




ACCOUNTING FOR  
SUSTAINABILITY

# FINANCED EMISSIONS


TOP TIPS FOR FINANCE TEAMS OF  
FINANCIAL INSTITUTIONS

CALCULATING AN EMISSIONS BASELINE: DATA AND METHODOLOGIES

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# ° ABOUT THIS GUIDANCE

In the absence of international, regulated best practice, this Top Tips guidance provides steps and practical examples for finance teams of financial institutions to work towards overcoming the challenges associated with scope 3 data,

methodologies and setting a baseline. The scope 3 category covered in this guidance is investments - that is, category 15 of the Greenhouse Gas Protocol - and the specific focus is financed emissions.



## DEFINITIONS

### Scope 3 emissions

As defined by the Greenhouse Gas Protocol, “[s]cope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.”<sup>1</sup>

Category 15 Investments includes “scope 3 emissions associated with the reporting company’s investments in the reporting year, not already included in scope 1 or scope 2. This category is applicable to investors ... and companies that provide financial services ... Investments are categorized as a downstream scope 3 category because providing capital or financing is a service provided by the reporting company.”<sup>2</sup>

### Financed emissions

Absolute emissions that banks and investors finance through their loans and investments. The financial institution accounts for its portion of emissions based on an attribution factor. Further information on financed emissions, as well as information on facilitated and insurance-associated emissions, can be found in the ‘Other types of emissions’ section on page 18.

[> Read more](#)

The content was informed through publicly available information and insights from interviews we held with financial institutions and other experts around the world.

This guidance includes a range of case studies, highlighting the steps taken by different banks. The case studies provide examples for others to consider when developing their own approach.

**The risk that climate change poses to our economic and financial stability is catastrophic. Given their place in the financial system, financial institutions have a strategic imperative, a moral responsibility and critical leverage to drive faster global decarbonization. Measuring and reporting emissions – across all scopes – are vital steps we must take towards reducing and ultimately eliminating those emissions. Challenging though this is, finance teams are well positioned and appropriately skilled to play a key part in overcoming these challenges and delivering on net zero goals.**

Helen Slinger, Executive Director, A4S

1. Greenhouse Gas Protocol, [FAQ](#)  
2. Greenhouse Gas Protocol, [Category 15: Investments](#)

# ° INTRODUCTION

Without immediate action, the climate emergency threatens to destabilize financial markets and leave the world uninsurable.

If we are to limit global warming to 1.5°C<sup>3</sup> and reach net zero by 2050 at the latest – which is necessary to prevent the worst climate damages – we need to reduce net human-caused GHG emissions by nearly 50% by 2030.<sup>4</sup> Despite the clear case for climate action, financial institutions continue to invest in high-emitting sectors. Sixty of the world’s largest banks have provided almost US\$4.6 trillion of financing for fossil fuels since the Paris Agreement was adopted in 2015, and US\$742 billion of this fossil fuel financing was provided in 2021 alone.<sup>5</sup>

Financial institutions play a significant role in identifying, measuring and monitoring financed emissions so they can use this data to identify the highest emitting aspects of a portfolio to focus their reduction efforts, set a baseline, set targets and then track progress to net zero.

Gathering and reporting these types of emissions data presents several challenges, though. This may be why only a fifth of banks, financial services firms and insurers have pledged intermediate emissions reductions or net zero targets related to their financed emissions.<sup>6</sup> This is despite CDP’s finding that, for the 25% of the 332 financial institutions that reported on their financed emissions to CDP in 2020, their financed emissions were 700 times greater than their reported operational emissions.<sup>7</sup>

Financial institutions have a critical part to play in achieving a net zero global economy through four key financing strategies, as outlined in the [Recommendations and Guidance on Financial Institution Net-Zero Transition Plans](#) by the Glasgow Financial Alliance for Net Zero (GFANZ):



## CLIMATE SOLUTIONS

Financing or enabling entities and activities that develop and scale climate solutions.



## ALIGNED

Financing or enabling entities that are already aligned to a 1.5°C pathway.



## ALIGNED

Financing or enabling entities committed to transitioning in line with 1.5°C-aligned pathways.



## MANAGED PHASEOUT

Financing or enabling the accelerated managed phaseout (eg, via early retirement) of high-emitting physical assets.

These four definitions are extracted from GFANZ’s [Recommendations and Guidance on Financial Institution Net-Zero Transition Plans](#)

## THE LIMITATIONS OF FINANCED EMISSIONS

While the measurement, reduction and reporting of financed emissions is an important aspect of progressing to net zero, there are inherent limitations, especially when it comes to using financed emissions as a decision tool for portfolio shifting. For example, financed emissions do not help a financial institution understand its forward-looking physical or transition risk. To help overcome this, backward-looking financed emissions metrics should be used in conjunction with other forward-looking, transition-relevant data and metrics (such as transition-related capex spending and transition plans).

Financed emissions metrics also do not necessarily lead to financial institutions supporting emissions reductions in the real economy. Even if the financed emissions of a portfolio decrease (perhaps due to divestment from a high-emitting asset or fund), the real economy decarbonization impact may be negligible if another financial institution buys that asset or fund.

Related to this, a financed emissions approach could lead to under-investment in supporting transition in high-emitting sectors. Firms reporting on financed emissions may be incentivized to divest rather than to engage and provide the long-term financing necessary for high-emitting sectors to shift towards climate-aligned practices.<sup>8</sup>

3. IPCC, [Urgent climate action can secure a liveable future for all](#)  
 4. IPCC, [The evidence is clear: the time for action is now. We can halve emissions by 2030](#)  
 5. Oil Change International, [Banking on Climate Chaos: Fossil Fuel Finance Report 2022](#)

6. S&P Global, [Financed emissions are missing from many firms’ net zero plans](#)  
 7. CDP, [The Time to Green Finance](#)  
 8. RMI, [Identification, Access, and Use of Transition-relevant Data and Metrics](#)



The background is a solid blue color. On the right side, there is a large, stylized white graphic consisting of several parallel lines that form a large, downward-pointing triangle. The lines are of varying lengths, creating a sense of depth and movement. The text is positioned on the left side of the page, within the blue area.

# THE ROLE OF THE FINANCE TEAM

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Chief financial officers (CFOs) and finance teams within financial institutions have an enabling role to assist on the approach to financed emissions, including:

- 1 Sourcing, analysing and providing the information needed to drive decisions
- 2 Developing and setting interim targets
- 3 Measuring, monitoring and reporting progress over time
- 4 Incentivizing action within the financial institution
- 5 Responding to regulatory requirements

There is no standard approach to which team works on financed emissions. An organization's approach may be led by or include input from strategy, sustainability, data, risk, client facing/relationship teams and finance teams. Many banks, for example, are ensuring they approach financed emissions in a multifunctional or cross-departmental way so they can share skills and knowledge efficiently. The task is too great for it to be completed by one individual department or by teams operating in silos. Bringing together a range of perspectives and expertise from across the organization can also enhance productivity and innovation.

The finance team offers a valuable set of skills, such as interpreting guidance and regulation, setting up governance frameworks, analysing and reconciling data, modelling and stress testing, establishing controls, and reporting. **All of the actions covered in these top tips could be undertaken by the finance team, in either a leadership or supporting role.**

Further practical actions that can be taken by finance teams on net zero can be found in our [Net Zero Practical Guide for Finance Teams of Banks](#). Practical examples of work already being taken by banks on financed emissions can be found in our [NatWest](#) and [ABN AMRO](#) case studies.



The finance team at Virgin Money initially conducted the data analysis for the business portfolio. This helped us to understand the process and check alignment with the PCAF methodology. This process was then passed to the specialist data team at Virgin Money to maximize efficiency and utilize their specialist skills and knowledge in this area.

Julie Wood, Accounting Policy Manager, Virgin Money



# THE CHALLENGES

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Outlined below are the challenges associated with the data and methodologies associated with calculating an emissions baseline.

## DATA

Data challenges include:

### Availability

Emissions data is unlikely to be available across the entire portfolio, especially for private equity or small to medium-sized enterprises or for customers in certain geographies.

### Type

Financial institutions will need to decide what data to use for emissions factors. For example, in the oil and gas sector, emissions could be based on oil and gas produced or on revenue from final sales.

### Quality

Emissions data is not subject to the same standardized guidance and regulation as financial data, with limited or no transparency on the assumptions, controls or governance behind the data, and insufficient granularity.

**Data limitations mean that sectors are generally foot-printed using a mixture of customer-specific emissions and estimated data.**

NatWest Group plc, Climate-related Disclosures Report 2022

## INDUSTRY CODING CHALLENGES

Financial institutions apply industry-standard coding, such as NACE or ISIN codes, to classify data. This may be different from the industry coding used in emissions conversion factor databases. If the industry classification codes in these databases are not ones the institution uses, the institution will have to do a mapping exercise between the two, which adds another layer of assumptions. A further complication is that the industry coding of the parent company may not be appropriate for the industry at the subsidiary or asset level. This may arise, for example, when making a loan to an asset finance company that invests solely in internal combustion engine vehicles.

### Governance

As emissions data may be gathered and analysed by different divisions within the financial institution, the ownership over and the roles and responsibilities relating to data sourcing, validation and reporting may be unclear.

### Consistency/comparability

Emissions data is likely to be drawn from different sources for different segments of the portfolio or even within the same segment of the portfolio. This makes comparisons across the portfolio, and between different financial institutions, challenging. Different counterparties also report emissions data in different ways – for example, some include scope 3 whereas others exclude or only partially include scope 3 data.

### Timing

Emissions data may have a 12 to 18-month time lag before it is externally reported, and is therefore backward-looking. There may also be a mismatch between the timing of financial data required for attribution calculations and emissions data.





## METHODOLOGIES

Currently, there is no universal, regulated guidance on financed emissions. At Accounting for Sustainability (A4S), we do not favour any methodology over another. As this Top Tips guidance focuses on calculating an emissions baseline, though, we have made several references to PCAF, because many of the financial institutions we spoke to are following the PCAF Standard. PCAF has also been acknowledged in some regulatory regimes, either directly or as a reference. For example, the Task Force on Climate-related Financial Disclosures (TCFD) noted PCAF as supplementary guidance for financial institutions.

Some financial institutions have developed in-house tools and methodologies, such as Barclay's BlueTrack and JP Morgan's Carbon Compass methodology.

## SETTING A BASELINE

There are currently no common standardized approaches to developing a baseline, which makes comparability difficult. As data quality and coverage improve and methodologies evolve, financial institutions will likely need to restate their baseline. If so, they will need to communicate and justify this change clearly to stakeholders.

**Progress has been made to extend the scope of our emissions baseline, refine our methodologies and improve data quality, recognizing there is still more to do.**

Lloyds Banking Group, Environmental Sustainability Report 2022

**Experience has shown us that it takes time to get to grips with carbon data and to shift the mindset of an organization, so starting this work ahead of regulatory change has been helpful for us. We would encourage other institutions to get started too.**

ABN AMRO

The challenge of data, methodologies and setting a baseline is not a good reason to delay work on this important area. Instead, financial institutions should be taking steps now on seeking out solutions and addressing these challenges.

**A lack of data is not an excuse for inaction—financial institutions do not need perfect data to begin engaging with companies or taking actions that finance climate solutions, support transition plans, and mitigate stranded asset risk. Where data gaps persist, financial institutions should actively pursue that data directly with corporates and/or through collaborative partnerships with peers, data providers, and regulators to drive improved data accuracy and availability. Financial institutions should continuously expand, iterate on, and improve alignment strategies based on the best available data, metrics, and methodologies as these evolve.**

RMI's Center for Climate-Aligned Finance, IMPACT+ Principles for Climate-Aligned Finance



# TOP TIPS FOR FINANCE TEAMS TO ADDRESS THE CHALLENGES

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As regulators pursue a goal for emissions data to be of the same quality and subject to the same rigorous controls and assurance processes as financial data is today, the financial sector needs to move forward by addressing challenges with the tools and practices it has available.

The following top tips provide examples of practical actions that finance teams can take, sometimes in collaboration with others, to overcome the challenges associated with financed emissions data. Our top tips are:

- 1 Establish the data governance framework
- 2 Select and follow a methodology
- 3 Identify a starting point
- 4 Develop data requirements
- 5 Source data
- 6 Review data
- 7 Consolidate data to establish a baseline

## ESTABLISH THE DATA GOVERNANCE FRAMEWORK

By being clear at the start of the project on roles and responsibilities for financed emissions data governance and oversight, financial institutions can increase efficiency, prevent duplication of tasks and ensure that data review and sign-off is appropriate.

Leveraging their skills in developing processes to gather and approve data, finance teams could lead or support on designing the data governance framework used for emissions data, as well as allocating tasks to relevant parts of the financial institution. The finance team can oversee the process from inception to implementation and improvement.

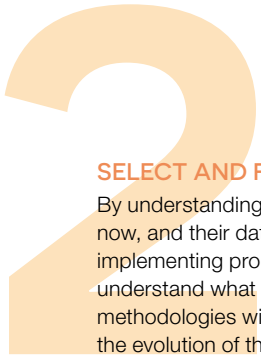
## UBS GROUP: DEVELOPING THE FRAMEWORK AT THE OUTSET

Our finance team designed and oversaw the implementation of a Responsible, Accountable, Consulted and Informed (RACI) framework and metric hub for sustainability information, including financed emissions. The process involved the following steps:

1. **Surveying the field** – we completed an inventory and assessment of the reporting requirements and metrics that are in scope for environment, social and governance (ESG) oversight.
2. **Establishing the ground rules** – we considered the necessary process and control expectations around the required ESG metrics and reporting. We broke down each of the core processes (such as data origination, data definition and data controlling) and identified associated controls to be implemented.
3. **Designing the structure** – we assigned responsibility for processes and controls to clearly defined roles and developed a RACI matrix.
4. **Allocating ownership** – we allocated specific individuals to each of the key roles we identified, at both the report and metric level, based on where the competencies sat.
5. **Setting up a one-stop-shop** – we established a metric hub as the central repository for the metrics and their supporting documentation, along with guidance for staff. For example, our guidance specified that staff should source data from the ledger rather than the front office systems.
6. **Closing the gap** – we supported, and continue to support, the report and metric owners in delivering to their RACI responsibilities regarding controls and documentation.
7. **Providing evidence** – we included a step in our process for report and metric owners to provide evidence to support the annual ESG reporting, which encourages real ownership.
8. **Enhancing the process** – we continue to expand the control frameworks, data identification and testing of operating effectiveness. We are continuously improving and refining the processes and controls.

Establishing the overarching framework and controls at the outset helped to break down the tasks and ensure that we could clearly define ownership and accountability. This was critical for being able to make positive organizational change. Having a central metric hub ensured efficiency and a standardized approach to data. Our finance team was well positioned to oversee this process, as it has expertise in establishing and implementing controls, a comprehensive understanding of our processes and experience of implementing change.





**SELECT AND FOLLOW A METHODOLOGY**

By understanding the financed emissions methodologies available now, and their data requirements, financial institutions can start implementing processes to gather the relevant data and understand what data is missing. Knowledge of the existing methodologies will also enable financial institutions to contribute to the evolution of the methodologies and development of emerging guidance, and respond to new regulatory requirements when they arrive.

Using its experience in understanding and implementing guidance and regulation, the finance team can oversee and collaborate with other departments on reviewing existing methodologies and guidance, applying the selected methodology, and staying up to date with developments.

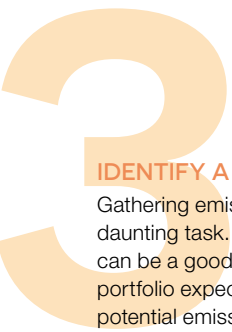
**ABN AMRO: BUILDING AN INTERNAL METHODOLOGY FROM PCAF**

Our finance team used the PCAF guidance to develop an internal methodology for emissions calculations. The internal methodology translated the PCAF guidance into our internal terminology so that it was easier for staff to use and understand.



**Our finance team acts as the subject matter expert and go-between in the bank on using the PCAF methodology. They understand the requirements and manage the processes required to gather the relevant data, making sure that others, such as the data modelling, consumer and commercial teams, know what is required for the calculations and are interpreting and implementing the guidance correctly. The finance team holds other teams within the bank accountable on their adoption and correct application of PCAF.**

Julie Wood, Accounting Policy Manager, Virgin Money



**IDENTIFY A STARTING POINT**

Gathering emissions data across an entire portfolio can be a daunting task. Focusing on a specific, material part of the portfolio can be a good way to get started – this may be the part of the portfolio expected to have the highest emissions, the largest potential emissions reduction or the biggest transition risk. Hot spot analysis, which typically uses estimated or proxy data across the portfolio, can be used to identify the most emission-intensive areas and can be a good way to determine which aspects of the portfolio to focus on.

Industry initiatives can also provide a useful starting point. Subsector alliances of the Glasgow Financial Alliance for Net Zero (GFANZ) have specific targets and associated guidance to help GFANZ members. Banks signed up to the Net-Zero Banking Alliance (NZBA) are required to set a portfolio target in one of the carbon-intensive sectors identified by NZBA and will ultimately

need to set targets in all, or the substantial majority of, nine sectors.<sup>9</sup> Typically, the power sector or the oil and gas sector are chosen first, as these sectors tend to have reasonable availability of data as well as being high carbon-emitting sectors that form the priority areas for action.

RMI has developed a portfolio-led approach that provides a structure to help financial institutions consider where (through sectors and geographies) and how (through asset classes and business units) they approach the real-economy net zero transition.<sup>10</sup> Decisions such as which asset class and sector to start with are important for financial institutions, and the case studies below highlight both a sectoral and asset class approach.

The finance team can use its skills in consolidating and analysing data to either lead the hotspot analysis or work with other teams on this, such as sustainability and data teams.

9. These sectors are: agriculture; aluminium; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport. See UNEP FI, [Guidelines for Climate Target Setting: Supporting notes](#)

10. RMI, [Getting Down to Business: Enabling Action and Enhancing Credibility in Net-Zero Banking Using a Portfolio-Led Approach](#)



### ING: IDENTIFYING HOTSPOTS

We completed a hotspot analysis to determine which sectors of our portfolio to focus on first. The sustainability team used the PCAF methodology for this hotspot analysis

The team considered how carbon intensive each client is and how much exposure we have towards that client – for all our thousands of clients. With that overview, we selected the most relevant sectors for us to address.

We then applied insights from the International Energy Agency, NZBA, RMI, SBTi and PACTA, using this external guidance as a steer on how to measure emissions for the sectors we had identified and align the sector portfolios with climate goals. The finance team provided internal data on the relative size of each aspect of the portfolio.

### VIRGIN MONEY: FOCUSING ON THE HIGHEST-EMITTING SECTORS

The finance team chose to focus first on mortgages for its work on financed emissions, as mortgages accounted for 80% of customer lending. The second area of focus was the highest emitting business banking sectors.

Within business banking, we identified four priority sectors: agriculture, manufacturing, transport and storage, and resources. We selected these on the basis of carbon intensity, our exposure to the sector and the requirements of key dependencies (such as setting targets). Only customers with outstanding lending above £1.5 million were included in the analysis. This threshold was reduced to £1 million for agriculture and £250,000 for resources in order to get the coverage required for the SBTi targets. This helped us to target our approach and maximize impact.

Finance provided the financial data, with different members of the team looking at the financed emissions calculations for mortgages and business banking.

## 4 DEVELOP DATA REQUIREMENTS

Understanding the different types of data available at the outset can help financial institutions to decide where to focus, identify gaps and prioritize areas where there is the potential to improve coverage and quality over time. The PCAF methodology outlines a five-point scoring system for the quality of data: high-quality data is assigned a score of 1, and poor-quality or estimated data is assigned a score of 5.<sup>11</sup>

The finance team could lead, or support the sustainability team, in using the PCAF methodology to develop a data wish list for each of the segments of a portfolio and identifying any data gaps.

Institutions should also choose which metric to use. For example, for the oil and gas sector, production emissions can be used as tonnes of CO<sub>2</sub>e, but in the power sector it may be better to choose an intensity metric such as gCO<sub>2</sub>e per kWh.

The finance team has the necessary skills to work with other teams to:

- Review existing guidance to understand the data requirements
- Benchmark against the data being used by peers, if possible
- Map current data coverage, both in-house and externally, noting what type of data is available (for example, reported emissions data and physical- and economic-activity related data) and its source (for example, in-house, external third-party provider, publicly available data sources and information published by the company)
- Record details of where data was sourced and on what date, along with any assumptions
- Determine whether the data has been assured
- Check that the financial and emissions data cover the same time period, if possible
- Complete a data gap analysis and use it to draft a paragraph that summarizes the level of confidence finance has in the data – or the data's error margin (so that people don't make decisions on it without first understanding that carbon accounting is not yet as sophisticated as financial accounting and that caution should be applied in using this metric as a decision-making tool)
- Develop a wish list of data requirements
- Consider system change requirements

11. Further details can be found on page 41 of the second edition of the [PCAF Standard](#)

## SOURCE DATA

Sourcing high-quality data will increase the accuracy of emissions reporting and reduce the chances of major baseline restatements. Emissions data gathered either directly from the client or through a third-party provider is deemed the highest quality accordingly to the PCAF Standard. Along with emissions data, financial institutions will also need to source financial data – such as the size of the investment and the enterprise value including cash (EVIC) – to calculate the attribution factor. Some of this financial data can be sourced internally.

When sourcing emissions data directly from clients, try to get data through existing processes – for example, through the routine contact that relationship managers have with clients. Some data could also come from publicly available sources, which financial institutions could gather in-house or externally.

Some financial institutions prefer to use emissions from a data provider, such as CDP, as that data is presented in a consistent way. Other financial institutions prefer using asset-level data as this removes some of the risk of clients calculating and reporting emissions data in different ways. However, asset-level data can be difficult to source.

Given the evolving nature of data, financial institutions should accurately and transparently record their sources.

## TAKING AN INNOVATIVE APPROACH

Financial institutions may complete hotspot and data analyses to determine areas where there may be particularly high emissions and lower-than-average data quality. This information can enable institutions to focus their approach. They may also do a data deep-dive with willing clients, to move data from emissions factors to reported emissions.

Financial institutions should consider a ‘nexus approach’, considering several interconnected components in an integrated manner, looking at the entire supply chain of their clients.<sup>12</sup>

## THE FINANCE TEAM HAS THE ANALYTICAL SKILLS TO HELP MAKE DECISIONS SUCH AS:

### HOW... TO SOURCE DATA?

**Internal vs external:**  
What is the cost–benefit analysis of sourcing data internally or externally?

**Existing sources:**  
Can data be obtained from existing sources, eg from expected credit loss modelling under IFRS 9 or internal ratings-based credit risk modelling?

**Existing processes:**  
How can data sourcing be integrated into existing routine processes?

### WHO... COULD BE INVOLVED?

**Data providers:**  
Can the scope of relationships with existing data providers be expanded to cover emissions data?

**Relationship managers:**  
Can relationship managers source the data?

### WHAT... ELSE CAN THE FINANCIAL INSTITUTION DO?

**New systems:**  
What systems can be developed to source data?

**Client support:**  
Can data sourcing be used to help clients optimize their data for their own reporting and benchmarking purposes?

12. Liu, J et al., Nature Sustainability 1, [Nexus Approaches to Global Sustainable Development](#)

## SOURCING EMISSIONS DATA

Emissions data can be calculated either directly from reported emissions or derived from emissions factors:

**Reported emissions** – are those “collected from the borrower or investee company directly ... or indirectly via verified third-party data providers”.<sup>13</sup>

**Emissions factors** – are “a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant”.<sup>14</sup> For example, emissions factors can be physical activity-based (eg tCO<sub>2</sub>e/MWh or tCO<sub>2</sub>e/tonne of steel) or economic-activity-based (eg tCO<sub>2</sub>e/\$ of revenue or tCO<sub>2</sub>e/\$ of sectoral assets).

There are many sources for gathering the data needed:

### DATA SOURCES FOR REPORTED EMISSIONS

Company-reported emissions data – self-reported and publicly available (eg company sustainability report)

Engagement with companies – through existing procurement and reporting processes or developing a bespoke questionnaire

Sustainability-specific data providers – such as CDP, Sustainalytics, ISS ESG

Other commercial data providers – such as Bloomberg, MSCI, S&P/Trucost

Climate advisers

### DATA SOURCES FOR EMISSIONS FACTORS

Publicly available data from research organizations or think tanks

Government databases

PCAF database – see the PCAF European building emission factor database

NB: Example data sources for emissions factors for listed equity and corporate bonds can be found in the PCAF Standard (Part A, page 58-59), information for other asset classes is found elsewhere in the document.

13. PCAF, [The Global GHG Accounting and Reporting Standard for the Financial Industry](#)

14. United States Environmental Protection Agency, [Basic information of air emissions factors and quantification](#)



### ANONYMOUS: SOURCING ASSET-LEVEL DATA\*

First, the finance team looks at each sector separately to consider the characteristics of the activities that are driving emissions. Second, we assess the nature of the data sets available (eg reported emissions data, production data) and the levels at which data is available (eg asset, company). This helps us to determine the completeness of available data in relation to our portfolio. We also get a view of the consistency, comparability and granularity of that data. Based on this, we can establish the most appropriate data set to use by comparing the emissions estimated by the different data sets to sector averages.

We typically base our emissions calculations on asset-level data rather than reported emissions data. One reason for this is a lack of transparency on the granularity and assumptions behind reported emissions data. There is also a lack of consistency in how counterparties measure and account for emissions. In the absence of one universal, regulated emissions reporting framework, counterparties may calculate and report emissions from the same emitting activities in different ways.

\* This financial institution's contributions have been provided on a no-names basis.

### ABN AMRO: EMPOWERING CLIENT UNITS TO GATHER DATA

Initially, our financed emissions calculations were done centrally without involving the client units\*. Now, ownership of these calculations sits within the client units. The client unit accounting teams complete the calculations, which are then reviewed by client-facing/sustainability staff and are signed off by the client unit CFO.

Our decentralized approach has helped us to get buy-in from the individuals within the client units. The central finance team provided reporting instructions to the client units to ensure consistency and promote good practice.

The process of calculating financed emissions is also linked to the processes of gathering and reporting data for the financial statements. This ensures that data is reviewed throughout the year and provides evidence to our auditors that we are applying the same rigour to emissions data as to our financial data.

\* ABN AMRO has structured its business activities into three 'client units', based on its core client segments. The three client units are personal and business banking, wealth management, and corporate banking.

### ABN AMRO: EXTERNALLY REPORTING DATA SOURCES

We report the data sources for residential mortgages, commercial real estate, energy and shipping in [Appendix A of our 2022 Climate Strategy and Targets](#).



#### Residential Mortgages

Data type	Data source
Portfolio scoping	Product Residential Mortgages
Type of property	Internal data
Type of financing	Internal data
Outstanding/Committed debt	Internal data
Property value at origination	Calcasa
Area of the property	Basisregistratie Adressen en Gebouwen (BAG)
EPC data	Rijksdienst voor Ondernemend Nederland (RVO), proxies
Emissions factor by EPC data	CBS data
Energy Consumption data	CBS, Economic Institute for Building (EIB)
Future trajectory	CRREM 1.5 C NL



## REVIEW DATA

Ideally, financial institutions should apply the same rigorous review process and controls to both financial and emissions data.

Using its expert knowledge in developing and implementing controls, the finance team can undertake the following data checks to make sure that emissions-related data is appropriate, complete, reasonable and auditable:

### Appropriate

- ▶ Review client classification – either across the full portfolio or for material balances
- ▶ Evaluate the parent company's coding



### Complete

- ▶ Reconcile data back to the general ledger to ensure that outstanding lending balances match



### Reasonable

- ▶ Undertake a top-down analysis of emissions – for example, calculating expected financed emissions across an industry based on the industry's total emissions and the proportion of that industry financed by the financial institution
- ▶ Liaise with colleagues, potentially a specialist data team, to identify any outliers in the data and interrogate the data accordingly
- ▶ Check the reasonableness of the underlying data – for example, does the average floor space of properties used for real estate calculations seem plausible



### Auditable

- ▶ Establish a validation process for data – for example, matching counterparty data to data from emissions reports
- ▶ Develop guidance for other teams on how emissions data can be reconciled, and stipulate that reconciliations must be signed off
- ▶ Document the assumptions used when mapping between different coding approaches and make sure these assumptions are applied consistently
- ▶ Lead, support or request an internal audit over the financed emissions data and controls – this may be in preparation for external assurance



## ING: REVIEWING DATA PROVIDED BY THIRD PARTIES

We source most of our climate data from external vendors. While this is coordinated by the sustainability team, the finance team is responsible for:

- Reviewing the portfolio data provided by wholesale banking and business banking teams
- Checking the absolute emissions calculations performed by the sustainability team
- Ensuring that the right processes and control frameworks are in place
- Supporting the onboarding of external auditors
- Providing any relevant information to the regulators

## ANONYMOUS: CHECKING DATA TO OTHER INFORMATION SOURCES\*

The finance team plays a key role in data control. For our financed emissions calculations, we double-check data sourced from third-party vendors against other sources where possible. For example:

- We check the financial values of companies to the US Securities and Exchange Commission's 10-Q and 10-K filings on a random sample basis.
- We check emissions data to CDP information.

Assertion letters are also held with third-party data providers, which provide evidence that the third-party data providers have good operational controls and provide the details of the methodologies used.

\* This financial institution's contributions have been provided on a no-names basis.

## 7

**CONSOLIDATE DATA TO ESTABLISH A BASELINE**

Establishing a baseline sets a position that financial institutions can measure future emissions against, which is necessary for setting targets and measuring progress against them. An appropriate baseline year should also be determined, using the latest available data but avoiding any large anomalies, such as the impact of the COVID-19 pandemic.

Financial institutions may need to restate the baseline as data quality and methodologies evolve. Recording the data type, source and date on a granular basis will help institutions to identify future changes in the baseline and report transparently to stakeholders. It will also be helpful to log the approach taken to foreign exchange conversions where revenue and/or debt and equity data is in different currencies. It is also important to note which scopes are included – some sectors may only look at scope 1 and 2 emissions.

By holding data on a centralized, dynamic platform, along with financial information, multiple users can update and benefit from the information. Such a platform will also help to protect data integrity and reduce instances of teams sourcing data from different places, which can create data inconsistencies.

The finance team has the necessary skills to:

- Oversee the management and controls around data recording
- Establish a data ownership and validation framework
- Manage the governance and controls of a central data platform
- Ensure that data sources are transparently recorded in external reports
- Reconcile any baseline changes and ensure these are accurately reported
- Develop policies and procedures around thresholds for triggering a baseline recalculation
- Review the data collected by other departments that has been used in the baseline

Some organizations have a data team who may handle this work.

**UBS GROUP: ESTABLISHING A CENTRAL DATA PLATFORM**

The finance team manages and oversees a central ESG metric hub. Any metric posed on the hub must align with our data management frameworks as well as our metric and reporting guidance. Metrics have to be validated by the metric owners and approved by the finance team before they can be published on the hub. The hub contains information both on the metric and the governance that underpins it.

We are developing the metric hub to include the underlying data – for example, emissions for specific elements of the portfolio – so that the hub can be used as a 'golden source' of information.





# OTHER TYPES OF EMISSIONS

# OTHER TYPES OF EMISSIONS

Accounting for facilitated and insurance-associated emissions (see table below for definitions) is not yet as developed as it is for financed emissions, although many of the data challenges and steps needed to overcome the

challenges are similar. In recognition of the differences between financed, facilitated and insurance-associated emissions, the PCAF Standard recommends that they are each reported separately.

## DEFINING FINANCED, FACILITATED AND INSURANCE-ASSOCIATED EMISSIONS FOR FINANCIAL INSTITUTIONS<sup>15</sup>

### Financial Institution Activities

Emissions accounting term:	Financed emissions	Facilitated emissions	Insurance-associated emissions
Type of activity:	Lending and investment provided to clients, generating interest or dividend returns	Capital market facilitation services to clients for fees, eg as a bookrunner	Insurance and re/insurance services provided to clients for a premium
PCAF definition:	Absolute emissions that banks and investors finance through their loans and investments	Emissions associated with the issuance of capital market instruments	Emissions associated with re/insurance underwriting portfolios
What should be measured:	Annual corporate accounting and disclosure of emissions at a fixed point in time and in line with financial accounting periods. The categories of emissions shown below should be reported separately. The financial institution accounts for its portion of emissions based on an attribution factor.		
Categories of emissions covered:	1. Scope 1 and scope 2 emissions of borrowers and investees across all sectors 2. Scope 3 reporting for lending to and making investments in companies in certain sectors, see table below* 3. Emission removals** (listed equity and corporate bonds, business loans and unlisted equity, and project finance)** 4. Avoided emissions** (project finance)**	****	5. Scope 1 and scope 2 emissions of the re/insured client or asset across all sectors 6. Scope 3 emissions to the extent that such numbers are available and represent reasonable and verifiable estimates 7. Emission removals**** 8. Avoided emissions****

#### Notes:

*Phase-in period	NACE division sectors considered (NACE codes provide the statistical classification of economic activities in the European community).
For reports published in 2021 onwards	At least energy (oil & gas) and mining (ie NACE L2: 05–09, 19, 20)
For reports published in 2023 onwards	At least transportation, construction, buildings, materials and industrial activities (ie NACE L2: 10–18, 21–33, 41–43, 49–53, 81)
For reports published in 2025 onwards	Every sector

\*\* Where methodologies and data are available.

\*\*\* Methods provided in latest PCAF Standard.

\*\*\*\* Guidance not currently provided in PCAF Standard, financial institutions therefore advised to disclose their methodology.

For more information and definitions of scope 1, 2 and 3 emissions as well as emissions removals and avoided emissions see the glossary in the latest [PCAF Standard](#).

15. The Partnership for Carbon Accounting Financials (PCAF) is an industry-led partnership established to facilitate transparency and accountability of the financial industry on emissions measurement and disclosure. The PCAF Standard has three parts, covering detailed methodological guidance for financed emissions, facilitated emissions (to be published in spring 2023) and insurance-associated emissions. The PCAF Standard conforms with the requirements of the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The sovereign debt methodology and guidance on emissions removals are still pending GHG protocol review and approval.

# ° A4S RESOURCES

## GUIDANCE

[Net Zero: A Practical Guide for Finance Teams of Banks](#)

## FINANCED EMISSIONS CASE STUDIES

[ABN AMRO](#)

[NatWest Group](#)

## TRANSITION PLAN BLOGS

[Transition plans Q&A the with Task Force on Climate-related Financial Disclosures \(TCFD\) \(February 2023\)](#)

[Net zero transition plans: The race to net zero \(December 2022\)](#)

[Transition plans Q&A with GFANZ \(November 2022\)](#)

[Transition plans Q&A with the Transition Plan Taskforce \(TPT\) \(November 2022\)](#)

## NET ZERO TOP TIPS AND CASE STUDIES

[Top Tips for CFOs](#)

[Top Tips for Pension Scheme Trustees](#)

[Net Zero Practical Examples](#)

## ESSENTIAL GUIDES

[A4S Essential Guide to Incentivizing Action Along the Value Chain](#)

[A4S Essential Guide to Valuations and Climate Change](#)

## WEBINARS

1. [Accounting for financed emissions](#) in conversation with ABN AMRO, NatWest and PCAF
2. [The role of finance professionals in accounting for financed emissions](#) in conversation with Amalgamated Bank, Citi and NatWest
3. [The role of finance professionals in accounting for financed emissions](#) in conversation with Standard Chartered, First Rand Bank, NatWest and British International Investment
4. [Insurance associated emissions – the what, why and how](#) in conversation with Allianz, Aviva and PCAF

# ° GLOSSARY AND ACRONYMS

<b>Attribution factor</b>	The share of total GHG emissions associated with the specific loan or investment, re/insurance cover or facilitated activity provided by the financial institution.*
<b>Economic activity-based emissions</b>	"Where emissions are estimated by the reporting financial institution based on economic activity data collected from the borrower or investee company (eg euro/dollar of revenue or euro/dollar of sectoral assets)." <sup>**</sup>
<b>ESG</b>	Environmental, social and governance
<b>EVIC</b>	Enterprise value including cash
<b>GHG</b>	Greenhouse gas
<b>ISIN</b>	International Securities Number
<b>NACE</b>	Nomenclature of Economic Activities
<b>Physical activity-based emissions</b>	"Where emissions are estimated by the reporting financial institution based on primary physical activity data collected from the borrower or investee company (eg megawatt-hours of natural gas consumed or tons of steel produced)." <sup>**</sup>
<b>RACI</b>	Responsible, Accountable, Consulted and Informed
<b>Reported emissions</b>	"Where verified or unverified emissions are collected from the borrower or investee company directly (e.g., company sustainability report) or indirectly via verified third-party data providers (eg CDP)." <sup>**</sup>
<b>Scope 1</b>	"Direct GHG emissions that occur from sources owned or controlled by the reporting company – ie emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc." <sup>**</sup>
<b>Scope 2</b>	"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." <sup>**</sup>
<b>Scope 3</b>	"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 and downstream emissions: Upstream emissions include all emissions that occur in the life cycle of a material/product/service up to the point of sale by the producer, such as from the production or extraction of purchased materials. Downstream emissions include all emissions that occur as a consequence of the distribution, storage, use, and end-of-life treatment of the organization's products or services." <sup>**</sup>

\* Definition based on the [PCAF Standard](#)

\*\* Definition taken directly from the [PCAF Standard](#)

# ° ABOUT A4S

Our aim is to make sustainable business, business as usual.

HM King Charles III established Accounting for Sustainability (A4S) in 2004, when he was The Prince of Wales, with the aim of working with the finance and accounting community to:

- Inspire finance leaders to adopt sustainable and resilient business models
- Transform financial decision making to reflect the opportunities and risks posed by the climate crisis and other environmental, social and governance (ESG) issues
- Scale up action to transition to a sustainable economy

## A4S HAS THREE GLOBAL NETWORKS:

- CFO Leadership Network – CFOs from leading organizations seeking to transform finance and accounting
- Accounting Bodies Network (ABN) – members comprise approximately two thirds of the world’s accountants
- Asset Owners Network – Pension Fund Chairs who integrate sustainability into investment decision making

## THE A4S ESSENTIAL GUIDES

### LEAD THE WAY

Developing a strategic response to macro sustainability trends

- ▶ Managing Future Uncertainty
- ▶ Engaging the Board and Executive Management
- ▶ Finance Culture
- ▶ Incentivizing Action

### TRANSFORM YOUR DECISIONS

Integrating material sustainability factors into decision making

- ▶ Strategic Planning, Budgeting and Forecasting
- ▶ Management Information
- ▶ Capex

### MEASURE WHAT MATTERS

Developing measurement and valuation tools

- ▶ Natural and Social Capital Accounting
- ▶ Social and Human Capital Accounting
- ▶ Valuations and Climate Change

### ACCESS FINANCE

Engaging with finance providers on the drivers of sustainable value

- ▶ Enhancing Investor Engagement
- ▶ Debt Finance
- ▶ Implementing the TCFD Recommendations
- ▶ Implementing a Sustainable Finance Framework

[Download the guides.](#)

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