock, where 100% of the bank's commitment to the capital markets transaction is accounted for annually throughout the issuance's lifetime, based on the emissions in each reporting year. This option is akin to treating the capital markets issuance as if it were a loan that remained on the bank's balance sheet.

There are several benefits to this approach. Large swings in reporting for issuances that occur only every few years is reduced, and the risk of lumpy reporting is dampened. Additionally, if attributing emissions over time, this method captures issuers' GHG emissions changes over time, and may reflect the capital's impact on GHG emissions over time.

Among the drawbacks to reporting in this way is that capital markets activity would be substantial. The concern of this activity persistently dwarfing any lending that represents capital extended by the bank to a company (which conceptually feels unfair—in reality, facilitators are not lending for capital markets transactions, they are only a facilitator).

Option C (Average Flow)

The capital markets issuance is accounted for by averaging the capital markets issuances that an arranger facilitates for a client across a given number of historic years (for example, an average of issuances over last 3 years).

Advantages of this approach include the smoothing effect on numbers that need to be reported, avoiding lumpy or large swings in reporting year-over-year as this method attempts to imitate what loans do on a bank's books. It is potentially more practical from a reporting point of view as it would make the reporting of capital markets easier to compare to the reporting of loans.

However, this reporting approach may be harder to explain because a time period has to be chosen and this results in no recognition of the instrument for its life or at the time of issue (the method simply creates an average with less of a technical or theoretical rationale to back the approach up, other than creating a smoothing of the reporting of this activity). This approach can also create logistical complications to aggregating and averaging 3 years of data for a single years' reporting.

Option D (Amortised Stock)

The arranger accounts for the capital markets issuance on its balance sheet for the life of the issuance (based on annual emissions); however, it is amortised over that life/tenor from 100% down to 0%. This is another approach to approximating what would happen with loans that a bank might extend but introduces the concept of the issuance amortising (which does not happen with capital markets instruments in reality). It is an alternative method to try to smooth the impact of the facilitation.

Similar to Option B, this approach means the arranging bank would continue to report the capital markets issuance into the life of the instrument. A benefit to this approach is that it helps create a way for arrangers to differentiate between issuers that might have more ambitious plans to transition versus those that do not have plans. Reporting an instrument into its life and the emissions associated with that instrument may mean that there is an incentive to back companies that can report reduced emissions over time as the arranger would start to account for fewer emissions as the instrument matures. This benefit would also apply to the method set out in Option B, but there are also large drawbacks to that approach. The next chapter further details this forward-looking consideration.

However, this approach is more complicated to calculate and is harder to justify from a theoretical perspective because the instrument does not amortise in reality. The chosen amortisation period may be harder to explain from a theoretical perspective.

To illustrate the financial impact of these various reporting options, consider an example where a bank commits to US$200 million in a US$1 billion 5-year loan facility and co-arrangers (with four other co-arrangers) a US$5 billion 10-year bond issuance—together making up a US$6 billion financing package for Company A.

	Treatment	Financing type	2020 ($bn)	2021 ($bn)	2022 ($bn)	2023 ($bn)	2024 ($bn)	2025 ($bn)
	N/A	Lending	0.2	0.2	0.2	0.2	0.2	-
A	Flow	Capital Markets	1.0	-	-	-	-	-
B	Stock	Capital Markets	1.0	1.0	1.0	1.0	1.0	1.0
C	Average Flow*	Capital Markets	0.3	0.3	0.3	-	-	-
D	Amortised Stock*	Capital Markets	1.0	0.7	0.3	-	-	-

*Note: The 3 years used in these calculations is for illustration only.

Table 1: Illustrative example of a financing package

If capital markets facilitation activity is only reported in the year it occurs, this fails to capture the forward-looking profile of issuers, as is the case in Option A (Flow). This means that—unlike financed emissions that are counted for every year in which the bank holds the corporate's debt—the emissions profile of a company in year 1 of the instrument tenor is used for the total size of the issuance regardless of any improvement of the company's emissions profile in subsequent years. While investors in the instrument would get the benefit of this reduction over the life of the instrument, with the "flow" accounting under Option A there is no way to differentiate between transactions with companies that are more or less likely to transition.

A possible solution is to include a forward-looking transition score for the issuer, which could be used to weight in-year reported facilitated emissions. Alternatively, backward tracking of the issuer's progress in the years following transactions could be drafted, potentially restating facilitated emissions depending on emissions profiles of issuers post transaction, particularly if the issuers' emissions profile changes dramatically from when the issuance took place.

What Portion of the Capital Markets Issuance is the Responsibility of the Arranger/Facilitator

As a lender, banks provide their own capital. As a facilitator of a capital markets transaction, banks just facilitate the transaction and bring issuers and investors together. Therefore, there is usually no risk held on the balance sheet of the facilitator, making it difficult to compare the role of an arranger/facilitator to the role of a lender/capital provider.

Whether the facilitator's responsibility should be as great as the investor's remains a big question. On the one hand, it is the investors who provide the capital, but on the other, the facilitators are key to unlocking the capital by facilitating/arranging the transaction as banks over time have evolved to specialize their services as critical intermediaries and therefore also gatekeepers to capital markets and negotiators between the providers of capital and those seeking financing. As capital markets are set up such that an intermediary is required to arrange these transactions.

Some will argue that there should be a shared responsibility between the facilitator and the investor. Reflecting the compensation received by the facilitator versus the investor is one way to undertake this—the emissions could be split between facilitators and investors to reflect the economic reality of the bank versus investor roles. An arranging bank's role tends to be for a limited time while the transaction is being arranged/distributed.

Potential approaches to how we could capture capital markets facilitation activity include the following:

i) Allocate 100% of issuance to arrangers/facilitators.

ii) A proportion of the issuance based on economic return is taken by arrangers; e.g. one bank assumes 33% of their allocation of the issuance in the year of issuance based on the idea that, on average, a coupon holder will hold double the revenue of the arranger in the year the transaction is arranged. The following diagram illustrates this:

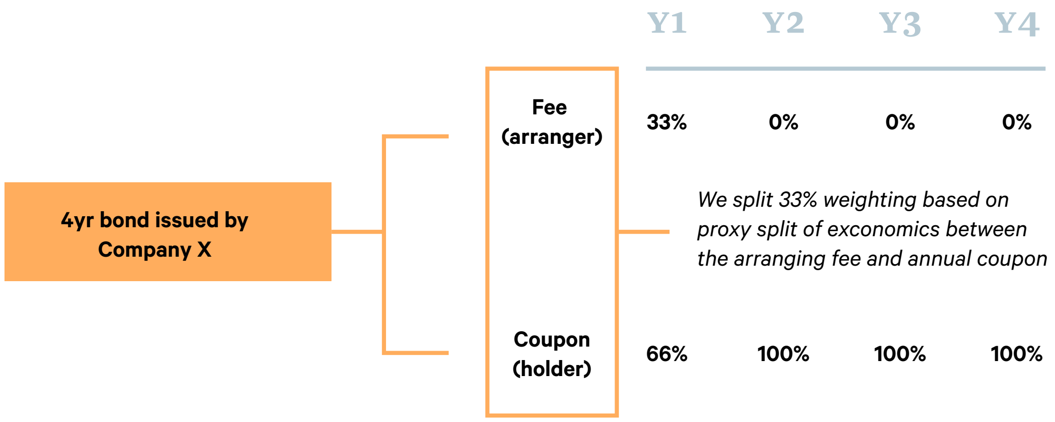

Figure 1:
Potential approaches to how the capital markets facilitation activity could be captured

iii) Arrangers take varying proportions of attributed emissions based on the issuer's transition plans to incentivise arrangers to support companies looking to transition to a greener pathway. For example, an arranger takes 50% of attributed emissions if the issuer is a brown company with no transition plans, 30% if the issuer is a greener company with some transition plans, and 10% if the issuer is a green company with a target of net zero by 2050. Chapter 5, Challenges for a Facilitated Emissions Methodology details this approach.

iv) Allocate attributable emissions based on an approach to weight the quantum of fees generated from the transaction on a deal-by-deal basis. This approach is consistent with the existing PCAF Standard for direct financing and its overarching principle of follow the money. However, the process should be robust enough to prevent arrangers avoiding emissions by waiving fees in return for economic returns through other means.

Splitting the Responsibility between Facilitators

Once it is decided how arrangers should report the issuances they facilitate in timing and how the issuance arrangers should take responsibility versus investors, there remains a question of how the arrangers in a transaction (typically there is more than one) should split their responsibilities. This could be addressed in several ways. Options include splitting the facilitators' responsibility based on the role/fee received by each or assigning an equal split between arrangers. For example, if the responsibility of the facilitator is calculated to be US$1 billion and there are five joint bookrunners, each of the joint bookrunners will be responsible for US$200 million of the capital markets transaction. Typically, league table methodology prorates volume across lead managers.

Allocating Emissions

Once an approach is decided on for reporting the facilitation of capital markets transactions, emissions need to be allocated to the proportion of the issuance being reported. We recommend adopting the approach that PCAF takes to attributing emissions in other applicable PCAF methodologies. For example, for corporate issuers, the appropriate approach might be found in the Listed Equity and Corporate Bonds approach within the PCAF Global GHG Accounting and Reporting Standard for the Financial Industry.

The following diagram illustrates the recommended approach for calculating the attribution factors for Listed Equity and Corporate Bonds. In place of the numerator (outstanding amount) shown in the formula, we suggest using the proportion of the capital markets issuance calculated according to a preferred method taken from the options (A to D) above, as well as the preferred weighting and splitting approaches from earlier in this chapter. The Enterprise Value Including Cash (EVIC) that is used as the denominator in the diagram should be post the transaction to account for any changes in EVIC due to the capital markets issuance.

For listed companies:

$$Attribution\ factor_c = \frac{Outstanding\ amount_c}{Enterprise\ Value\ Including\ Cash_c}$$

For bonds to private companies:

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

$(with\ c = borrower\ or\ investee\ company)$

Figure 2: Recommended approaches for calculating the attribution factors

Source: the Global GHG Accounting and Reporting Standard for the Financial Industry, PCAF.

In an equity issuance for a private company that is listing in the public markets for the first time, by the time a bank comes to report the facilitated emissions associated with that transaction we expect the EVIC of the newly listed company is known and should be the denominator in the above calculation.

Differences between Equity and Debt Capital Markets

A capital markets methodology inclusive of both equity and debt capital markets standardises across two market activities. The assumptions behind the capital markets facilitated emissions methodology should either account for the nuance in both types of transactions or consider separate methodologies.

Of the proposed methodologies, one accounts for GHG emissions starting from 33% of league table credit. This percentage is derived from an approximate revenue split between arranger and coupon holder in the first year (see Figure 1: Potential approaches to how the capital markets facilitation activity could be captured). However, this is not reflective of the revenue split in the equity capital markets, where there is no coupon and revenue is tied to the open market. While using the same percentage for both debt and equity capital markets offers the benefit of methodological simplicity across the most common facilitated emissions transactions, there are some additional considerations to evaluate to determine an appropriate rate for equity transactions.

First, league table credit accurately reflects the scale of involvement of various parties in investment grade debt issuances, where all bookrunners, i.e. all banks involved in the issuance, are allocated a more or less equal share of the issuance. However, in the equity market, league table credit is less reflective of the actual economic or fees split of the transaction because co-managers have a larger role in the transaction (than in debt transactions) and therefore get a larger portion of the fees, but do not receive league table credit. For equity transactions, wallet share is a more accurate distribution of facilitation between bookrunners and co-managers. In addition, in an equity transaction, not all co-managers get league table credit but would get some wallet share, so using league table methodology for equity may over-attribute activity to some institutions and potentially leave out others who are playing a facilitating role. A methodology that includes equity capital markets facilitation could use wallet share as a basis of dividing up the total transaction size for the purposes of further GHG emissions attribution.

Second, not all capital raised in equity capital markets transactions goes to the company issuing capital. Some transactions are split between primary capital, which goes to the company and so contributes to emissions generation, and secondary capital, which goes to the entity selling shares, which could be an investor in the company (e.g. private equity or other institutional investors). Secondary capital is not additional capital for the company to use productively, and therefore is not tied to the GHG emissions of that company. An equity capital markets methodology should focus only on the primary capital aspect of transactions.

These are just a few initial considerations when including equity and debt capital markets facilitation in the same methodology. More research is required to assess whether bundling these two distinct capital markets products is an accurate discussion of emissions attribution.

5 Challenges for a Facilitated Emissions Methodology

Introduction

Moving from financed emissions to facilitated emissions creates several significant challenges for an accounting methodology. The inherent differences between the two types of financing discussed in the previous chapters complicate accounting choices and test the logic PCAF uses in its current Standard. This chapter discusses those challenges.

The list below is based on feedback collected by the PCAF Working Group members from their respective institutions, including bankers active in capital markets transactions. The list synthesises PCAF Working Group member feedback into the following three key issues:

- Double counting
- Forward- and backward-looking capacity
- Attribution of emissions

The following sub-chapters details these issues.

Double Counting

A common concern is double counting—attributing the same GHG emissions to two or more owners. An example illustrates the problem:

> Company X issues a $1 million bond facilitated by Bank A. The bond is purchased by Asset Owner 1. Who owns Company X's emissions attributable to the bond issuance? Company X would report its own Scope 1, 2, and 3 footprint and the Asset Owner 1 can be assigned proportionate ownership (reported under Scope 3 category 15) based on the current PCAF Standard for bonds. Bank A facilitated the issuance but does not own any of the bonds; it uses none of its own balance sheet for the transaction. By adding attribution of those same emissions to Bank A, the double counting is obvious.

Double counting is a well-known aspect of GHG emissions accounting and is acknowledged by the PCAF Standard, which was designed to facilitate an institution's measurement and disclosure of various types of financed emissions, with each type reported separately. Rather than creating a global carbon balance sheet, PCAF focuses on transparency and consistency, enabling a clearer view of the various actors connected to emissions from a financing perspective and creating a standardised way for financial institutions to disclose and manage their carbon footprint within their value chains and progress toward climate goals. This approach acknowledges that double counting is inherent in GHG accounting.

The challenge of double counting may not be solvable in the sense of making it disappear, at least not in the foreseeable future. Among other things, cutting out double counting requires a quality and granularity of data that is not yet available.

But the challenge of double counting is also a matter of perspective. Moving the focus from a global carbon balance sheet to transparency and standardisation across the financial industry helps to clarify what the challenge is. It is not so much a question of fairness in attributing emissions. It is more a question of reporting types of financing activity and tracking changes in that activity over time

Forward- and Backward-Looking Capacity

As the PCAF Standard attributes emissions from a previous year, the year capital is used is relevant for consideration. However, as previous chapters describe, tracking facilitated capital across the tenor of the instrument is complex. Also, a key incentive for arrangers or facilitators of green financing is to get credit for the work. The PCAF Standard recently added a methodology to account for attributing the emissions related to green bonds and to account for negative emissions; meanwhile, the Standard already includes avoided emissions. But what about facilitating those bonds without owning them? And what about facilitating transactions for clients who are in the process of pursuing transitions to lower carbon business models? If facilitated emissions are treated as a point-in-time transaction and reflect their temporary nature, banks' emissions accounting would not benefit from improvements in clients' emissions profiles.

Carefully accounting for transitions in emissions accounting requires some capacity to look forward at the time of the facilitation and backward over the tenor of the instrument. On the forward-looking side, there would need to be some plan or goal that facilitation helps the issuer fulfil. Then there would need to be an ability to check on progress, to look backward and see if the borrower is indeed accomplishing the green goals funded by the issuance. Combining these elements of the future and the past would then enable a bank to get full credit for its facilitation.

Initial forays into financing activity that involve a time element, such as loans or derivatives that specify ESG performance targets, are already occurring. For example, a major US bank structured a cross-currency swap with a global energy company in which both parties need to meet specific ESG targets or face additional costs. But beyond this type of specific, one-off transaction, there are significant challenges to adding a time element to attributing emissions.

CONSISTENCY WITH THE CURRENT STANDARD

The current PCAF Standard is point-in-time, not forward- or backward-looking. That enables a cleaner, simpler accounting of financed emissions. Incorporating a time factor for facilitated emissions could be a cumbersome complication. And it is not clear why facilitated emissions should have a time factor while financed emissions do not. The approach and underlying incentive for both financed and facilitated emissions should be consistent.

One argument for distinguishing between the two is inherent in the differences between the financing types. A loan may be held on the balance sheet for 5 years. Over that time, the financing bank's attributed emissions will benefit from emissions reductions by the client. For example:

> Bank A makes a 5-year loan to Company X. Over the 5 years, Company X's emissions drop by 20%. Therefore, Bank A can report a 20% decline in its attributed emissions from Company X, since each point-in-time report will show an incremental decline.

However, that benefit is not available for facilitated emissions that are only recognised in the year of the transaction or over an average of historic years. Facilitation is arranging, not lending, with nothing held on the balance sheet and is almost instantaneous compared to a loan so there is no benefit to the facilitator from the issuer's progress in reducing emissions over time. Although this may seem unfair from a business perspective, some argue that banks typically have long-term relationships with issuers who are ultimately their clients, and the benefit from supporting a transitioning company is recognised over multiple issuances the bank will assist with over time. But there is another argument that there need not be an engineered incentive for facilitators as bank duties to their stakeholders and their own net zero commitments, should compel them towards net zero aligned transactions.

TENOR OF INSTRUMENTS

There are arguments that shorter-term facilitations—as with financed emissions—should be excluded. For example, commercial paper has a shorter lifecycle (up to 270 days). However, it may also be more reflective of capital used in the past year (and connected more directly to issuers' expenditures leading to GHG emissions).
On the other hand, a longer-term bond at its maturity may more accurately reflect longer-term investments and strategies (in either carbon intensive or decarbonisation technologies). Attributing previous years' emissions based on capital that is financing a future emissions profile may not accurately capture a financiers' or arrangers' efforts in advancing the low carbon transition.

LACK OF CURRENT DISCLOSURE FOR TRANSITION PLANS OR PLAN EXECUTION

Examining how to account for the potential change in clients' emission plans over time faces additional practical challenges—how would this be measured at the time of issuance? Although an increasing number of companies are announcing transition targets, these remain a minority across the whole economy. Commitments and targets are usually a decade or more in the future, so interim data projections for the duration of a shorter-term bond would be few and far between. For firms that announced transition goals in previous years, there is even less data on plan execution. Data availability and coverage will undoubtedly improve, but the current gaps make formulating an approach difficult. Transition finance of a company's general strategy remains a nascent sustainable finance activity compared to financing specific projects.

In the example above, it is likely that Company X would only have a general transition plan in place and little or no progress to report. This indicates there is little information to use for Bank A to get credit for its green facilitation, and that Bank B will share in Company X's progress over time.

LACK OF DATA FOR REPORTING THE IMPACT OF CAPITAL MARKETS ISSUANCE

Another data gap is the lack of impact reports around green financing and facilitation. Again, examples in the market are largely discrete transactions directed to specific assets and use of proceeds and not larger, more general finance of a company's full operations. The issue of impact reporting in general is still nascent. PCAF is designed to make impact reporting—in this instance, progress on reducing financed emissions—easier and comparable.

PROBABLE NEED FOR THIRD-PARTY VERIFICATION OF TRANSITION PLANS AND IMPLEMENTATION

The probable need for third-party verification is another challenge for time factors in facilitation accounting. Transition plans and goals would need certification, such as whether they are science-based. And plan execution may need to be audited. In each case, current capabilities are severely limited; for instance, there are no agreed-upon standards for how to audit progress on a transition plan or towards emissions targets. And, as noted previously, there is little historical data on transition plans to audit at this point. As with other data and standard gaps, these are likely to be filled over time. But in the meantime, they create yet another challenge for developing a forward-looking accounting methodology.

REPORTING BURDEN FOR ISSUERS

A final aspect of the time challenge for facilitation is the potential reporting burden for banks. Whether this would be carried out internally, by a third party, or by a combination of the two is another area that remains to be decided. Climate accounting will have to meet a variety of regulatory and auditing standards over time and tracking client performance could add materially to the resource requirements of that accounting.

Attributing Emissions to General Capital Market Issuance

The previous chapter discusses the choices resulting from facilitation that are available for attributing emissions. Several challenges with attributing capital markets facilitation result from its relationship to lending. There is generally a close correlation between a bank's lending clients and its capital markets clients. Arranging a bond or equity issuance is often the result of a pre-existing lending relationship; a bank-client relationship already exists.

Because of this correlation the question emerged whether continuing to account mainly for lending would capture the vast bulk of attributed emissions. Would adding facilitation capture emissions otherwise left out? The scale of this overlap likely varies across institutions and comprehensive work on this question has not yet been performed, creating another data gap in the measurement process.

Assume Bank A makes a 5-year loan to Company X and underwrites both a bond and equity offering during that 5-year period. Would using only the loan to attribute emissions to Bank A leave any emissions on the table? Without resolving the challenges above, it would seem not, since there would be no direct link—no ownership—between the capital markets facilitation and Company X's emissions trajectory.

Another part of this challenge is whether it would be appropriate to try to convert capital markets activity into a lending equivalent and then simply apply the existing PCAF Standard to the financing. Some banks make similar conversions of one product into the equivalent of another for internal risk management purposes. But it is unclear whether such an approach for this purpose would be either feasible or useful. Among other things, the challenges (double counting, the time element) must be addressed anyway to create such a conversion methodology. Measuring and reporting bank financing activity by type may also enhance transparency in a useful way.

6 Next Steps

This discussion paper highlights why capital markets are so significant to the climate transition. It also introduces the concept of facilitated emissions and its associated challenges more broadly. This Working Group recognises that capital markets involve a large cast of actors and an added level of complexity due to the off-balance sheet dimension of facilitation.

This discussion paper was written with the intent to start the conversation among the financial institutions affected by facilitated emissions, as well as with other interested parties. The Working Group looks forward to receiving comments from the upcoming PCAF public consultation. These comments and inputs will help us develop the methodologies for facilitated emissions.

Developing a GHG accounting methodology for capital markets facilitated emissions will entail numerous challenges, including double counting, forward- and backward-looking treatment, and choice of attribution method, as described below:

- **Minimising Double Counting**: A common concern voiced on the proposed incorporation of capital markets or any type of facilitation activity into PCAF's guidance is that it encourages double counting. PCAF works to minimise double counting wherever possible, but the organisation's main goals are transparency and consistency (not creation of a global carbon balance sheet) to enable a clearer view of the various actors connected to emissions from a financing (or facilitation) perspective. The Working Group will consider ways to clarify and enhance PCAF's guidance on double counting since a separate method for facilitated emissions will likely operate in line with PCAF policy—allowing banks with capital markets activities to account for and report these emissions separately, while minimising double counting as far as possible, which in some instances remain unavoidable.
- **Forward- and Backward-Looking Treatment**: Tracking facilitated capital across the tenor of the instrument is a complex challenge, and guidance will be crucial in allowing arrangers or facilitators of green financing to get credit for their work. Accounting for capital markets may require some capacity to look forward at the time of the facilitation (goals to fulfil) or to look backward over the tenor of the instrument (checks on progress). The current PCAF Standard is point-in-time, not forward- or backward-looking, which has enabled a clean and simple accounting of financed emissions. It is not yet clear whether facilitated emissions should have a time factor, and this topic merits robust consultation and engagement over the coming year.
- **Attributing Capital Markets Facilitated Emissions**: There is more work that can be undertaken to refine an approach. For example, mirroring the split in economics between the facilitator and long-term investor may be an option, but how this relationship could change over time as rates change remains in question. Attribution methods will also need to account for differences in the balance between fees versus coupons for equity versus debt capital markets, and more research will be performed over the coming months to assess appropriate approaches for each asset class. We are open to exploring other approaches that may be suggested through the consultation process.

This Working Group has mainly considered capital markets (DCM and ECM) transactions but recognises that other types of facilitated emissions may also need consideration (for example, third-party managed funds and acquisition financing) to ensure a completeness of approach towards assessing the impact of these activities on climate change.

In addition, the Working Group kept in mind overall corporate issuances while working through the points of this paper. If banks start to disclose facilitated emissions, they may likely start with corporate issuances as was initially the case with financed emissions to corporate borrowers. However, we believe that our approach could apply in the same way to issuances by sovereigns and financial institutions should banks decide to disclose in relation to those as well. This is something we will consider in more detail in 2022.

The Working Group will examine a broader way to consider other types of facilitated emissions next year, when developing the feedback from this discussion paper into official guidance.

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