

## Executive summary – Overview

#### What is it?

The PwC Financed Emissions Benchmark is a comprehensive analysis of the financed emissions metrics disclosed by financial institutions (FIs) as part of their 2024 sustainability disclosures. This paper is supported by in-depth analytics and comparisons of peers across the market. Please do reach out if you would like further details on our GHG Analyser which contains the underlying data and analytics from this benchmark.

This is the **fourth iteration of this exercise** focused on 2024 sustainability disclosures. This edition includes an **increased coverage of metrics in scope** (e.g. data providers and additional restatement and target setting information). The FIs covered include the following:

- 26 Global Wholesale, Retail and Investment Banks.
- 21 Asset managers and Life insurance companies.
- Asset coverage totaling £25tn on balance sheet.
- Geographical reach spanning the UK, US, Europe, and Middle East.

The global reach **reflects the increasing level of transparency of sustainability disclosures** within the financial services sector.

The analysis primarily focuses on the **carbon footprint metrics** disclosed by the aforementioned FIs, specifically covering the **lending activities** of Banks and **investment activities** of Life Insurers & Asset Managers (i.e. financed emissions). Additional data is included regarding operational emissions, target setting, forecasting and sustainable finance activities.

## Why is it important?

The sustainability reporting landscape continues to evolve rapidly amid heightened geopolitical tensions and a shifting regulatory environment. With frameworks such as TCFD, ISSB, CSRD, and Pillar 3 driving increasingly granular disclosures, financial institutions face growing scrutiny from regulators, investors, and internal stakeholders. In response, leading FIs—particularly G-SIBs with global operations—are revisiting their Target Operating Models to ensure they can meet divergent regional requirements at scale, with EMEA and APAC often setting the pace.

We are observing a **divergence in approach**: large, **globally active Banks/FIs** are investing in integrated, enterprise-wide emissions reporting structures, while **smaller and regionally focused FIs** are prioritising capability building and foundational data improvement. Robust financed emissions metrics are critical—not only to fulfil compliance obligations, but also to inform **risk management** (e.g. CP10/25, EBA guidelines), enable effective **transition planning**, identify balance sheet **decarbonisation levers** and **guide balance sheet optimisation**. A clear **decarbonisation strategy** can help institutions align disclosures with strategic priorities and unlock value across sustainability reporting, risk oversight, and net zero transformation.

## Our benchmarking exercise covers 47 Fls split across:

**26** 

Banks<sup>1</sup> corresponding to

21

Life Insurers & Asset Managers<sup>1</sup> corresponding to

£22<sub>Tn</sub>

total assets on balance sheet

£3<sub>Tn</sub>

total assets on balance sheet<sup>2</sup>

[1] Following the issuance of this paper, we will also be publishing an APAC specific version of the report. Please contact the <u>team</u> if you would like to be notified at the publishing date.

[2] Assets under management are not included within this figure.

# Executive summary – Market trends & outcomes

We are observing a clear divergence in approach to financed emissions reporting: large, globally active FIs are investing in integrated, enterprise-wide reporting structures, while smaller and regionally focused FIs are prioritising capability building and foundational data improvements. This variation reflects differing levels of maturity and resource allocation, often leading to inconsistencies in sustainability disclosures and carbon footprint figures. Below, we outline key market trends and insights observed across the industry, structured around four critical pillars: disclosure, scope & assumptions, data, and target setting & decarbonisation strategy.

## **Pillars**

## Key market trends and outcomes

01 Disclosure

## Framing the reporting landscape

- Restatement becoming more prevalent with, 60% of FI restating a financed or operational emissions metric, driven by improved data quality, errors correction and evolving methodologies—highlighting the ongoing push for transparency and accuracy.
- PCAF is driving the financed emissions calculation landscaped, with 92% of Banks and 86% of Life Insurers & Asset Managers aligning their disclosures accordingly.
- Growing emphasis on external assurance to enhance credibility and meet emerging regulatory expectations such as those under CSRD and ISSB. 64% of participants engaged external assurance providers for emissions reporting—a figure expected to grow as regulatory requirements increasingly mandate third-party verification.

02
Scope & assumptions

## **Defining the boundaries**

- Asset class and value chain coverage continues to expand year-on-year, driven by smaller and regionally focused FIs often due to improved data access and phased implementation strategies. Whereas, large, globally active FIs are focused on investing in integrated, enterprise-wide reporting structures.
- Banks are prioritising the highest-emitting sectors, with baseline years ranging from 2018/2019 to 2024, reflecting differing maturity levels across portfolios.
- Coverage has increased across almost every asset class, specifically for Banks. This
  trends reflect a sector steadily broadening its emissions scope while refining disclosure
  depth in response to rising expectations.

O3

Data

#### Driving the evolving landscape

- Growing data availability is clear with participants reporting average PCAF data quality scores of ~2.5 to 3.5 for their most material sectors, an improvement on prior benchmarks. This reflects both an increased availability in better quality data, along with a clear effort by institutions to enhance data quality and refine methodologies. This is in line with broader sector trends toward more robust financed emissions reporting.
- Disclosure of data providers is also becoming more common, helping to increase transparency given the long-standing concerns around the "black box" nature of emissions estimates.

04

Target setting & decarbonisation strategy

#### Shaping your transition plan

- Looming interim portfolio targets are increasingly becoming a priority for financial institutions. 81% of Banks and 86% of Life Insurers & Asset Managers have now disclosed at least one interim target, signalling widespread baseline establishment and transition planning.
- Target restatement is emerging, with 12% of Banks resetting targets, a figure expected to rise due to variation and evolution in reference scenarios.
- Reference pathway disclosure has surged, with non-disclosure falling to just 4% for Oil & Gas and Power sectors, reflecting growing strategic clarity and transparency.



## Disclosure

Framing the reporting landscape

Despite existing guidance on scoping and measuring the carbon footprint of financial institutions' lending or investment activities, it is not always prescriptive and often requires judgment. This leads to variations in sustainability reports and carbon footprint figures. Our analysis highlights key findings and considerations for FIs, categorised into the four pillars below: disclosure, scope, data, and target setting and forecasting.

01



## Disclosure - Assurance over emission disclosures

"

Over time and where possible, data should be verified to at least a level of limited assurance. Financial institutions should disclose whether data is verified and to what level."

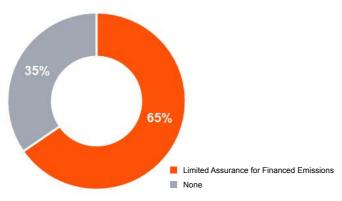
PCAF – Financed Emissions GHG Standards Part A Key insights:

On a combined basis **64% of the 47** FIs analysed have had **at least limited assurance** on the data underpinning their financed emissions disclosures (see more detail in graphs below for breakdown by FI). This varied from assurance of individual metrics to wider scopes covering a broader range of sustainability disclosures.

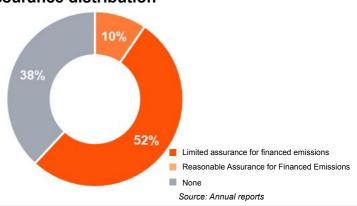
Interestingly, **2** FIs requested reasonable assurance on their financed emissions, an increase from 1 in the YE23 Benchmark.

The **majority**, that we observe, of **institutions seeking external assurance** is driven by a combination of **voluntary motivations** and **regulatory requirements**, such as those prescribed under the **CSRD**. This number is expected to **grow in future years**, as the second phase of CSRD brings more EU companies into scope.

## **Banks - Assurance distribution**



## Life Insurers & Asset Managers – Assurance distribution



We note the following **deviations in scope of assurance across FIs**:

- **Level of assurance:** Only 2 FI (Insurance companies) sought reasonable assurance on their financed emissions disclosures with the majority opting for limited assurance from external providers.
- **Metrics in scope of assurance:** Some FIs included absolute emissions, emission intensities, PCAF scores or a combination of the above.
- **Year of emissions reporting:** Some FIs obtained assurance over the baseline year only, while others included both baseline and reporting years. Please note where a baseline year has not been set, assurance is provided over the reporting year values only.
- Out of scope: As of yet, no FIs have included targets and projections in their assurance scope.

1.2

**Disclosure – Use of PCAF (Partnership for Carbon Accounting Financials)** 

## Key insights:

**92% of Banks** and **86% of Life Insurers & Asset Managers** included in the sample have calculated their financed emissions metrics **in line with PCAF guidance**. These proportions remain consistent with the YE 23 benchmark, however we have observed a slight increase in the number of Life Insurers & Asset Managers using bespoke methodology (2).

**All the Banks** analysed have **aligned with PCAF** methodologies, with **2 exceptions** that are leveraging **in-house bespoke** methodologies; One also provides PCAF-aligned calculations in their appendices for ease of comparison

**3 Life Insurers & Asset Managers did not disclose** whether the calculation methodology used was bespoke or aligned to PCAF.

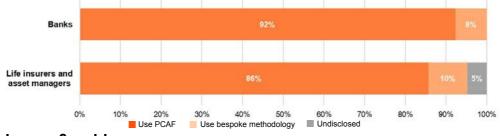
Given the **continually evolving and complex disclosure requirements and guidance** we are commonly observing FIs disclosing/reporting under **multiple frameworks**.

The Partnership for Carbon Accounting Financials (PCAF) is a global industry-led initiative to develop a methodology for measuring financed emissions, and it aligns with GHG protocol for **Scope 3 Category 15**. PCAF aligns to and is explicitly referenced in several regulatory and voluntary frameworks as the preferred approach for FIs i.e. EBA, SBTi, and TCFD.

As at July 2025, globally over **615 institutions** corresponding to **\$104tn of assets** have committed to measure their financed emissions in line with the approach developed by PCAF<sup>1</sup>. This allows for comparability of the emission disclosures by stakeholders.

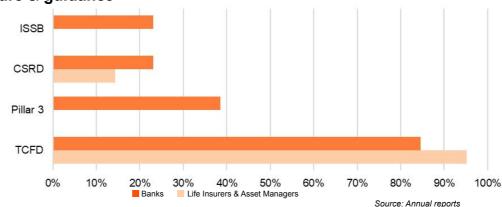
While PCAF provides **guidance** on the approach, the framework is **not always prescriptive**. This paper hence also aims **to summarise the industry practice across the assumptions underpinning industry standards**.

#### Banks - PCAF alignment



Banks - Disclosure & guidance

Please note, CSRD and Pillar 3 are relevant for EU FI's only.





## **Disclosure - Need for restatement**

Companies are increasingly being held accountable by regulators and investors for the accuracy and consistency of their carbon footprint disclosures. In line with evolving sustainability reporting requirements—such as those under the CSRD and the ISSB—the ability to restate greenhouse gas emissions data, supported by clear and robust policies, has become essential for ensuring transparency, comparability, and regulatory compliance.



Financial institutions (FIs) **shall** ... establish a baseline recalculation policy to define under which circumstances a recalculating of (base year) financed emissions is necessary to ensure consistency, comparability, and relevance of the reported GHG emissions data over time."

<u>PCAF – Financed Emissions GHG</u> <u>Standards Part A</u>

## Key insights:

On a combined basis **60% of the FIs** within our sample have **restated either a financed or operational emissions** metric within their 2024 disclosures (see more detail in graphs below).

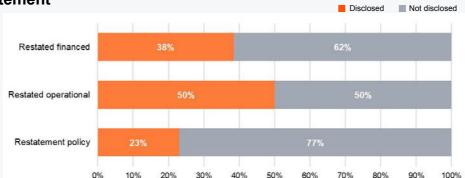


While only **26%** of these have **disclosed** the existence of a **restatement policy**. Most have provided narratives explaining the reason for restatement, with the primary reason being changes in methodology or improvements in data quality.

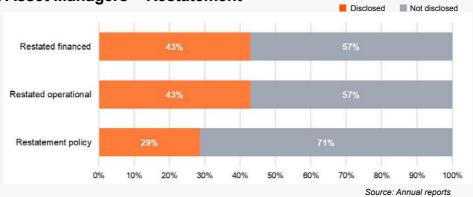


Overall **40% of FIs** within our sample have **restated a financed emissions metric** while **47%** have **restated an operational emissions metric** please see more detail in graphs below.

#### Banks - Restatement



## Life Insurers & Asset Managers - Restatement



## 1.4

## Disclosure - Sustainable finance

Sustainable finance involves directing financial resources towards supporting economic growth while having positive environmental and social impacts.The aim is to align financial decision-making with sustainable development goals. This means integrating ESG criteria into investment strategies and risk assessments, and ensuring portfolios support sustainable projects and minimise negative impacts on society and the environment. Banks typically participate in sustainable lending, such as environmental project finance or green mortgages, whilst Life Insurers & Asset Managers sustainable investing, participate in as green bonds. We note that Life Insurers and Asset Managers do not generally disclose sustainable finance commitments, hence progress appears artificially strong.

£2.75Tn

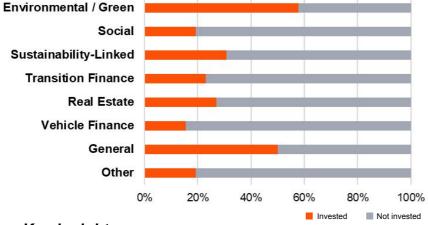
Banks – Total sustainable finance lending to date

Banks – Sustainable finance future commitments

Life Insurers & Asset Managers – Total sustainable finance investment to date

Life Insurers & Asset Managers – Sustainable finance future commitments







## Key insights:

We have observed that overall across all classifications 88% of Banks and 71% of Life Insurers & Asset Managers, within our sample, have disclosed a sustainable finance investment amounts or

targets in their 2024 reports.

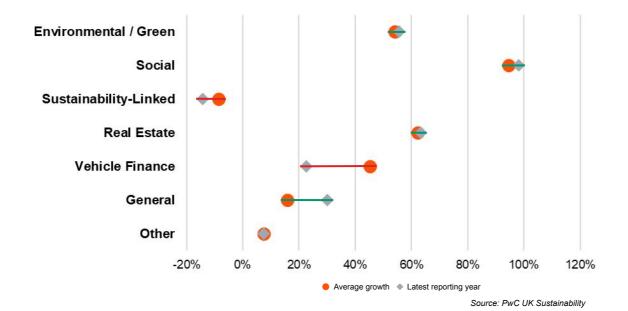
Within this disclosing population, the investment areas being disclosed greatly vary from institution to institution. 58% of Banks in our sample disclosed investments in Environmental / Green areas however the rest of the areas are much less consistent. No single area was commonly disclosed by Life Insurers & Asset Managers, with the most common areas being Transition Finance.

We note there is a lack of consistency in the basis of reporting of sustainable finance and hence the categorisation varies considerably, from specific products to a general ESG umbrella for example. Hence the inclusion of the 'General' area above.

As mentioned previously, the **basis of sustainable finance disclosures varies greatly** between institutions, owing to a **lack of global taxonomy**. Hence the categories observed below were created to enable comparison between institutions. The basis of disclosure varies in granularity and scoping, as well as the time period.

In the graph below a **average growth rate** over the reported timespan is calculated to provide **comparison to the latest reporting year's growth rate**. The **indicates areas of growing investment** alongside the acceleration of that investment. For example, in the Vehicle finance category we observed a decrease in the latest years growth rate (indicated by a red line) in comparison the overall average growth rate, suggesting decrease in the rate of investment for vehicle finance over the last year. The same graph is not produced for Life Insurers & Asset Managers due to a lack in reporting year granularity within sustainable finance disclosures.

## Banks - Annual growth rate



## Key insights:

Every category, other than Sustainability-Linked and Vehicle Finance has shown significant positive growth over recent history with 4 out of 7 still gaining more momentum. Environmental / Green,
Social and Real Estate
financing continue to show
sustained growth and even
slight increasing momentum.
Indicating institutional
prioritisation and strong
market demand.

Vehicle Finance is shown to be experiencing significant deceleration. Despite strong historical growth, recent momentum has dropped. This is potentially due to the maturing of the EV market alongside reduction in government incentives.

## 1.5

## Disclosure - Additional considerations & variations

**PCAF**, and other similar institutions, have established **widely recognised methodology** for **calculating** and **disclosing financed emissions (FE)**. However, due to limited data availability, these institutions are limited in how prescriptive they can be, as reducing flexibility may prevent many institutions from being able to report FE. Conversely, institutions can **commonly face issues** in relation to disclosure as the **non-prescriptive approach** feeds further discussion and **interpretation**. This has led to **notable differences** in how FIs report their FE figures. In our analysis, we observed **variations in methodological choices**, data quality assumptions and attribution approaches in disclosures **across institutions, reporting years as well as markets.** The insights below represent some of the **key additional considerations** resulting from this, that have not previously been explored in this section.

## Key insights:

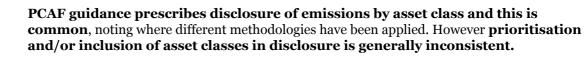
**Metrics disclosed:** We continue to note deviations between the metrics disclosed by participants. Some included absolute metrics while others included intensity metrics. This deviation not only occurs between participants, but also across asset classes/sectors within the same participant's report. The selection of absolute or intensity metrics is potentially influenced by data quality and/or the emissions intensiveness of a sector or asset class; for example, sectors with high emissions or reliable data may warrant absolute disclosures, while those with limited data availability or lower emissions may be better suited to intensity-based metrics to ensure meaningful comparison and tracking over time.

**Level and transparency of disclosures vary between participants.** Key observations and variations include:



**Disclosing the % of assets under management** (AUM) for Life Insurers & Asset Managers as part of emissions for each asset class and clear narrative on exclusions.

Disclosure of the size of book analysed and the data coverage of financed emissions calculations has significantly decreased in recent years. However since the 2023 benchmark this trend has stabilised. 51% of all reported emission metrics were accompanied by an exposure. This is a very slight increase on the previous year suggesting that FIs may be starting to prioritise transparency of their figures - PCAF guidance prescribes disclosure of coverage across the seven asset classes.



The most comprehensive disclosures tend to include a baseline year, 1 or 2 interim years followed by the latest reporting year, to allow ease of compatibility and tracking. Other, more limited, disclosures only feature the latest reporting year. - CSRD requires baseline year disclosure.



**Disclosing scope of emissions numbers** such as value chain or counterparty emissions included. - **CSRD requires disclosure of the scope of emissions included and clarification of the boundary of emissions data.** 



# Scope & assumptions

Defining the boundaries

While there is established guidance for measuring financed emissions, it is not fully prescriptive and leaves room for interpretation. As a result, financial institutions (FIs) may apply different approaches, leading to variations in the scope of reported figures. This section outlines these key differences in scoping decisions.

## Scope - Asset classes & sectors

The PCAF methodology provides an approach at asset class level. Institutions are hence expected to calculate the baseline emissions for each asset class separately. Following PCAF's "follow the money" principle, financial institutions must map their exposures to defined PCAF asset classes to ensure consistent and transparent attribution of financed emissions.

## Key insights:

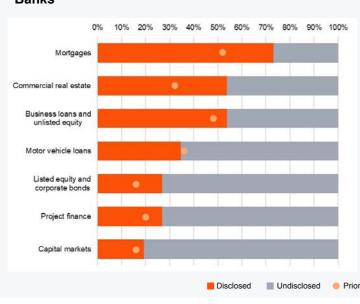
- Generally, across the **Banks** sample, we have observed an increase in the coverage across asset classes.
- Remaining consistent with the prior year disclosures, business loans and mortgages were the **most reported** by Banks however, we have seen a rise commercial real estate disclosures.
- While sovereign debt and listed equity remain the most reported by Life Insurers & Asset **Managers**, we observe a decrease in commercial real estate disclosures. This is driven by a change in the composition of our sample of Life insurer and Asset Managers.

From the disclosures we also noted the following:

- FIs are taking a phased approach to disclosing financed emissions, focusing on the most material sectors / asset classes first.
- Life Insurers & Asset Managers' disclosures continue to be at asset class level while most Banks disclosed at sector level covering different asset classes where relevant (e.g. loans, project finance).

#### PCAF asset class distribution

## **Banks**



#### Life Insurers & Asset Managers



Please note, certain asset classes are more relevant to a lending book activities (i.e Banks) compared to investments activities (i.e Life Insurers & Asset Managers) and vice versa. Therefore, motor vehicle loans and capital markets asset classes are not reported on by Life Insurers & Asset Managers.

2.2

Scope - Baseline and reporting years

## Key insights:

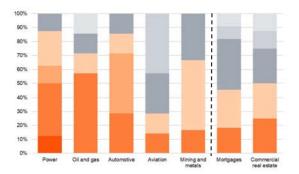
#### Overall

Participants reported **varying baseline years** across asset class or sector, representing variations in the data available and phased-in approach taken by institutions whereby new sectors are added in scope of emissions over time. However, **Tier 1** / **leading FIs** are consolidating their reporting, focusing on enhancing data quality and integrating disclosures more strategically, while **challenger Banks** / **small FIs** are accelerating efforts to build capability and close the gap in coverage.

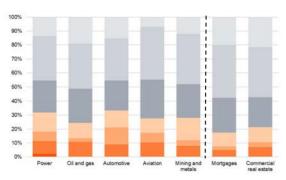
We note that the FIs in our sample often are **reporting multiple years** following the baseline in each report, for ease of year on year comparison. There is more variation in the amount of years reported within the Banks sample, and Banks tend to include more historical data.

Baseline years are not always included in disclosures; when they are, they do not always include the accompanying metrics - only the year is mentioned.

## Banks - Baseline year



## Banks - Reporting year



#### **Life Insurers & Asset Managers**

The **majority** of participants have selected a **2019 baseline year** and have noted the impact of Covid-19 on their 2020 emissions numbers.

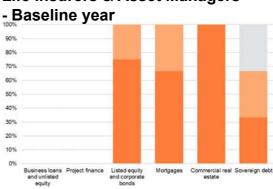
A number of participants have disclosed emissions without setting a baseline year, reflecting the lack of target setting seen by asset managers. This is observed as 15 FIs disclosing listed equity during 2024, whereas only 4 baseline years have been set.

#### **Banks**

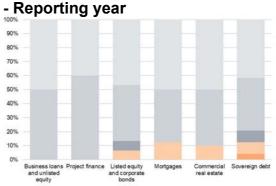
Review of the underlying data shows that for some Banks, the chosen **baseline year is not consistent between sectors** due to the **phased approach.** 

Across the majority of sectors, **the earliest baseline years are 2018/2019**. Noting that the proportion of Banks with these earlier baseline years tends to reflect a **phased in approach**. For typically **less material sectors** (such as mortgages, CRE, aviation), we see a far **higher proportion** of baseline years from **2022 onwards**.

## Life Insurers & Asset Managers



## Life Insurers & Asset Managers



Source: Annual reports

■ 2018 ■ 2019 ■ 2020 ■ 2021 ■ 2022 ■ 2023 ■ 2024

2.3

Scope - Greenhouse Gases (GHGs)

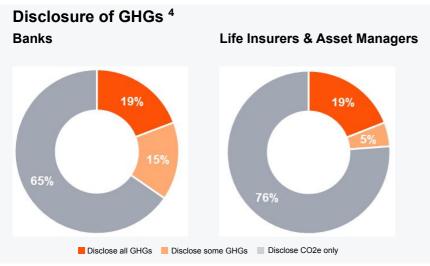
## Key insights:

All participants which report absolute emissions disclose that they at least capture in CO2 within their reported metric in line with last year's disclosures.

As shown in the bottom chart, aside from CO2 and CH4 being the most commonly disclosed GHGs, **disclosure frequency** of other GHGs **does not show any significant trend**, with each gases being disclosed across 18-27% of the sample.

Across both the Banks and Life Insurers & Asset Managers samples, the vast **majority** of institutions are **not disclosing the GHGs** included in their metrics. Interestingly, when this disclosure is made, it is more often a full disclosure specifying all the gases included, as opposed to mention of the most significant ones.

When data coverage across asset classes increases, we may observe a increased focus on data transparency and documentation. If this stage is reached, we would expect the number of full GHG disclosures to increase.



[4] The graphs above assume reporting units of CO2e represent the inclusion of a minimum of CO2 within emission metrics.

There are **seven greenhouse gases mandated under the Kyoto Protocol** and to be included in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC).

Accounting for all greenhouse gases in the emissions calculation is helpful to capture the broader climate impact, particularly in sectors where emissions other than CO2 are significant, such as methane emissions in Agriculture or Oil and Gas. The Portfolio Alignment Team suggests portfolio tools that cover all seven GHGs. In the immediate term, gases may be aggregated using the GWP framework detailed by the GHG Protocol.

Source: Annual reports





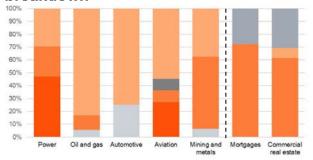
2.4

Scope - Borrowers & investors scope of emissions

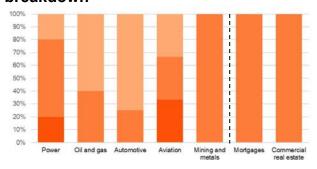
Financial institutions shall report the absolute scope 1 and scope 2 emissions of borrowers and investees across all sectors. For reporting the scope 3 emissions of borrowers and investees, PCAF follows a phase-in approach which requires scope 3 reporting for lending to and making investments in companies depending on the sector in which they are active."

PCAF – Financed Emissions GHG Standards Part A

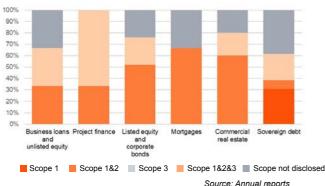
## Banks - Financed emissions sector breakdown



## Banks - Facilitated emissions sector breakdown <sup>5</sup>



## Life Insurers & Asset Managers-Financed emissions sector breakdown



All Banks have disclosed financed and facilitated emissions at a sector level, with most also including CRE and Mortgages asset classes. While all Life Insurers & Asset Managers have disclosed financed emissions at an asset class level, with 2 choosing to additionally disclose emissions at a sector level. The below graphs summarise the scope of emissions for Banks by sector and for insurers by asset class. To ensure comparability, we have included sectors / asset classes covered by most FIs.

## Key insights:

#### Overall

- All **Banks** have disclosed emissions at a **sector/asset class level**, while **Life Insurers & Asset Managers** have disclosed at an **asset class level**, with 2 also disclosing at a sector level.
- There is a great **deviation** among FIs regarding the inclusion of scope 3 emissions.

#### **Banks - Financed emissions**

- A significant proportion **(69%)** of the sample are now reporting all **3 scopes of emissions**, across a range of sectors. Of the 7 most commonly reported sectors, only Mortgages has not had any Banks disclosing all scope coverage.
- The only asset classes/sectors to not consistently disclose the scope of emission coverage was Commercial real estate and Mortgages.
- This shows a drive towards **comparable**, **transparent reporting**, a trend we would expect to continue in the coming years.

#### **Banks - Facilitated**

- For the Oil and Gas and Automotive sectors, the majority of Banks have **included at least scope 1** and 2 emissions.
- Since YE 23 in Automotive and Aviation, a significant proportion of the sample have **included scope 3** emissions within their disclosures.

#### **Life Insurers & Asset Managers**

- Where disclosed, all institutions have reported scope 1 and scope 2 financed emissions, with the exception of the sovereign debt sector asset class.
- **Disclosure of the scope** of emissions included in their in-scope asset classes is **less common** than the Banking sample.

[5] The significant differences between Financed and Facilitated are driven by a much reduced population of Facilitated disclosures.

2.5

Scope - Sector level value chain considerations

As part of scoping, FIs look to avoid double counting and as such apply value chain exclusions across sectors. This exclusion is also based on the investee and borrower emissions scope included which was detailed in the previous section.

## Key insights:

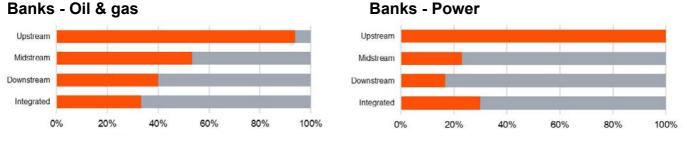
#### **Banks**

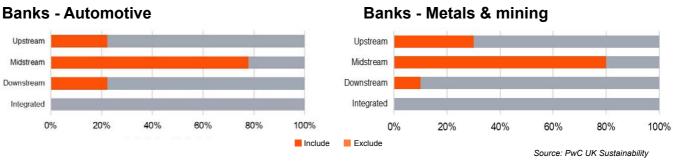
The **upstream** elements of the value chain have continued to be **most commonly reported within the Oil** and **Gas** and **Power and Utilities** sectors. This is in-line with expectation due to most Banks implementing a phased approach **prioritising the highest emitting** part of the value chain for those industry segments. As data-availability improves we would expect the level of reporting across the other value chain segments to increase, this trend is generally observed in comparison to the YE23 benchmark.

Value chain coverage remains fairly consistent since YE 23 for the Automotive and Metal and mining sectors. Midstream activities are almost always included since these correspond to manufacturing and is the most carbon intensive area of the value chain, noting we have started to see some downstream reporting within metals and mining.

## Life Insurers & Asset Managers

We note that the value chain information is **not disclosed** by Life Insurers & Asset Managers since most of them have **not disclosed sector level** information.





To ensure comparability, we have included only those sectors which are covered by most of the Banks, namely Oil and Gas, Power and Utilities, Automotive and Mining and Metals sectors, which are also the highest emitting sectors. Additionally, we note that the concept of value chain in the context of financed emissions does not apply to mortgages and CRE.



## Data

Driving the evolving landscape

## Financed Emissions: Deep dive insights – Data

03



## Data - PCAF score

**Data availability remains a key challenge** for institutions assessing their carbon footprint, often requiring the use of proxies to address information gaps. This is reflected in the data quality scores reported by institutions following PCAF guidance. This section highlights key insights from the disclosed PCAF scores, where a score of 1 indicates the highest data quality and a score of 5 represents the lowest. For additional context on the PCAF scoring methodology, please refer to the *Appendix*, and consult the paper *Financed Emissions: Navigating the Data Challenge*' for further discussion on data-related issues and considerations.

## Data quality score - Banks 6

#### Overall

96%

Of the selected Banks disclosed a PCAF data quality score across any sector. Noting this increase on the 92% of the sample following PCAF guidance, this is due to a bespoke methodology Bank providing PCAF metrics in the appendix for ease of comparison.

#### **Power**

3.2 and 3.6

Are the **mean Scope 1 & 2 and Scope 3 PCAF data quality scores** respectively in **Power** across the Bank sample.

## Oil & gas

3.2 and 3.5

Are the mean Scope 1 & 2 and Scope 3 PCAF data quality scores respectively in Oil & Gas across the Bank sample.

#### **Mortgages**

3.7

Is the **mean Scope 1 & 2 PCAF data quality** score in **Mortgages** across the Bank sample.

## Data quality score – Life Insurers & Asset Managers<sup>5</sup>

#### Overall

48%

Of the selected Life Insurers & Asset Managers disclosed a PCAF data quality score across any sector.

## Listed equity & corporate bonds

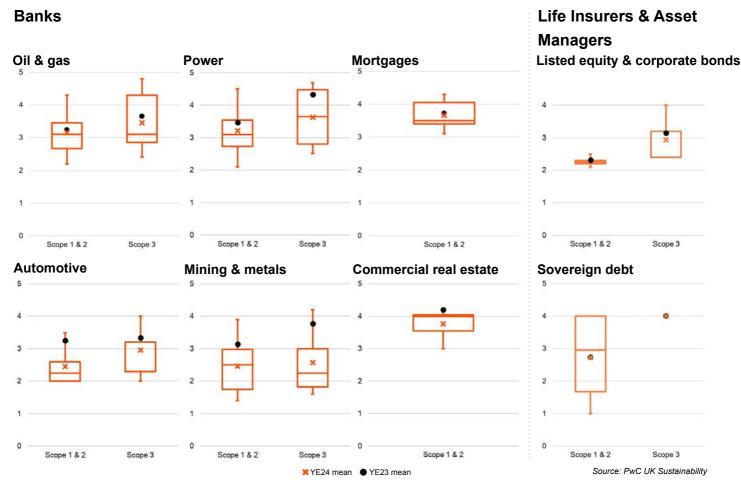
2.3 and 2.9

Are the mean Scope 1 & 2 and Scope 3 PCAF data quality scores respectively in Listed equity & corporate bonds across the Life insurer and Asset manager sample.

## Financed Emissions: Deep dive insights – Data

## Key insights:

- For most sectors and asset classes, we continue to see a **wide range of PCAF scores**, highlighting that financial institutions are **relying on varying data sources and methodologies**—ranging from proxies to verified emissions data—to calculate their financed emissions. However, we can observe **improvement in mean PCAF score** from the YE 23 benchmark, in every featured sector below (except sovereign debt). This suggests that data availability is improving, and institutions are actively seeking improved data & methodologies.
- We observed that **Mortgages** have a **small range of PCAF scores** and averaging between a score 3 and 4. This suggests that **property level energy efficiency proxies are prevailing** with no participant using an actual consumption approach (i.e. PCAF score 2).
- For the **Oil & Gas** sector we see a **large range in PCAF scores**, suggesting a range of approaches from unverified emissions, to proxies in the form of production, revenue and asset intensities being leveraged.
- Interestingly, **Mining and metals** and **Sovereign debt** are the only sector/asset class where the minimum **PCAF score is close to 1**, suggesting that some FI leveraging **verified** emissions for these sectors.



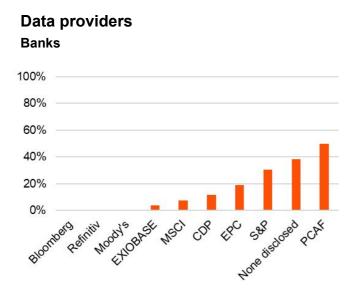
To ensure comparability, we have focused on sectors and asset classes which are widely covered by most institutions, namely Oil and Gas, Power and Utilities, Automotive and Mining and Metals sectors. Additionally we have considered the Commercial Real Estate and Mortgages asset classes, which have seen a growing number of disclosures. For Life Insurers & Asset Managers we have included the Listed equity and corporate bonds and Sovereign debt asset classes<sup>7</sup>.

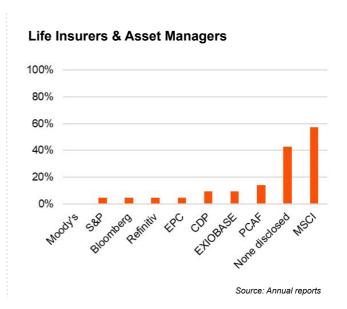
## Financed Emissions: Deep dive insights – Data

## 3.2

## Data - Data providers

As discussed in section 1.5 PCAF, and other leading guidance, is generally **not entirely prescriptive** and this is consistent **with regard to data**. While PCAF does prescribe the general basis of proxy data, it is up to the institution to source and evaluate the relevance and/or accuracy of the data. Hence we **observe significant variation** in data sources utilised across financial institutions. Those that have been mentioned in disclosures are summarised below.





## Key insights:

The PCAF database is the most popular disclosed source for Banks and in the top 5 for Life Insurers & Asset Managers. While this database obviously has the advantage of being provided by PCAF itself, it provides proxies across multiple PCAF score methodologies and is fed data from other sources (such as Exiobase) and hence may provide more of a 'one-stop-shop' incentive to FIs, hence it's popularity.

Overall, **62% of Bank and 76% of Life insurer and Asset manager participants included mention of data providers** in their disclosures, however this was almost never consistent across all sectors/asset classes or an exhaustive list of data providers.

**Some data providers mentioned are tied to specific asset classes**, such as EPC (which is specific to UK books) to CRE or Mortgages, and hence are unlikely to be disclosed by institutions without a large portfolio in these asset classes.





# Target setting & decarbonisation strategy

Shaping your transition plan

# Financed Emissions: Deep dive insights – Target setting & decarbonisation strategy

04



Target setting & tracking - Interim and Net Zero Targets

With the introduction of new regulations—such as **TPT**, **ISSB**, and **CSRD**—FIs are increasingly expected to disclose both their current emissions and their **future emissions reduction targets**. These regulations vary in scope and focus: while ISSB and CSRD centre on sustainability reporting, the TPT framework addresses transition planning, guiding UK entities in articulating credible pathways to net zero. To demonstrate their climate commitments, FIs typically set two types of targets: **Net Zero Targets** (long-term decarbonisation goals) and **Interim Targets** (shortto medium-term milestones by sector or asset class). This section outlines key insights related to interim targets, including, where available, the methodologies and assumptions underpinning their determination.

## **Key insights:**

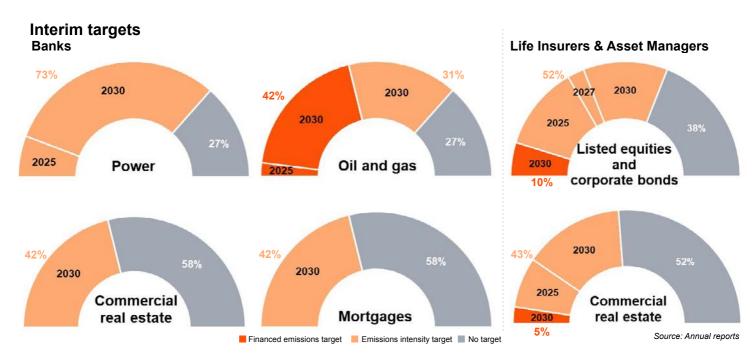
Across all sectors/asset classes **81%** of Banks and **86%** of Life Insurers & Asset Managers within our samples have disclosed at least one **interim target** for their portfolio, while only **46%** of Banks and **67%** of Life Insurers & Asset Managers have disclosed at least one **net-zero target**.

We have observed that **Banks** tend to offer a **more comprehensive** financed emission **disclosures**, the stats above show that the **Life insurance and Asset management** market **may** be **ahead** in **terms of targets**.

We note that Banks are disclosing **targets at sector level**, while some Life Insurers & Asset Managers are disclosing a **single target** as opposed to **multiple sector-specific targets**.

Across the majority of sectors we observe **2030** as the most common interim target year, however we note that the Life insurer and Asset Manager sample includes a broader range of interim target years than Banks.

We have observed a **trend** in the use of **production intensity targets** as **opposed to absolute emission targets** across most sectors, with the **notable exception of Oil & Gas**. This divergence stems from the fact that production intensity in the Oil & Gas sector is inherently constrained—being a fuel-based industry, its emissions per unit of output cannot be significantly reduced through technological innovation or use of alternative methods.



To ensure comparability, we have focused on sectors and asset classes which are widely covered by most institutions.

# Financed Emissions: Deep dive insights – Target setting & decarbonisation strategy



Target setting & tracking - Target resets

With **growing scrutiny on the credibility and transparency of climate targets**, FIs are under pressure not only to set ambitious decarbonisation goals but also to demonstrate robust governance around how these targets evolve over time. As methodologies improve, data quality increases, and regulatory expectations such as TPT, ISSB, and CSRD become more granular, some FIs are revisiting their previously set targets. In this context, there are **three** critical considerations: **baselining**, **target setting**, and **target tracking**.

Two key mechanisms through which this occurs are **target resets** and **rebaselining**. Target resets refer to the revision or replacement of previously disclosed targets, while rebaselining involves changing the baseline year against which progress is measured. In this section, we examine the extent to which Banks have engaged in these practices, and present insights into what this indicates about the maturity, transparency, and ambition of their net zero strategies.

## Key insights:

#### **Banks**

7

We've observed 19% of the Banks sample disclose a reset or rebaseline of a target. This is explored in more detail in the graph below. We might expect restatement rates to increase in coming years, as we approach 2030, an interim target year for many institutions.

The act of **re-baselining** likely reflects: **improved data quality**, **methodological refinements** (e.g. better emissions tracking), or alignment with **updated standards** such as PCAF. This indicates Banks are actively iterating on their financed emissions strategies as they mature.

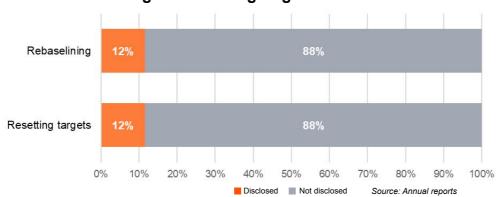
Although disclosures rarely include a direct comparison between original and restated targets, from conversations with clients, we are seeing FIs will **usually restate targets to align them to updated reference scenarios**. This is often accompanied by **disclaimers noting that the targets rely on assumptions** - such as technological advancements - that are **beyond the institution's control**.

We anticipate that FIs will need to **regularly review and adjust their targets** over time in response to variation and evolution of reference pathways and the shifts in global net-zero commitments. We expect FIs to establish a **robust transition plan** that demonstrates the **feasibility of these targets** will **enhance the credibility** of both the **decarbonisation strategy** and the associated goals

#### **Life Insurers & Asset Managers**

Our underlying data has shown **no Life Insurers or Asset Managers** have re-baselined or reset targets so we have not included a graph below. However, we do expect Life Insurers & Asset Managers to abide by the same standards in terms of target setting as Banks i.e. have a robust restatement policy.

#### Bank - Rebaselining and resetting targets



# Financed Emissions: Deep dive insights – Target setting & decarbonisation strategy

4.3

Target setting & tracking - Reference pathway selection

FIs have used benchmark scenarios which are reference pathways set by relevant industry bodies (IEA or regional / UK) to determine both their interim and net zero targets. This section summarises the scenarios used by Banks across sectors and Life Insurers & Asset Managers and overall book level. To ensure comparability, we have included only those sectors and asset classes for Banks which are covered by most of the institutions, namely the Oil and Gas, Power and Utilities, Mortgages and Commercial Real Estate. The varying granularities observed in the chart, provider vs specific pathway, are reflective of the detail included in disclosure.

## Key insights:

Across all sectors, for both Banks and Life Insurers & Asset Managers, we have seen a **significant increase** in the number of institutions **disclosing a reference pathway** since the YE 23 benchmark.

#### **Banks**

Fewer Banks disclosed reference pathways for Mortgages and Commercial Real Estate compared to Oil & Gas and Power & Utilities (75%, 79%, 96%, 96% respectively).

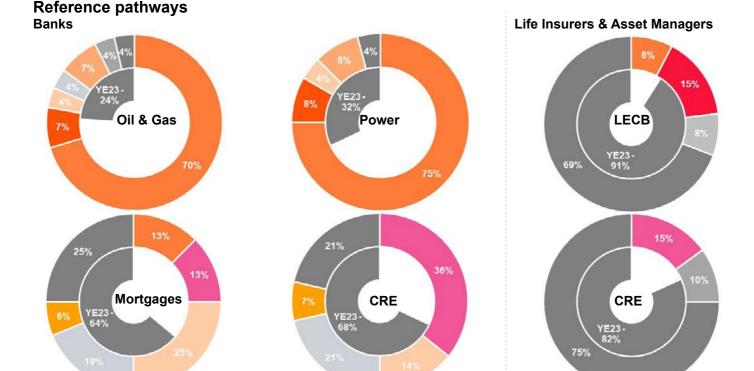
We also observe that reference pathway selection is much **more varied within Mortgages and**Commercial Real Estate, with 4 and 5 different pathways, respectively, achieving over 10% sample share.

Other sectors/asset classes include **far fewer reference pathways**. This reflects Banks that have not set targets for other sectors/asset classes as well as Banks that have not used reference pathways to set their targets. We note, in some cases reference pathways do not yet exist for specific sectors/asset classes.

#### **Life Insurers & Asset Managers**

■ IEA NZE ■ IEA ETP

Far fewer Life Insurers & Asset Managers (14% of participants) have disclosed a reference pathway across any sector/asset class, in comparison to Banks (73% of participants), as shown in the graphs below. However, as previously noted there is still a significant increase in reference scenario disclosure from the YE 23 benchmark.



CRREM



## How PwC can help

# How PwC can help you in your sustainability journey



## Sustainability reporting

- · Gap assessment.
- · Define reporting framework.
- · Implement and refine.
- · Ensure assurance readiness.



## Data sourcing & processing

- · External data selection and processing.
- Sensitivity and benchmarking analysis.
- Proxy sourcing and/or calculation.



## Emissions modelling & climate stress testing

- · Maturity assessment and level setting.
- · Emissions baseline.
- · Stress testing.
- · Risk management frameworks.



## Strategy development & transition planning

- · Decarbonisation strategy and optimisation.
- · Portfolio and counterparty management.
- Risk appetite.
- · Transition planning.
- Credit risk decisioning.



## Transformation roadmap & implementation

- Transformation roadmap development.
- Supply chain and procurement.
- · Operations and logistics.
- · People and culture.
- · Data, technology and cyber.
- · Operations and logistics.



#### **Assurance**

- Emission metrics e.g. absolute emissions, intensities, data quality scores.
- Sustainable finance.
- External disclosures.

## Other publications

- YE23 Financed Emissions Benchmarking
- Financed emissions: Navigating the data challenge
- · Navigating the sustainability reporting landscape in the UK for banks UK SRS

## GHG Emissions Analyser

To explore the **full benchmark dataset** and gain access to our comprehensive **GHG Emissions Analyser**, **please reach out to our team**.

# How PwC can help you in your sustainability journey

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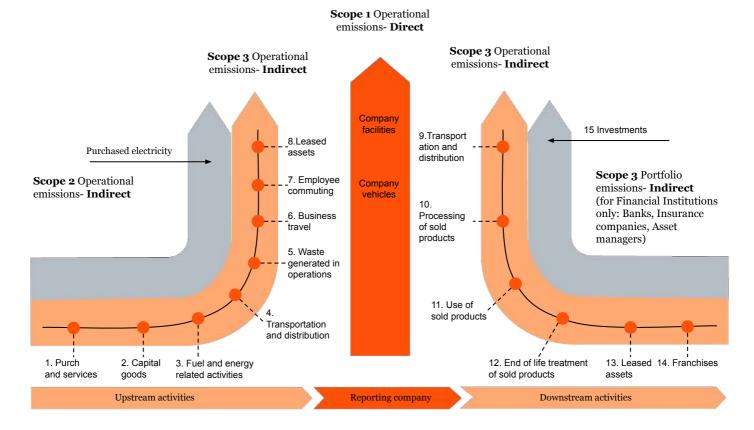
# Appendix

## Appendix - Background

The granularity of emissions reporting can be increased by reporting emissions at scope level, where:

- **Scope 1** is direct GHG emissions.
- **Scope 2** is indirect GHG emissions.
- Scope 3 is all other indirect GHG emissions not included in scope 2.
   Scope 3 emissions can be further broken down into upstream and downstream emissions, often referred to as the value chain.

The charts highlight the importance of **financed emissions reporting** in comparison to operational emissions. Which further emphasises the need for improved data, measurement and reporting.



Below we have included a brief description of some key terms:

#### **Brief description Financed** GHG emissions from lending or investment activities (e.g., mortgages, bonds, equity). emissions Operational GHG emissions from the institution's direct operations. emissions **Absolute** Total GHGs emitted, typically expressed in tonnes CO<sub>2</sub>e. emissions **Emissions** Emissions per unit of activity. intensity **PCAF Data** Rating scale (1 = best, 5 = worst) assessing reliability of emissions data used. Quality Score CO2e Carbon dioxide equivalent: Unified measure of different GHGs using global warming potential.

## Appendix - Graph context

The basis for the calculations and populations used in the graphs throughout this paper varies. Differences in taxonomy, timeframes, and portfolio compositions, among other factors, have required the application of judgement to ensure that the most relevant and meaningful insights are presented. The accompanying notes below clarify the context specific to each graph.

**Graph context** 

Disclosure	Assurance distribution	Page 4	Proportion of participants disclosing engagement of assurance providers.
	PCAF alignment	Page 5	Proportion of participants disclosing use of PCAF methodologies.
	Disclosure and guidance	Page 5	Proportion of participants disclosing use of other frameworks.
	Restatement	Page 6	Proportion of participants disclosing restatement of given metrics across any asset class/sector.
	Investment areas	Page 7	Proportion of participants disclosing investment into the categories provided. PwC have implemented their own judgement to map investment area to a category.
	Annual growth rate	Page 8	Average compound annual growth rate and average latest reporting year annual growth rate for the categories provided. PwC have implemented their own judgement to map investment area to a category.
Scope	PCAF asset class distribution	Page 10	Proportion of participants disclosing financed emissions for each PCAF asset class.
	Baseline year	Page 11	Proportion of participants disclosing the specified baseline year, as a percentage of those reporting any financed emissions baseline year within the given sector.
	Reporting year	Page 11	Count of disclosure of the specified reporting year, as a percentage of all financed emissions reporting year count within the given sector.
	Disclosure of GHGs	Page 12	Proportion of participants by the level of detail disclosed on GHG coverage - specifically whether all 7 GHGs (Kyoto protocol), some GHGs, or $CO_2e$ only are reported.
	GHGs in scope	Page 12	Proportion of participants disclosing inclusion of GHGs, across any asset class/sector.
	Financed emissions sector breakdown	Page 13	Proportion of participants disclosing the specified financed emission scopes, as a percentage of those reporting financed emissions within the given sector.
	Facilitated emissions sector breakdown	Page 13	Proportion of participants disclosing the specified facilitated emission scopes, as a percentage of those reporting facilitated emissions within the given sector.
	Value chain breakdown	Page 14	Proportion of participants reporting the inclusion of the specified value chain segment in their financed emissions metrics, expressed as a percentage of those who disclosed whether the segment is included or excluded.
Data	Data quality score figures	Page 15	All PCAF score metrics in this section (except for the percentages disclosed, which is the proportion of participants disclosing a PCAF score) include the latest data for each Bank and sector, with a minimum of 10 Banks or, if necessary, data for 2022 as the earliest.
	Data quality score boxplots	Page 16	Population includes the latest data for each Bank and sector, with a minimum of 10 Banks or, if necessary, data for 2022 as the earliest.
	Data providers	Page 17	Proportion of participants disclosing use of the given data source.
Target setting & tracking	Interim targets	Page 18	Proportion of participants disclosing an interim target.
	Rebaselining and resetting targets	Page 19	Proportion of participants disclosing the rebaselining or resetting of any financed emission target.
	Reference pathways	Page 20	Proportion of participants disclosing the given reference pathway expressed as a percentage of those who have disclosed a financed emissions target.

# Appendix - Sustainable finance categorisation

Owing to a lack of global taxonomy/standardisation in the market the classification used in the graphs is PwC own based on expert judgement and for the purpose of this benchmark only. The basis of disclosure varies in granularity and scoping, as well as the time period.

For transparency, we have provided below the definitions used to map/categorise each institutions investments. Note that categories have only been defined for investments where the benchmark population had multiple participants disclosing investment in that area across multiple reporting years:

#### **Category definitions**

Environmental / Green	Lending/investment where the proceeds have a specific environmental purpose.	
Social	Lending/investment where the proceeds have a specific social purpose.	
Sustainability-Linked	Lending based on sustainability KPIs.	
Real Estate	Lending/investment for more sustainable real estate.	
Vehicle Finance	Lending/investment for more sustainable vehicles.	
General	General ESG/sustainability investing and impact investing.	
Other	Other.	

## Appendix - Glossary

## **Brief description**

CRE	Commercial Real Estate PCAF asset class.			
CSRD	The Corporate Sustainability Reporting Directive (CSRD) is an European Union initiative which builds on the existing Non-Financial Reporting Directive (NFRD). It aims to enhance transparency and accountability by requiring all large companies and listed SMEs to regularly report on their environmental and social activities.			
FI	Financial Institution: Includes Banks, Asset Managers, and Life Insurers.			
G-SIB	Global Systemically Important Bank.			
GHG Protocol	Greenhouse Gas Protocol: The global standard for carbon accounting.			
GHGs	Greenhouse Gases: Includes CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, SF <sub>6</sub> , HFCs, PFCs, and NF <sub>3</sub> (mandated under the Kyoto Protocol).			
IEA NZE	The Net Zero Emissions by 2050 Scenario (IEA NZE Scenario) is a normative scenario that describes a pathway towards achieving net-zero carbon dioxide emissions by 2050, for the global energy sector.			
ISSB	The International Sustainability Standards Board (ISSB) is advancing global sustainability reporting through IFRS S1 and S2, building on TCFD recommendations. In the UK, these standards will inform the "UK Sustainability Disclosure Standards (SDS)", to be finalised later in 2025. Developed by the Department for Business and Trade, the UK SDS aim to align with ISSB while addressing local needs. Source: gov.uk.			
LECB	Listed Equity and Corporate Bonds PCAF asset class.			
NZBA	The Net-Zero Banking Alliance (NZBA) is the banking member of the Glasgow Financial Alliance for Net Zero (GFANZ). It compromises leading international Banks dedicated to funding ambitious climate initiatives, aimin to transition the economy to net-zero greenhouse gas emissions by 2050.			
PCAF	Partnership for Carbon Accounting Financials: Industry-led initiative providing guidance for calculating financed emissions; aligned with Scope 3 Category 15 under the GHG Protocol.			
Portfolio Alignment Team	The Portfolio Alignment Team is responsible for aligning an organization's projects and initiatives with its strategic objectives to maximise performance and resource allocation.			
SEC	The US Securities and Exchange Commission (SEC) has issued new rules that require disclosure of climate-related risks that could materially impact business or financial statements. The gathering and reporting may require significant changes to a registrant's systems, processes and controls.			
TCFD	The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information. TCFD guidance recommends that financial institutions report financed emissions in line with PCAF as it provides the granularity required to contribute to a consistent implementation of TCFD and comply with UK government requirements.			