TARGETING NET ZERO

The need to redesign bank decarbonization targets

RECLAIM Finance

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A Technical Briefing

Author:
Paddy McCully, Senior Analyst, Reclaim Finance

Lead Researcher:
Christophe Etienne, Net Zero Research Associate, Reclaim Finance

Reviewers:
Lucie Pinson, Reclaim Finance
Paul Schreiber, Reclaim Finance
Aurore Mathieu, Reclaim Finance

Technical Reviewer:
Ilmi Granoff, Senior Fellow at the Sabin Center for Climate Change Law, Columbia Law School, and Principal at Climate Technology Group LLC

Research intern:
Robert McKay

Graphic design:
Jordan Jeandon

Publication date:
September 2024

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FOREWORD

Over the better part of the last decade, banks and other financial institutions have taken up the charge to measure their exposure to clients' greenhouse gas emitting activities and set targets to reduce those exposures consistent with the economy achieving net-zero emissions by 2050. In this report, Reclaim Finance provides a sweeping independent review of the state of this effort. The report reveals an incredible volume and variety of sector targets and methodologies, but also shows that years of growing complexity have led to something of a methodological morass.

Just as "what gets measured matters," mismeasuring may well be making matters worse.

The report reveals three distinct problems:

First, the sheer variety of emission measuring and target-setting methodologies among banks, and often black box assumptions within them, is itself a problem. Each metric requires impractical levels of unpicking to understand its specific implications, making comparison and benchmarking among banks impractical. While daunting even for sustainable finance experts, it creates an impossible barrier for mainstreaming climate metrics beyond those professionals. The proliferation of approaches gives banks somewhat of a free pass. They can tend to their own wild array of climate metrics, and not trouble with the consequence of greater fragmentation.

Second, the widespread reliance on "financed emissions" methodologies to quantify and attribute emissions to a portfolio, particularly those of the Partnership for Carbon Accounting Financials (PCAF), has created a false sense of precision that the methodology cannot support. The purpose of such emissions attribution has always been accountability, but when the numbers a metric produces are as frequently statistical artifacts as they are useful indications of material economy outcomes, then attribution and accountability diverge.

Finally, and perhaps most importantly, despite growing sophistication in the tools used to track portfolio exposure to emissions over time, the methodologies have not demonstrated that they are changing either the behavior of emissions-intensive borrowers or the banks' relationships to them. This is really the standard against which these methodologies should be judged.

The banks, to be fair, have pointed to many of the shortcomings and challenges of their climate metrics and targets in their own reporting. Their grumblings have understandably (but perhaps too readily) been dismissed as self-serving efforts to avoid accountability. But if the banks are doing anything wrong here, it is being too permissive of their own wheelspin. No one can cast the same doubts on Reclaim Finance. The report shows the full scope of the problem and, we hope, forces the industry to hold itself to a higher standard.

The overemphasis on target-setting itself may be part of the problem here. We may be squandering resources to perfectly calibrate the stated goals of corporates and their financiers at the cost of securing material incremental change from each. This is one reason that I have long been a proponent of tracking corporate capex in high- (and zero-carbon) capital assets at the company and portfolio level. With a modicum of detail, a company's capex plans will tell you very clearly where their emissions are heading in the medium-term regardless of their stated aspirations: it holds companies to where they put their money over where they put their mouth.

While Reclaim Finance is sharply critical of bank approaches to emission targets, they do give the benefit of the doubt to target-setting as a concept and recommend a handful of financial and emission targets which they believe have the potential to be effective, although they regard target setting as second best to policy-based measures. This still leaves open the most damning question, though: can we afford 10 more years of methodological fiddling with targets and metrics while the world burns? Ultimately, if they do not push banks to change their own behavior toward fossil fuel companies, and to change the behavior of fossil fuel-demanding companies, they are not worth much.

Ilmi Granoff

Senior Fellow, Sabin Center for Climate Change Law, Columbia Law School, and Principal, Climate Technology Group LLC

INTRODUCTION

Hundreds of banks, investors and other financial institutions have announced decarbonization targets in recent years. These targets are intended to mark interim steps on their way to reaching "net zero" emissions by 2050, with the goal of keeping global warming under 1.5°C. Most interim targets are currently set for 2030. And most are based on reducing financial institutions' Scope 3 emissions — those that the institutions are responsible for due to their provision of loans, investments, insurance and other financial services to corporations.

This briefing focuses on the decarbonization targets set by 30 members of the UN-Convened Net-Zero Banking Alliance (NZBA), a voluntary body which includes most of the major global banks outside of China.[1] The NZBA is unique among the financial sector net-zero alliances in that it requires its members to set targets for each of the most carbon-intensive industrial sectors, including oil and gas, power generation, steel, cement and transport. Such sectoral targets can in theory be more effective than portfolio-wide targets as they focus financial institution efforts on the most polluting areas of the economy, in particular fossil fuels, and can be customized to the specific characteristics of each sector.

Our detailed analysis covers 243 sectoral targets set by 30 of the largest banks in Europe, North America and Japan.[2] Other types of targets, such as for nature, and for increasing financing of sustainable activities and phaseouts of fossil fuel infrastructure, are also important but are outside the scope of this report. The great majority of targets are expressed in terms of reducing emissions in alignment with various mostly 1.5°C scenarios. A minority (26) are based on reducing credit exposure to fossil fuel production.

Since the emergence of the NZBA in 2021, these sectoral portfolio decarbonization targets have come to replace sectoral policies as the main vehicle for banks to implement their stated commitments to addressing climate change. Sectoral decarbonization targets are if anything likely to grow in importance in coming years as they are becoming embedded in emerging regulations on transition plans. This is especially the case in the EU where large financial institutions will have to report on their emission reduction targets and explain their compatibility with 1.5°C as well as the actions to be taken to meet the targets.

This briefing explores the design of the targets adopted by banks and their likely effectiveness. We find numerous problems and inconsistencies with target design and a lack of transparency that hinders understanding of target coverage and ambition. We explain which target types and parameters are most likely to ensure meaningful changes in banking practices and send a signal to the highest polluters that they will face increasing difficulties in raising finance unless they reform their business models.

EXECUTIVE SUMMARY

An analysis of the sectoral portfolio decarbonization targets of 30 of the largest banks in the UN-Convened Net Zero Banking Alliance (NZBA) calls into question the value of most existing targets as tools to advance real-world emission reductions. A new approach is needed if bank targets are to play a meaningful role in aligning the economy with 1.5°C.

We have identified 13 distinct types of targets used by the banks in our analysis. We conclude that only two of these target types are likely to be effective in driving decarbonization:

- Those which reduce financing to fossil fuel supply from both lending and capital markets activities (we term these **sectoral portfolio financing volume (SPFV) targets**); and
- Those which lower the emissions intensity of high fossil fuel demand industrial sectors (**weighted average physical intensity (WAPI) targets**).

We also recommend two additional target types:

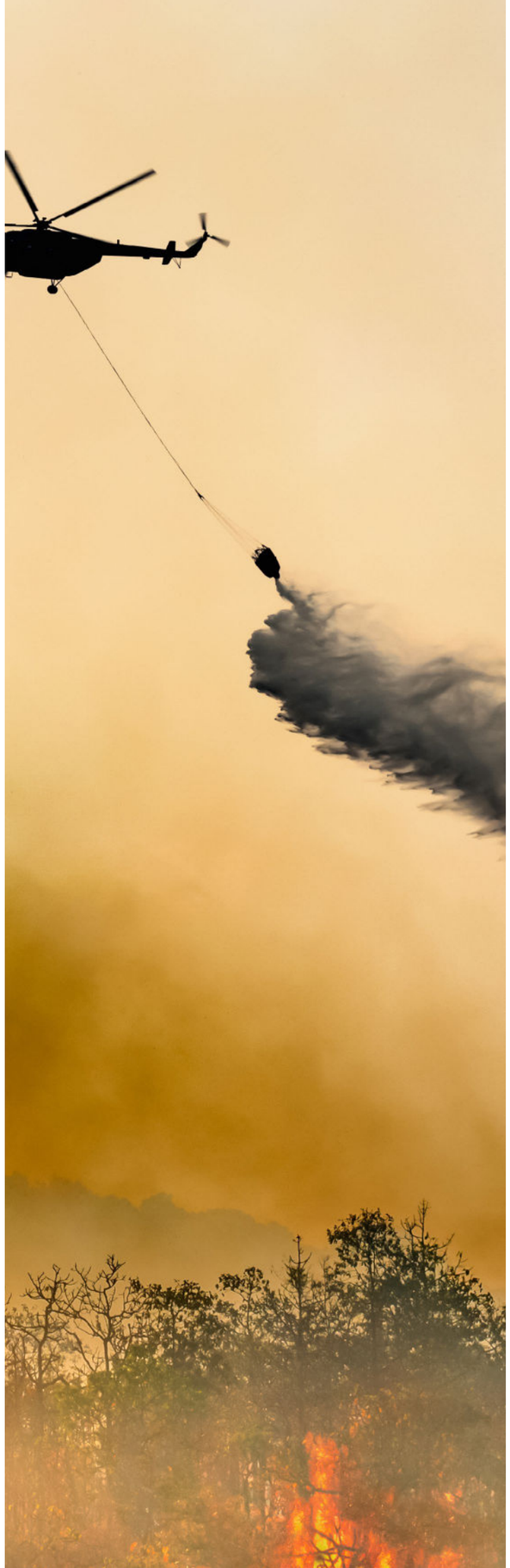
- Those which reduce absolute client emissions and do not use an attribution factor (**absolute sectoral portfolio emissions (ASPE) targets**); and
- Those which require bank clients to adopt robust 1.5°C-aligned decarbonization strategies (**sectoral portfolio coverage (SPC) targets**).

To be effective, these target types will need to be implemented using a suite of different targets disaggregated by scopes, financing activities (especially lending and capital markets activities), gases (separate CO2 and methane targets for fossil fuels are particularly important), and other relevant parameters. **Targets need to be transparent, comprehensive in their coverage, as well as ambitious and scientifically justifiable in terms of their 1.5°C alignment.**

Above all, targets need to be adapted to the features of different economic sectors. The most basic distinction in this regard is between fossil fuel production, which needs to be phased out, and sectors which consume high volumes of fossil fuels such as electricity generation, steel, cement and transport which need to be decarbonized. Because coal, oil and gas are responsible for the great majority of greenhouse emissions, these are by far the most important sectors that must be targeted.

For methodological and data reasons, the most effective targets for fossil fuels are likely to be those based on reducing financial flows to fossil fuel companies from lending and capital markets activities (SPFV targets). Eleven banks in our analysis have SPFV targets for fossil fuels, but these are based only on lending exposure. No banks in our analysis have set targets to reduce the volume of their capital markets financing for fossil fuels. Most exposure targets cover only coal and aim for zero credit exposure by 2025 (Intesa Sanpaolo), 2030, or 2040. BNP Paribas, Crédit Agricole, Société Générale and ING are the only banks with exposure targets for oil and gas.

Absolute sectoral portfolio emission (ASPE) targets should be used to complement SPFV targets. Out of the 30 banks in our sample, 18 have what are labeled absolute emission reduction targets for coal and/or oil and gas sectors. Unfortunately, this is a misleading description. Almost all of these targets assign only a very small part of the emissions of each company to their banks and other financiers. This is because the emissions are multiplied by an "attribution factor" which is the amount of finance provided to the company from each financier divided by the market value of the company.



Banks use these corporate value-based attribution factors as they are recommended by an industry body known as the Partnership for Carbon Accounting Financials (PCAF) to which most major banks belong. **PCAF's formulas are used to calculate "financed emissions" — those associated with loans and investments — and "facilitated emissions" — those from bank capital market activities.** The basic concept is that the higher the proportion of financing a bank or other institution provides for a client or investee, the more of its emissions that institution should take responsibility for.

Using these PCAF attribution factors means that a bank's financed and facilitated emissions for a sector could drop if the combined value of the companies in the bank's sectoral portfolio increases, even without any fall in the companies' emissions and in the bank's volume of financing to that sector.

None of the banks in our analysis have set unattributed ASPE targets. Such targets may be unpopular with banks as their baseline emission quantities would be many times higher than "financed" and "facilitated" emissions (and the same emissions would be counted by each of a company's bankers). **But the point of carbon accounting and target setting for banks is not to ascertain an exact value for each banks' climate impact, but to develop standardized methodologies that first create incentives for banks to pressure their borrowers and clients to reduce real-world emissions, and second enable bank staff and other stakeholders to evaluate if their engagement efforts are causing emissions to fall.**

Going forward, banks need to stop using attribution factors and use emission reduction targets based on the total emissions of all the companies in their sectoral portfolios.

For non-fossil fuel sectors where a rapid conversion to low-carbon production methods is needed, emission intensity targets should be used. They must be based on physical (rather than financial) intensity: emissions proportional to the amount of electricity, steel, cement or other physical commodities

produced (or for transport, emissions per kilometer travelled). Intensity targets should also be aligned with credible calculations for the sectoral efficiency improvements needed to match the absolute emissions pathways in 1.5°C scenarios.[3]

To be meaningful, intensity targets must not be based on a financial intensity metric such as tons of CO2 per million dollars of loan exposure.[4] **They also must not use an attribution factor as this ties emission intensities to corporate value in the same misleading manner as occurs for absolute emissions.**

Non-attributed physical emission intensity targets are commonly used by banks – half (121) of the targets in our sample are these WAPI targets. We also count 50 targets that apply an attribution factor to their physical or financial intensity target.

Non-attributed absolute emission targets can also usefully supplement physical intensity targets in non-fossil fuel sectors.

Emission and financing reduction targets can be supplemented with sectoral portfolio coverage targets which have the potential to aid real-world decarbonization of both fossil and non-fossil sectors. SPC targets are based on the percentage of clients in a portfolio who have made meaningful climate commitments, such as adopting reliably certified transition plans. No bank to our knowledge is currently using a portfolio coverage target, although these are used by some investors and are promoted by the Net Zero Asset Manager initiative and the Science Based Targets initiative.

An indicator that Reclaim Finance has not yet seen in bank targets but which merits more attention to how it can be incorporated into both targets and policies is the extent to which corporate capital expenditure (capex) plans are aligned with 1.5°C. Planned capex on items such factories, smelters and resource exploration and exploitation are likely the best indicator of a company's emissions trajectory.

In addition to getting target types right, banks also need to ensure that their targets comprehensively cover their own activities as well as their clients' material business activities and emission scopes. **Current targets mostly include only partial coverage of bank and client activities, and the extent of coverage is rarely fully transparent.** And targets must also be aligned with credible 1.5°C scenarios.

The biggest gap in bank target coverage is for capital market activities. Around half of bank finance for fossil fuels is provided via the facilitation of bond issuances. Only seven banks in our analysis have at least one target with at least partial coverage of their capital markets activities. All are based on a facilitated emissions formula using an attribution factor.

In April 2024, the NZBA issued new guidelines which require its members to set facilitated emission targets, so this coverage gap should soon be closed. **But the new guidelines allow banks to set combined targets for financed and facilitated emissions, rather than requiring separate targets for each financing type, and they encourage the use of a "weighting factor" that reduces reported facilitated emissions by two-thirds.**

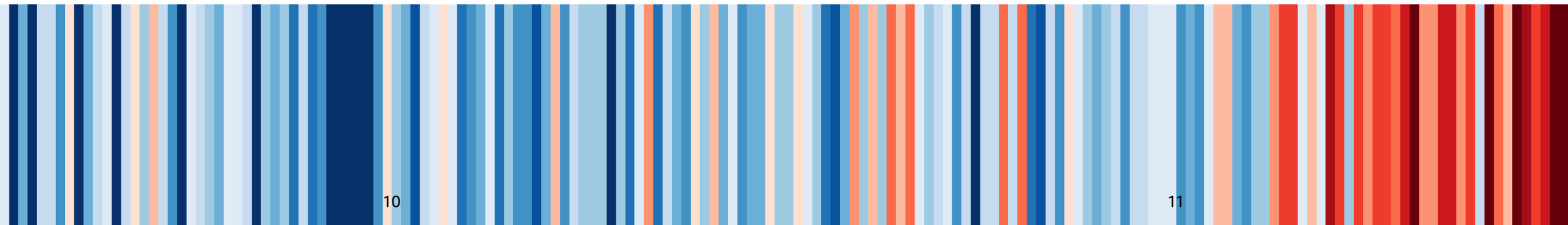
Since its original 2021 guidelines, the NZBA has required its members to adopt targets that are aligned with 1.5°C scenarios with no or low overshoot and that "rely conservatively" on negative emissions. More than half (129) of the targets in our sample are said to be benchmarked to the IEA's Net Zero Emission pathway, which meets the NZBA's scenario requirements. A further 27 targets are claimed to be aligned with other explicitly 1.5°C scenarios. **But partly due to the NZBA's failure to specify detailed and robust target design parameters and disclosure practices, and partly due to the banks' own lack of commitment to credible and transparent targets, it is impossible to evaluate if most targets are indeed aligned with 1.5°C.**

Judging alignment with 1.5°C scenarios is also complicated by banks potentially allowing their clients to "meet" their targets through the large-scale use of offsets instead of real-world emission cuts. Despite repeated attempts at ensuring their quality over the past quarter century, offsets cannot be reliably assured to represent emission reductions, regardless of claims made for their additionality or their compliance with certification schemes. Just over a third of the banks in our sample explicitly state that they do not allow their clients to use offsets for meeting their targets, at least until they judge more credible offsetting standards and practices to be in place. The rest either explicitly allow offsets or have not published a position.

Even if the issues described above were to be solved, a fundamental problem with financial institution emission accounting and targets would persist: no methodology has yet been developed to account for the full impact of financing decisions over the long-term. This is one reason why it is vital for banks to have policies in addition to targets. PCAF, for example, recommends that that a bank should only account for the full emissions from a corporation receiving a loan for the year that the loan is made. The emissions allocated to the bank then decline in proportion to the rate at which the loan is paid off. As corporate loans often have terms of only three to four years the emissions impact of a loan on a bank's carbon accounts will have disappeared within a few years. Emissions from corporations receiving new financing thanks to a bank's capital markets facilitation should, under PCAF's methodology, only be counted in the year the transaction happens. But any fossil fuel infrastructure built (or rehabilitated) with bank financing will lead to emissions for many years or decades after the initial financing decision.

Financial regulators and supervisors need to enact strong oversight of the quality of banks' targets and their level of ambition as part of robust transition plans. Net-zero committed banks in turn must take responsibility now for setting their own robust 1.5°C targets. And these banks must make serious efforts to meet their targets, and not just ignore or weaken them if it looks like achieving them will require the banks to change how they do business.[5]

As members of the NZBA and PCAF, banks that take seriously their climate commitments must also use their influence to greatly improve the NZBA's target-setting guidelines and PCAF's methodologies. This will increase pressure across the banking industry for coherent, meaningful targets accompanied by action plans to ensure the targets are met.



1. TARGET SETTING STANDARDS, GUIDELINES AND REGULATIONS

Until the early 2020s, the most prominent financial institution actions on climate were sectoral policies that restricted finance to some parts of the coal and, to a much lesser extent, oil and gas industries. However, from the start of this decade many banks, investors and insurance companies have shifted their focus to adopting emission reduction targets.

The number of corporate and government net-zero targets ballooned in the wake of the IPCC's 2018 report on keeping global warming under 1.5°C. This showed that the world needed to halve its emissions by 2030 and to reach net zero by 2050.[6] Private finance responded to this new discourse on net zero by setting up a series of alliances and initiatives which led to the formation of the Glasgow Financial Alliance on Net Zero (GFANZ) in April 2021. GFANZ members are supposed to commit to "high ambition, science-based targets" that deliver "their fair share of 50% emission reductions this decade" and to review their targets every five years. They are also supposed to report annually on their progress toward this goal.[7] GFANZ documents mention the importance of financial institutions setting sectoral policies, especially for fossil fuels,[8] but the initial emphasis was on emissions targets, and this emphasis is reflected in the guidelines of the GFANZ member alliances.

As of mid-2024, GFANZ's membership of more than 675 financial institutions was spread across seven financial sector-specific alliances. Most finance sector decarbonization targets have been set as part of financial institutions' commitments as members of these alliances. The largest alliances, covering banks, asset owners and asset managers, currently require their members to set decarbonization targets. Each of the alliances sets their own guidelines for the types of targets required and for how their members should report on progress.[9] Box 1 gives key features of the Net-Zero Banking Alliance (NZBA) and Appendix 1 gives an overview of key information on the other main sectoral alliances.

This briefing focuses on bank portfolio decarbonization targets. It is largely based on a detailed analysis of the 243 sectoral targets of 30 NZBA members: the largest banks in France and the US (six banks in each), Canada and the UK (four banks in each), Japan (three banks), Italy and Spain (two banks each), and Germany, Netherlands, and Switzerland (each with one bank).[10] A tracker with data on each of the sectoral targets set by these banks as of August 2024 is available on reclaimfinance.org as a downloadable excel file.[11] A sample of some of the fields covered in the tracker is given for fossil fuel targets in Table 1. Other types of targets, such as for deforestation and biodiversity, and for increasing financing for sustainable technologies and practices and phaseouts of fossil fuel infrastructure, are also important but are outside the scope of this report.

Box 1: Key features of the UN-Convened Net-Zero Banking Alliance (NZBA)

Members: 145 banks from 44 countries.

Total assets: $74 trillion, representing 41% of global and 60% of non-Chinese global banking assets[12] (only one Chinese bank is a member).[13]

Target type: "sector-level targets shall be set for all, or a substantial majority of, the carbon-intensive sectors".[14]

Target coverage: "shall" cover emissions from lending and (from April 2024) capital markets arranging and underwriting (both equity and debt).[15] "Should" cover investment activities.[16] from most carbon-intensive sectors.

Scopes: "targets shall include their clients' Scope 1, Scope 2 and Scope 3 emissions, where significant and where data allows".[17]

Scenarios: "shall" be aligned with no or limited overshoot 1.5°C pathways (IPCC "or equivalent"), and "shall rely conservatively on negative emission technologies."[18]

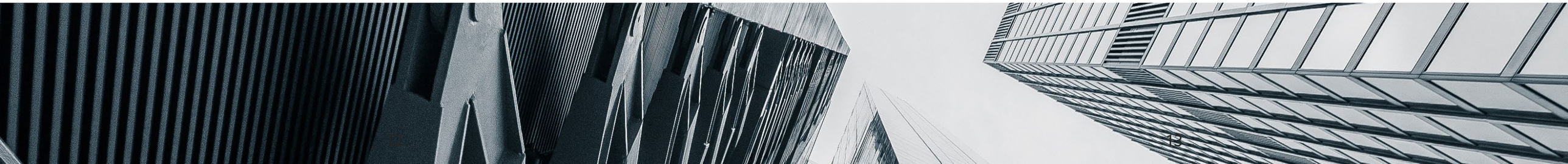
Convenors: UN Environment Programme-Finance Initiative (UNEP-FI) and the UN-supported Principles for Responsible Investment (PRI)

a. The Partnership for Carbon Accounting Financials (PCAF)

Most finance sector portfolio decarbonization targets are based, at least to some extent, on the methodologies for greenhouse gas accounting and reporting developed by PCAF. Since its formation by a group of climate-committed Dutch banks and investors in 2015, PCAF has grown massively and gone mainstream. More than 500 financial institutions are now committed to assessing and disclosing the emissions from their financing activities according to PCAF guidance.[19] Some of the world's largest banks, investors and insurers are now involved in its governance.[20]

PCAF defines three conceptually distinct types of "attributed emissions": [21]

- **Financed emissions:** Emissions associated with loans and investments. This was the initial methodology developed by PCAF in 2020. It now covers seven asset classes



including investments in listed equity and corporate bonds, business loans, project finance and mortgages.

- **Insurance-associated emissions:** Emissions associated with re/insurance underwriting. The relevant methodology was published in November 2022 and is not yet widely used.
- **Facilitated emissions:** Emissions associated with banks' facilitation of companies raising money from the capital markets through issuances of bonds and, to a lesser extent, stocks. PCAF published its long-awaited facilitated emissions methodology in December 2023.[22] **It requires banks to apply a 33% "weighting factor" to their annual facilitated emissions total,[23] meaning that banks only need to report a third of the emissions from their capital markets activities. Financed emissions are not subject to a weighting factor.[24]**

PCAF's attribution problem

Allocating responsibility for corporate greenhouse gas emissions to the institutions that finance them is much more complex than might first appear. Under PCAF's methodologies, emissions from corporations are allocated to financial institutions by multiplying the corporation's emissions by an "attribution factor".

PCAF's basic rationale for using an attribution factor is that it would be unfair and misleading to allocate all of a company's emissions to each of its financiers, regardless of the volume of their financing. Following this logic, the higher the value of a financial institution's support to a company, the higher the percentage of the company's emissions that the financial institution should show on its books. For example, a bank with a $10 million lending exposure to an oil and gas company should only report its financed emissions from that company as being 10% of the amount reported by a competitor bank with a $100 million exposure.

PCAF's attribution factor is calculated by taking the amount of a financial institution's outstanding commitments to a company and dividing it by the value of the company (see formula below).

$$\sum_{c} \frac{FIN_c}{CV_c} \times CE_c$$

where c = Company c
FIN = Company exposure
CV = Company value
CE = Company emissions

For listed companies, value is calculated using a standard accounting concept called enterprise value including cash (EVIC) which is the total value of a company's shares plus its total debt; for private companies, book value of total equity and debt is used.

PCAF's methodology runs into serious problems because corporate value fluctuates significantly over time.[25] This means that attributed emission factors can vary widely from year to year regardless of changes in the real-world emissions of the relevant company or sector. **So while PCAF's methodologies could meaningfully compare different bank financed or facilitated emissions at any specific moment in time (provided consistent target parameters across banks), they fail to give a meaningful picture of how the real-world emissions of that bank's client companies are changing over time, or of how their lending exposure or capital market facilitation volumes are moving.**

Using EVIC in the denominator of the attribution formula means that if the sum of the EVIC of the companies in a bank's sectoral portfolio rises, its attributed emissions will fall even if the bank's volume of financing to those companies and their emissions stay flat. And conversely the banks' financed and/or facilitated emissions for that sector may rise if the aggregated EVIC of the companies in that sectoral portfolio drops. As an example, oil and gas companies' stock prices declined substantially because of the global pandemic in 2020, recovered in 2021, and then soared in 2022 after Russian's invasion of Ukraine.[26] **Canadian bank BMO notes that the emissions of the public companies in its oil and gas lending portfolio were mostly flat in 2020, while its financed emissions for that sector rose by almost 40%. The following year these companies' emissions declined by 1% — while BMO's oil and gas financed emissions plummeted by 45%.[27]**

The 2021 and 2022 boom years for oil and gas enabled many banks to meet their oil and gas financed emissions targets for 2030 years ahead of schedule. Deutsche Bank, for example, reported a 29% reduction in oil and gas financed emissions for 2022, compared to its 2021-2030 target — set only in October 2022 — of a 23% cut.[28] Crédit Agricole set a target in June 2022 of reducing its oil and gas absolute financed emissions by 30% between 2020-2030. As of the end of 2022 it had already cut these "emissions" by 40%.[29] The French bank increased this target to -75% in December 2024.[30] This is far more ambitious than its original target but also possible to meet without substantial cuts in the emissions from or its exposure to its oil and gas clients if these companies' combined market value and debt levels increase sufficiently.

The weaknesses of the PCAF attributed emissions methodologies have been recognized for several years. In 2020 the Paris Agreement Capital Transition Assessment (PACTA), which was developed by the 2° Investing Initiative thinktank in cooperation with a group of major banks, noted that:

> "'Financed emissions' (emissions normalized by a financial indicator) cannot be used as a measurement of [climate scenario] alignment given that climate scenarios do not provide a roadmap for this indicator."[31]

More recently other NGOs and analysts have also pointed to the problems with the PCAF attribution methodologies.[32] Several banks, including Citi, Deutsche Bank, HSBC and RBC, have pointed out in their 2022 and 2023 climate reports that their rapid progress toward meeting their financed emissions targets (particularly for absolute emissions in the oil and gas sector) is at least partly an artefact of using a financial attribution factor.[33]

In early 2024 PCAF itself implicitly recognized the issue and announced a new working group to address "fluctuations in absolute GHG inventory" due to the use of financial attribution metrics.[34] **The key issue for PCAF is whether they are willing to drop the use of these metrics (see Part 3 below) or if they will only recommend tweaks that might reduce the extreme volatility resulting from the use of EVIC in particular, but not solve the basic problem of the lack of a strong correlation between changes in attributed emissions and changes in real-world emissions.**

Time and securitization

There are also other issues which mean that attributed emissions can be a poor indicator of financial institutions' climate impact. One is how they deal with emissions over time. Providing capital for an oil major in 2023 will likely help enable it to open up new fields and build new pipelines and LNG terminals, thus leading to emissions that may continue for decades. But PCAF's methodology allows a bank supporting that oil major to count only the company's emissions over the typical several year term of a corporate loan — and only for one year in the case of a capital markets transaction.

Another issue is that loans may be securitized (converted into bonds and sold to investors) before they are paid off.[35] So a bank could, for example, make a loan to an oil company which it then sells off to investors before the end of its financial year when it calculates its annual financed emissions. It would thus not have to report responsibility for any of the oil company's emissions. Bloomberg reported in March 2024 that a hedge fund manager claimed to be in talks with "a number of banks" to create a new form of securitization that would be specifically aimed at taking financed emissions off bank's books. Indeed, the European Central Bank has long warned about banks "window dressing" their financial risks by shrinking balance sheet items that are of concern to financial supervisors before reporting dates, and expanding them right after. This hides the true risks banks are exposed to - and it is not unlikely that they would rely on similar practices to artificially reduce reported emissions.[36]

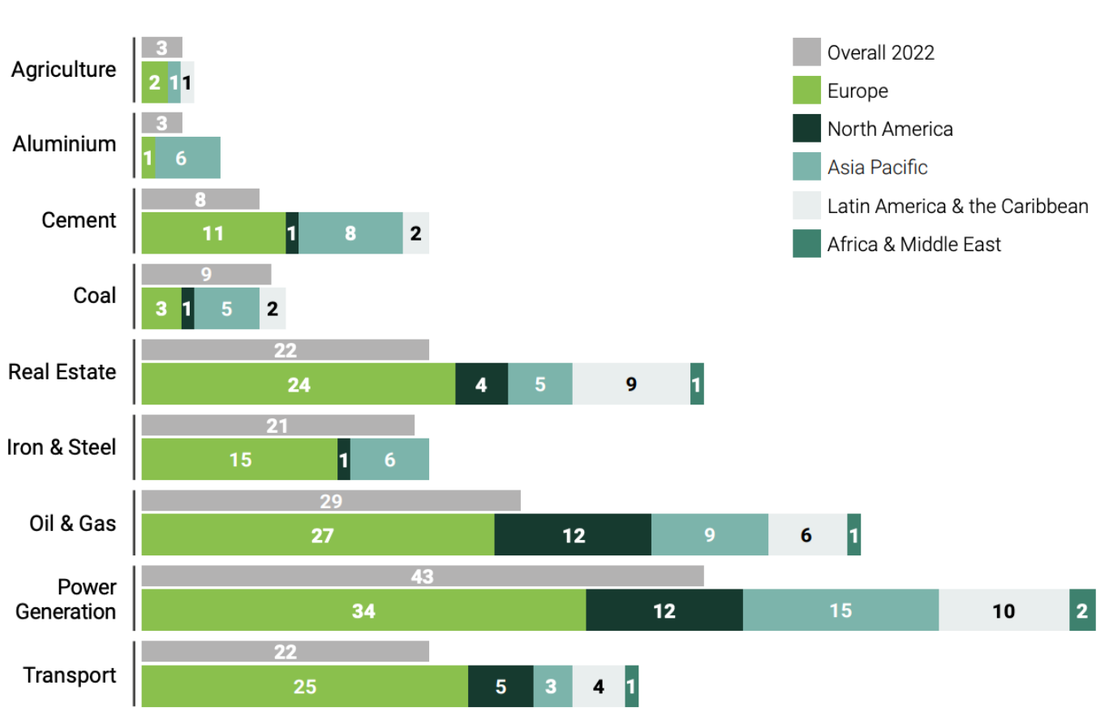
b. The Net-Zero Banking Alliance (NZBA)

The NZBA is the only one of the GFANZ alliances to require sectoral, as opposed to only portfolio-wide targets. Sectoral targets ensure that financial institution efforts focus on the most polluting sectors. They also have the potential to provide increased transparency allowing stakeholders to assess the ambition of a financial institution's targets and the adequacy of their plans and actions to meet these targets. Setting targets on a sectoral basis also allows targets to be customized to the specific characteristics of each sector.[37] It also means that the integrity of targets in sectors with better emissions data (such as fossil fuels) are not contaminated with those with poor quality data (such as real estate). As of the end of September 2023, 96 NZBA banks had set targets for 2030 or sooner for at least one sector. The greatest number of targets was for power generation, with 73 banks having set targets. This was followed by oil and gas with 55 banks (see Figure 1).[38]

The inclusion of facilitated emissions

The NZBA's original target-setting guidelines from April 2021 required targets to be set for the financed emissions from the bank's lending activities.[39] The guidelines were updated in March 2024 with a requirement for investment banks to include their facilitated emissions in their targets by November 2025.[40] This will significantly increase emissions coverage: in recent years the volume of financing for fossil fuel companies from capital markets issuances has been roughly equal to the volume of financing they received from loans.[41]

Figure 1: Sectoral targets set by NZBA members by region

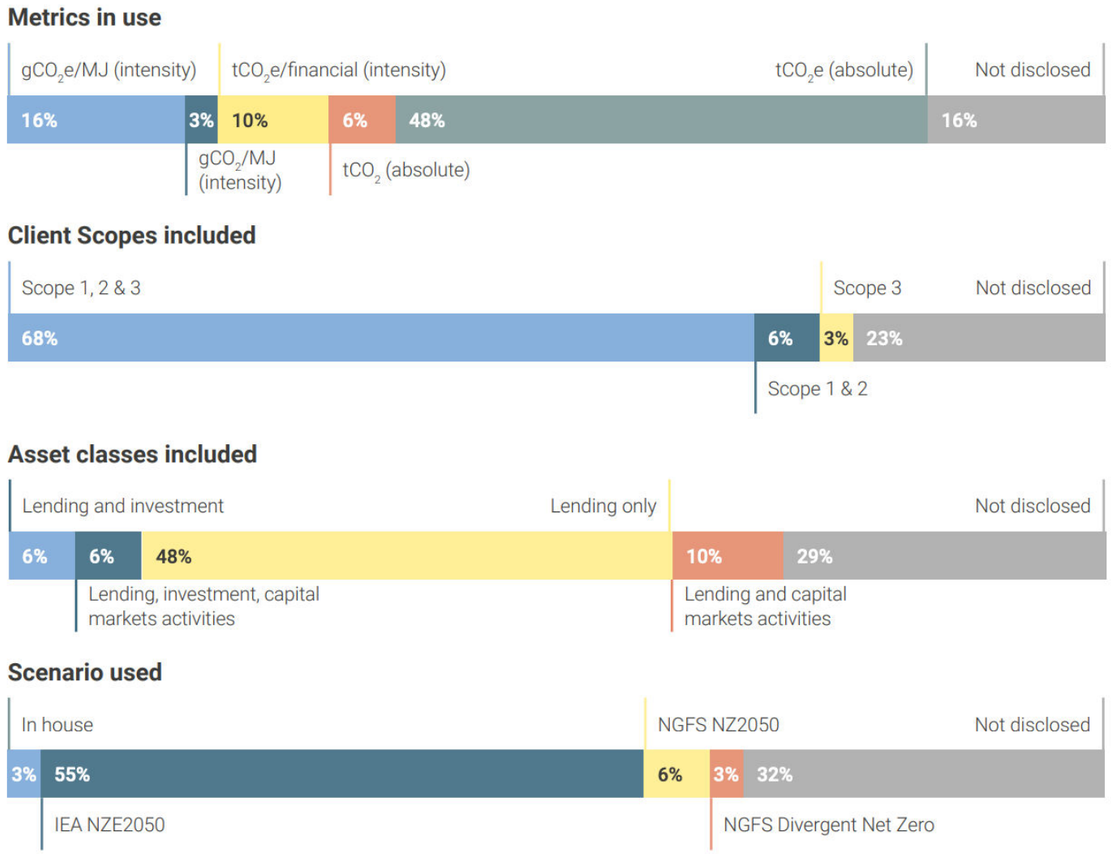


Source: NZBA, 2023 Progress Update

PCAF requires facilitated and financed emissions to be reported separately.[42] But the NZBA does not explicitly require separate reporting of these two emission types, allowing banks to combine facilitated and financed emissions targets.[43] As banks have long maintained, these are different types of finance (exactly the justification for the banks in PCAF insisting on the 33% weighting of facilitated emissions reporting); and the emissions are calculated using different methodologies, so they should logically be reported separately and have separate targets.

The NZBA does not mandate that its members use PCAF's methodologies for either financed or facilitated emissions, stating only they should use "credible sources" which "may refer to" PCAF.[44] NZBA members follow PCAF for many of their financed emissions targets. Presumably many will also use the PCAF facilitated emissions methodology and apply its 33% weighting factor to their facilitated emissions. **This means that bank targets will be able to blend unweighted financed emissions targets with weighted facilitated emissions targets. This will make it impossible to compare the level of ambition between banks' lending and capital markets targets, or between banks and temperature pathways, or to track progress on meeting targets for each type of finance.**

Figure 2: Parameters used in bank oil and gas targets



Source: NZBA, 2022 Progress Report

Lack of clear criteria for target design

The NZBA's new guidelines still give its members wide latitude on key issues of target design. The result is that bank portfolio decarbonization targets are based on a broad array of varying methodologies, levels of ambition, comprehensiveness and transparency. This diversity makes it very difficult to make meaningful comparisons between targets and the scenarios they are supposed to be aligned with, and between targets from different banks.

The impact of this lack of clear target design requirements can be seen in Figure 2, taken from the alliance's 2022 Progress Report. This shows some key parameters of NZBA members' oil and gas targets and the variety of different ways that the banks have defined these parameters. As an example, the 31 banks that had set oil and gas targets by mid-2022 were using at least five different emission metrics. Five banks did not even disclose the metrics used in their targets.

In its 2022 progress report, the NZBA noted that for reasons including "the variety of carbon accounting methodologies" used by its members, "it is currently not possible to make a judgement on the quality of targets, to calculate the anticipated impact of the targets on global emissions, nor is it reasonable to speculate on the likelihood of an individual member's meeting their intermediate targets."[45] The NZBA's new guidelines were an obvious opportunity to address this problem, including through mandating the use of absolute emission metrics, and setting clear requirements as to which parts of their clients' value chains should be included for which sectors. This opportunity has been missed.

c. Emerging regulations on financial institution decarbonization targets

Bank target setting practices will soon need to respond to regulatory mandates, and not just the voluntary standards and guidelines of PCAF and the NZBA. This has the potential to improve considerably the adequacy of target designs and transparency. The voluntary bodies should welcome the emergence of robust regulations on targets and update their recommendations to ensure that regulations set the floor for target setting ambition rather than the ceiling.

The reporting of climate targets and metrics in financial disclosures was one of the core elements in the 2017 recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).[46] Since then, the TCFD's recommendations have influenced many accounting regulations and norms, in particular the standards from the International Sustainability Standards Board (ISSB). To some extent, these require financial institutions to disclose and explain their climate-related targets. The ISSB framework was finalized in June 2023, and by May 2024, 20 jurisdictions, which combined represent over half of global GDP, had announced steps to partly or fully align their sustainability reporting standards with those of the ISSB.[47]

The EU's Corporate Sustainability Reporting Directive (CSRD), which started to come into force at the start of 2023, will require tens of thousands of companies and financial institutions doing business in the EU to disclose their climate transition plans.[48] Companies must report according to the European Sustainability Reporting Standards which require corporate transition plan disclosures that include emission reduction targets. The disclosures must include an explanation of the targets' compatibility with 1.5°C and the actions to be taken to meet them.[49] CSRD reporting standards specific to banks and other financial institutions are currently under development.[50] Other jurisdictions, including the UK, Australia and New Zealand, are working on sustainability disclosure norms which are likely to be reflected in legislation.[51]

In the meantime, regulators are starting to realize that addressing climate risks requires action on decarbonization targets and related plans. The Canadian Office of the Superintendent of Financial Institutions (OSFI) issued guidance in 2023 which establishes expectations on how banks and other federally regulated financial institutions should manage climate-related risks. The guidance mentions that financial institutions should implement climate transition plans with emission targets.[52] In the EU, the Capital Requirements Directive has mandated the European Banking Authority to develop guidelines for including climate risks in "prudential transition plans".[53] The influential Network on Greening the Financial System (NGFS), which includes 141 central banks and regulators, has in various publications addressed the need for financial institutions to be required to adopt transition plans with decision-useful targets and metrics.[54]

To summarize, the global trend shows an increase in regulatory and supervisory requirements related to target setting, with voluntary disclosure frameworks being progressively translated into mandatory requirements. While current regulation often stops at requirements for target disclosures, there is an increased focus on oversight of target quality. **It is likely that banks will soon have to ensure that their targets are well-designed and compatible with their own climate commitments and their supervisors' climate-risk expectations. Poorly designed and misleading targets (such as those based on corporate value) could therefore be ruled as in breach of regulatory requirements.**

2. KEY WEAKNESSES IN BANK DECARBONIZATION TARGETS

Meeting the overarching GFANZ goal of aligning finance with 1.5°C requires bank targets to follow carbon budgets and pathways with a realistic chance of staying under this key temperature benchmark. This means not just using scenarios that are labelled as 1.5°C-aligned but also verifying (a) that they assume no or low overshoot of the 1.5°C threshold before bringing temperatures back to this level by the end of the 21st century, and (b) that they do not rely on unfounded assumptions of the likely viability of a massive-scale program to remove CO2 from the atmosphere (See Box 2).

The NZBA requires its members to set their targets based on 1.5°C low or no overshoot pathways, and states that scenarios "shall rely conservatively on negative emission technologies."[55] But the alliance's target-setting guidance is so filled with loopholes and ambiguity that it fails to ensure alignment with any pathway or scenario. In many cases, key aspects of robust targets are recommended rather than required. The guidelines allow banks to use a wide diversity of non-comparable, non-transparent and ultimately ineffective target types and methodologies and give wide leeway to banks to decide what data to report. The weaknesses of the guidelines are reflected in the inadequacy of many of the alliance's members' target designs and disclosures.

The key reasons why most bank targets cannot be considered to be aligned with 1.5°C no or low overshoot scenarios can be separated into the following categories:

a. Use of numerous inadequate target types
b. Partial coverage of emission sources and financing activities
c. Failure to disaggregate targets by sectors, gases and other parameters
d. Leaving the door open to large-scale use of offsets
e. Setting of wide target ranges which allow alignment to non-1.5°C aligned scenarios
f. Lack of good quality emissions data
g. Lack of transparency on target design and reporting

Box 2: The dangers of high overshoot and high negative emission technology scenarios

The concept of no, limited and high overshoot scenarios was first brought to widespread attention by the IPCC in their 2018 report on 1.5°C. High overshoot pathways are defined by the IPCC as those that are likely to exceed 1.5°C by between 0.1-0.5°C.[56] This is a highly risky proposition, especially given the danger of passing irreversible tipping points such as the collapse of major ice sheets or the abrupt thaw of boreal permafrost before the peak of warming is reached.[57]

The IPCC 1.5°C report presented three illustrative low or limited overshoot pathways labelled Pathways 1, 2 and 3. In its 2022 Sixth Assessment Report the IPCC presented an updated set of 97 no or limited overshoot pathways, labelled as C1.[58]

Pathways must be avoided that allow emissions to decline only relatively slowly in the short and medium term in the hope of a massive global deployment of negative emission technologies (NETs) in the longer term. There are high risks that such a program would prove technically, economically and politically unviable as well as cause massive negative impacts to biodiversity and food security.[59] Researchers have warned that climate strategies that rely on large-scale carbon removals may also be inconsistent with international law.[60]

The International Institute of Sustainable Development has analyzed the IPCC's C1 pathways against the panel's sustainability and feasibility limits on carbon removal.[61] It concludes that 26 pathways are "feasible" when taking into account these considerations.[62] Reclaim Finance considers the One Earth Climate Model (OECM)[63] and the IEA's 2023 update to their net-zero emissions scenario (NZE)[64] to be consistent with these feasible pathways.

Table 1: Some key elements of bank fossil fuel decarbonization targets (extracted from Reclaim Finance's bank target tracker)

Institution	HQ	Sector	Subsector	Financing Services	Target Type	Scopes	Metric Type	Capital Markets Weighting	GHGs	Target Year	Target Reduction	Offsets	Benchmark Scenario
Bank of America	USA	Energy (Oil & Gas)	end-use	lending	emissions intensity (lending)	3.11	intensity (physical)	n/a	CO2	2030	29%	Yes	IEA NZE
Bank of America	USA	Energy (Oil & Gas)	upstream, refining, integrated companies	lending	emissions intensity (lending)	1, 2	intensity (physical)	n/a	u/d	2030	45%	Yes	IEA NZE
Barclays	UK	Energy (Coal, Oil & Gas)	upstream	lending, contingent facilities, CMA	financed + facilitated emissions	1, 2, 3	absolute	33%	CO2, CH4	2025	15%	No	IEA SDS
Barclays	UK	Energy (Coal, Oil & Gas)	upstream	lending, contingent facilities, CMA	financed + facilitated emissions	1, 2, 3	absolute	33%	CO2, CH4	2030	40%	No	IEA NZE
BBVA	Spain	Energy (Oil & Gas)	upstream	u/d	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	30%	n/a	IEA NZE (2021)
BMO	Canada	Energy (Oil & Gas)	upstream	lending	financed emissions	3	absolute	n/a	CO2, CH4	2030	24%	u/d	IEA NZE, GCAM NZE, IPCC NZ Aligned
BMO	Canada	Energy (Oil & Gas)	upstream	lending	emissions intensity (lending)	1, 2	intensity (physical)	n/a	CO2, CH4	2030	33%	u/d	IEA NZE, IPCC NZ Aligned
BMO	Canada	Energy (Oil & Gas)	upstream	lending	emissions intensity (lending)	1, 2	intensity (physical)	n/a	CO2, CH4	2030	33%	u/d	IEA NZE, IPCC NZ Aligned
BNP Paribas	France	Energy (Gas)	upstream	lending, contingent facilities	credit exposure	n/a	financial	n/a	n/a	2030	30%	n/a	IEA NZE
BNP Paribas	France	Energy (Oil & Gas)	upstream	lending, contingent facilities	credit exposure	n/a	financial	n/a	n/a	2025	12%	n/a	IEA NZE
BNP Paribas	France	Energy (Oil & Gas)	upstream, refining, end-use	lending, contingent facilities	financed emissions	1, 2, 3.11	absolute	n/a	CO2, CH4	2030	70%	u/d	IEA NZE

Institution	HQ	Sector	Subsector	Financing Services	Target Type	Scopes	Metric Type	Capital Markets Weighting	GHGs	Target Year	Target Reduction	Offsets	Benchmark Scenario
BNP Paribas	France	Energy (Oil)	upstream	lending, contingent facilities	credit exposure	n/a	financial	n/a	n/a	2025	25%	n/a	IEA NZE
BNP Paribas	France	Energy (Oil)	upstream	lending, contingent facilities	credit exposure	n/a	financial	n/a	n/a	2030	80%	n/a	IEA NZE
BPCE/ Natixis	France	Energy (Oil & Gas)	upstream	lending, project finance, investing	financed emissions	3.11	absolute	n/a	u/d	2030	70%	No	IEA NZE (2021)
Citi	USA	Energy (Oil & Gas)	upstream, midstream, downstream, end-use	lending, project finance	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	29%	u/d	IEA NZE
Crédit Agricole	France	Energy (Oil & Gas)	upstream, midstream, downstream	lending	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	75%	No	IEA NZE
Crédit Agricole	France	Energy (Oil)	upstream	lending	credit exposure	n/a	financial	n/a	u/d	2025	25%	No	IEA NZE
Crédit Mutuel	France	Energy (Oil & Gas)	upstream	lending, investing	financed emissions	1, 2, 3	absolute	n/a	All re-ported GHGs	2030	26%	No	IEA NZE (2023)
Deutsche Bank	Ger-many	Energy (Oil & Gas)	upstream	lending	financed emissions	3	absolute	n/a	CO2	2030	23%	No	IEA NZE
Goldman Sachs	USA	Energy (Oil & Gas)	upstream, refining, integrated companies	lending, investing (incl. tax equity), CMA	emissions intensity (lending + CMA)	1, 2, 3	intensity (physical)	100%	CO2, CH4	2030	17%	Yes	IEA B2DS
HSBC	UK	Energy (Oil & Gas)	upstream	lending, project finance, CMA	financed + facilitated emissions	1, 2, 3	absolute	33%	All re-ported GHGs	2030	34%	u/a	IEA NZE (2021)
ING	Nether-lands	Energy (Oil & Gas)	upstream	lending	credit exposure	n/a	financial	n/a	n/a	2030	35%	n/a	IEA NZE (2021)
ING	Nether-lands	Energy (Oil & Gas)	midstream, downstream	lending	emissions intensity (lending)	1, 2	intensity (physical)	n/a	CO2	2030	24%	No	IEA NZE (2023)
Intesa Sanpaolo	Italy	Energy (Oil & Gas)	upstream, integrated companies	lending	financed emissions intensity	1, 2, 3	intensity (physical)	n/a	CO2, CH4	2030	9%	u/d	IEA NZE (2023)
JPMorgan Chase	USA	Energy (Oil & Gas)	upstream, refining	lending, tax equity, CMA	emissions intensity (lending + CMA)	1, 2	intensity (physical)	100%	CO2, CH4	2030	45%	Yes	IEA NZE

Institution	HQ	Sector	Subsector	Financing Services	Target Type	Scopes	Metric Type	Capital Markets Weighting	GHGs	Target Year	Target Reduction	Offsets	Benchmark Scenario
JPMorgan Chase	USA	Energy Mix	oil, gas and biogenic fuel combustion plus zero carbon generation	lending, tax equity, CMA	emissions intensity (lending + CMA)	3	intensity (physical)	100%	CO2	2030	36%	Yes	IEA NZE
Mizuho	Japan	Energy (Oil & Gas)	upstream, integrated companies	lending, project finance	financed emissions	3.11	absolute	n/a	CO2, CH4	2030	12%	No	IEA NZE/IEA SDS
Mizuho	Japan	Energy (Oil & Gas)	upstream, integrated companies	lending, project finance	emissions intensity (lending)	1, 2	intensity (physical)	n/a	CO2, CH4	2030	36%	No	IEA NZE
Morgan Stanley	USA	Energy (Oil & Gas)	upstream, midstream, downstream, integrated companies	lending	financed emissions lending intensity	1, 2, 3	intensity (financial)	n/a	u/d	2030	29%	u/d	IEA NZE
MUFG	Japan	Energy (Oil & Gas)	upstream	lending, project finance	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	15%	u/d	IEA B2DS
NatWest	UK	Energy (Oil & Gas)	upstream	lending	tempera-ture rating (lending)	1, 2	tempera-ture align-ment	n/a	u/d	2030	28%	No	IEA NZE, UK CCC BNZ
NatWest	UK	Energy (Oil & Gas)	upstream	lending	tempera-ture rating (lending)	1, 2, 3	tempera-ture align-ment	n/a	u/d	2030	28%	No	IEA NZE, UK CCC BNZ
RBC	Canada	Energy (Oil & Gas)	upstream, downstream, integrated companies (excl. midstream, services)	lending, project finance	financed emissions intensity	3	intensity (physical)	n/a	u/d	2030	11%	u/d	IEA NZE
RBC	Canada	Energy (Oil & Gas)	upstream, downstream, integrated companies (excl. midstream, services)	lending, project finance	financed emissions intensity	1, 2	intensity (physical)	n/a	u/d	2030	35%	u/d	Canada 2030 ERP
Santander	Spain	Energy (Oil & Gas)	upstream, inte-grated compa-nies	lending	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	29%	u/d	IEA NZE

Institution	HQ	Sector	Subsector	Financing Services	Target Type	Scopes	Metric Type	Capital Markets Weighting	GHGs	Target Year	Target Reduction	Offsets	Benchmark Scenario
ScotiaBank	Canada	Energy (Oil & Gas)	upstream	lending	financed emissions intensity	3	intensity (physical)	n/a	u/d	2030	15%	u/d	Canada EOGP
ScotiaBank	Canada	Energy (Oil & Gas)	upstream	lending	financed emissions intensity	1, 2	intensity (physical)	n/a	u/d	2030	30%	u/d	Canada EOGP
SMBC	Japan	Energy (Oil & Gas)	upstream	lending, project finance	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	12%	No	IEA SDS
Société Générale	France	Energy (Oil & Gas)	upstream, midstream, downstream	lending	financed emissions	1, 2, 3.11	absolute	n/a	All reported GHGs	2030	70%	No	IEA NZE
Société Générale	France	Energy (Oil & Gas)	upstream	lending	credit exposure	n/a	financial	n/a	n/a	2025	50%	n/a	IEA NZE
Société Générale	France	Energy (Oil & Gas)	upstream	lending	credit exposure	n/a	financial	n/a	n/a	2030	80%	n/a	IEA NZE
Standard Chartered	UK	Energy (Oil & Gas)	upstream, midstream, downstream	lending, project finance	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	29%	u/d	IEA NZE
TD	Canada	Energy (Coal, Oil & Gas)	thermal coal mining; O&G upstream, midstream, downstream	lending, CMA	financed + facilitated emissions lending intensity	1, 2, 3	intensity (financial)	100%	All reported GHGs	2030	29%	No	IEA NZE (2021)
UBS	Switzerland	Energy (Coal, Oil & Gas)	upstream, refining, integrated companies	lending	financed emissions	1, 2, 3	absolute	n/a	u/d	2030	70%	Yes	IEA NZE (2023)
UniCredit	Italy	Energy (Oil & Gas)	upstream, midstream, downstream, end-use	lending	financed emissions	3	absolute	n/a	u/d	2030	29%	u/d	IEA NZE
Wells Fargo	USA	Energy (Oil & Gas)	upstream, refining, end-use	lending, CMA	financed + facilitated emissions	1, 2, 3	absolute	100%	CO2, CH4	2030	26%	No	NGFS ONZ (2021)

a. Inadequate target types

We have classified the sectoral targets set by the 30 banks in our sample into 13 distinct types (See Box 3). Appendix 3 explains in detail the formulas used in these target types. This wide range of target types complicates attempts to compare targets with each other and with temperature scenarios — especially as the names used for these types vary across banks and it may be necessary to hunt through bank disclosures to find the actual formulas used (when these are disclosed). The six target types based on financed and/or facilitated emissions targets are all problematic due to the PCAF attribution formula problem.

Eighteen banks out of the 30 we analyze have set absolute targets in the oil and gas sector. These absolute targets are based on financed emissions (and for four banks both financed and facilitated emissions), meaning that they all fall prey to the PCAF attribution problem.

Most bank sectoral emission targets (171 out of the 243 targets in our analysis of 30 top banks) are based on physical emissions intensity: emissions proportional to the amount of electricity, steel, cement or other physical commodities produced (or for transport sectors as emissions per kilometer travelled). The NZBA's guidelines recommend the use of physical intensity metrics. While the atmospheric carbon budgets that lie behind the 1.5°C (and any other temperature) pathways are based on absolute emissions, such intensity targets make sense for the industrial sectors that must be cleaned up rather than phased out.[65]

A (widely overlooked) positive aspect of most bank intensity targets is that they do not use a corporate value-based attribution factor. Unfortunately, however, some banks (including nine of the 30 major banks in our analysis)[66] apply PCAF attribution formulas to their intensity targets meaning that these targets could be met without decreases in real-world emissions intensity if corporate values rise sufficiently.

Financial-intensity targets (for example based on emissions per dollar of loan exposure) are highly problematic as these tie physical emissions to unrelated financial metrics. Out of the 30 major banks in our analysis, only Crédit Mutuel (for their global balance sheet carbon footprint reduction target), Morgan Stanley (for all their targets), and TD (for their fossil fuels target) have set financial intensity targets.

For fossil fuels, intensity targets are inadequate on their own, as intensity reductions (e.g. from reducing methane leaks and oil and gas wells) can be achieved even if fossil fuel production and overall emissions increase. Of the 30 banks in our analysis, 14 have set oil and gas physical intensity targets (and two financial intensity targets).

Box 3: A typology of bank sectoral portfolio decarbonization target types

We have broken down the target types used by the banks in our analysis into the following 13 categories.

- **Alignment score**

A type of physical emissions intensity target. These aim to align sectoral emissions to an industry-agreed benchmark (such as those in the Poseidon Principles for maritime shipping). The objective is to converge towards a portfolio alignment at the set date. Alignment score targets have also been set for the aluminum and steel sectors.

- **Credit exposure**

These aim to reduce sectoral credit exposure (amount outstanding or committed on loans). If sufficiently ambitious they can send an important signal to fossil fuel companies, investors and other stakeholders that capital will become scarcer for these companies if they do not rapidly transition. Our analysis shows 26 targets from 11 banks covering mostly coal, but also oil and gas.

- **Emissions intensity (lending)**

Based on the weighted average of the physical emissions intensity (emissions per volume of production) of all the clients in a lending portfolio. They do not use an attribution factor as clients' emission intensities are weighted by the clients' relative exposure in sectoral portfolios. They are used for all the main industrial sectors other than coal. These are the most commonly used targets in our sample (90 targets from 20 banks).

- **Emissions intensity (lending + CMA)**

These are similar to the targets above except they also include capital markets activities. Our sample includes 24 of these targets from five banks.

- **Financed emissions**

For the sake of clarity, we apply this term only to targets based on absolute emissions which apply a corporate value attribution factor following the PCAF methodology (banks and others may also use "financed emissions" as a generic term for financial institution Scope 3 targets). The targets are mostly for the oil and gas sector, but some cover coal, automotive, and steel sectors. Our sample includes 25 of these targets from 18 banks.

- **Financed + facilitated emissions**

These cover lending and capital markets activities and use a corporate value attribution factor. As with financed emissions, they are based on absolute emissions. There are four of these, used by Barclays, HSBC and Wells Fargo for their energy targets.

- **Financed emissions intensity**

Physical intensity targets for lending portfolios which use a corporate value attribution factor to reflect the banks' volume of financing to their clients. Used by eight banks for 44 targets across the major industrial sectors with the exceptions of aluminum, coal, and residential real estate.

- **Financed + facilitated emissions intensity**

Similar to financed emissions intensity targets but also cover capital markets activities. This target type is used only once in our sample (for the power sector).

- **Financed emissions lending intensity**

This is a financial intensity target, expressed as total sectoral financed emissions divided by total sectoral loan exposure. Morgan Stanley uses this type for its three targets (automotive, energy and power).

- **Financed + facilitated emissions lending intensity**

Similar to the above but with the addition of capital markets activities. TD's energy (coal, oil and gas) target is the only one of this type.

- **Lending intensity**

Represents the weighted average absolute emissions of the clients in a loan portfolio. Used in two coal targets.

- **Temperature rating (lending)**

These seek to reduce the implied warming from the emissions in a portfolio (following an SBTi methodology). La Banque Postale has set targets of this type (covering different client scopes) across its lending portfolio. NatWest uses this type for four energy and multi-sector (aviation/shipping/agriculture) targets.

- **Temperature rating (equity and bonds)**

Similar to the above except covering investments. La Banque Postale and NatWest have each set two of these targets covering all sectors in their portfolios.

b. Partial coverage of financing activities and emission sources

A common problem with the banks in our analysis is that their targets fail to comprehensively cover all financing activities and all relevant emission scopes (no single target can be adequately comprehensive, but each bank should have a suite of targets of different designs that cover all material and relevant activities). All affiliates and subsidiaries should be covered by targets – including the emissions from investments in bank asset management divisions.

The most glaring omission from bank targets until now has been their capital markets activities. Out of the 30 banks in our analysis, only six have set targets for facilitated emissions.[67] However, with the requirement in the new NZBA guidelines for its members to start setting 2030 targets for facilitated emissions, this loophole should be closed — even if the new facilitated emissions targets are likely to suffer from the methodological weaknesses mentioned in the section on PCAF above.

Another important aspect for the comprehensiveness of bank target coverage is whether all material scopes (See Box 4) of their borrowers' and clients' emissions are included. As can be seen in Figure 3, for most sectors Scope 3 is around 90% or more of total emissions (exceptions include electric utilities, cement and steel for which most emissions are Scopes 1 and 2). Given that around 75% of total global greenhouse gas emissions are from the energy sector, and that around 90% of energy sector emissions are Scope 3, it is clearly essential to include energy companies' Scope 3 emissions (mainly the emissions due to oil and gas combustion) in emission targets. Scope 3 emissions are chronically under-reported by companies and characterized by data scarcity and/or low data quality. However, Scope 3 data is probably more widely available and more accurate for the energy sector than for any other given that it can be calculated using widely accepted emission factors for different fossil fuels, and broadly accurate data on corporate fossil fuel production.

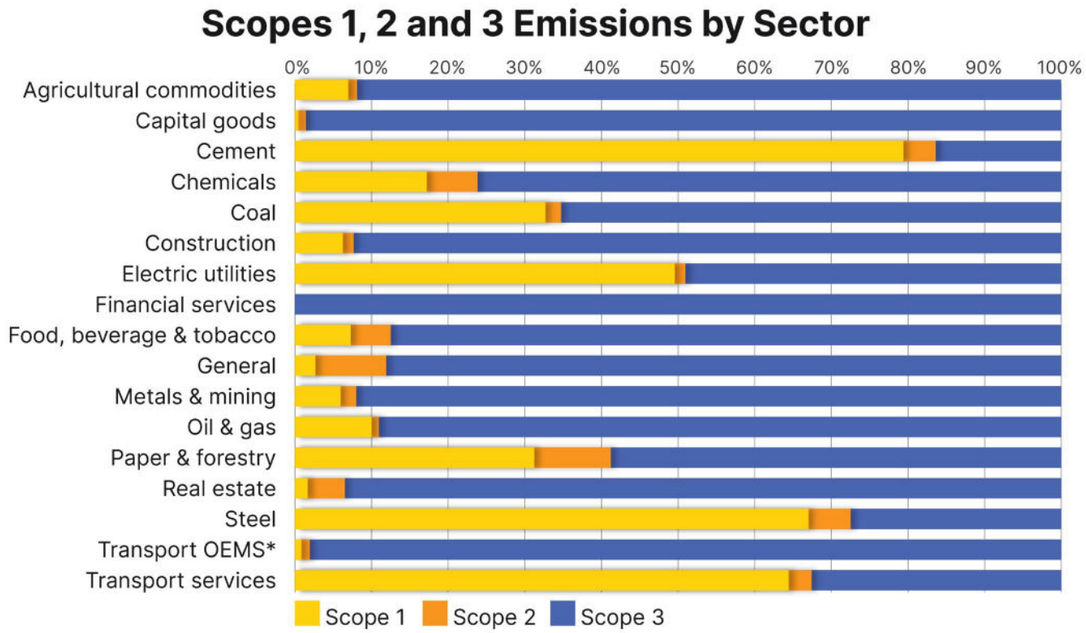
Box 4: Emission Scopes

The concept of emission scopes was first introduced in the 2001 Greenhouse Gas Protocol, published by the World Resources Institute and the World Business Council for Sustainable Development.

- **Scope 1:** Direct emissions from an entity's activities, for example from burning fossil fuels to generate power or heat
- **Scope 2:** Indirect emissions, mostly from purchases of electricity
- **Scope 3:** The emissions from up and down an organization's value chain. These are mostly upstream emissions from the production of inputs and downstream emissions from customers use of products, such as drivers burning gasoline.

The Scope 3 emissions of a bank are the emissions of the entities that it finances. These are known as Scope 3 Category 15 (3.15) emissions in the Greenhouse Gas Protocol. (The complexity of Scope 3 emissions is such that the Protocol breaks them down into 15 separate categories).[68] The Scope 3 emissions of a bank's clients are the "Scope 3 of Scope 3" emissions of the bank.

Figure 3: Sectoral greenhouse gas emissions by scope



Source: CDP Technical Note - Relevance of Scope 3 Categories by Sector, January 2023 IEEFA
*Original equipment manufacturing services

Source: IEEFA, Fossil-linked energy firms have high emissions and the room for denial is shrinking, 8 February 2023

The NZBA's original guidelines from 2021 stated that their members' targets "shall include their clients' Scope 1, Scope 2 and Scope 3 emissions, where significant and where data allows." The new NZBA guidelines repeat the Scope 3 language from before but add clarity that Scope 3 emissions are "expected to be included" in targets for the oil, gas and mining (which includes coal) sectors.[69]

NZBA members seem to be mostly in compliance with these requirements. Of the 30 banks analyzed by Reclaim Finance, all have set targets covering the oil and gas sector (see Table 1) with the exception of La Banque Postale — which has strong oil and gas sectoral policies.[70] Most oil and gas targets include all three scopes.

Six banks — Bank of America, BMO, RBC, Scotia Bank, Mizuho and ING — have an oil and gas target for Scope 3, and an additional one for Scopes 1 and 2 emissions. BPCE, Deutsche Bank, and UniCredit have oil and gas targets only for Scope 3 emissions.

Scope coverage is much less comprehensive for other sectors. Only around one fitfth of the 243 targets in Reclaim Finance's analysis cover all three scopes. A handful of banks have separate Scope 3 and Scopes 1 and 2 targets for the automotive and oil and gas (see above) sectors. Many targets cover only a single scope (e.g. Scope 1 for the power sector, and Scope 3 for Automotive), or two scopes (mostly Scopes 1 and 2 (Cement, Steel, Real Estate), sometimes Scopes 1 and 3 (Aviation, Shipping)), or fail to clearly state which scopes are covered.

c. Failure to disaggregate targets by scopes, gases, financing types and other parameters

The aggregation of different scopes, gases and other key parameters within targets, together with inadequate disclosures on target features, makes it difficult or impossible to get clarity on target parameters, evaluate target ambition, compare ambition between different banks and between banks and benchmark scenarios, or to evaluate in what areas progress is being made and where it is not. One of the most egregious examples are targets that combine financed and facilitated emissions (especially when the facilitated emissions component is adjusted by a weighting factor).

The NZBA (and the other GFANZ alliances) mostly encourage or require emission targets to be set and reported only in CO2-equivalent (CO2e or CO2-eq) units. CO2e combines the warming impact of the key greenhouse gases together, meaning that this is a more comprehensive metric than only CO2. However, targets should also be set, and reporting done for individual gases, so that it is possible to track progress on reducing emissions for these gases. **Using only CO2e also renders it difficult to assess if sectoral targets are aligned with sectoral pathways that are expressed in CO2, which is the case with the IEA's net zero emissions scenario (NZE).** Another problem is that most bank CO2e targets fail to specify which gases they cover.

Separate energy sector targets for methane, which has a short lifetime in the atmosphere but is highly potent at trapping heat, are particularly important. It is widely agreed that rapid reductions in emissions of methane from fossil fuel extraction and transport are vital to slow down warming over the short term and prevent breaching the 1.5°C threshold.[71]

JPMorgan Chase's "Energy Mix" target is perhaps the worst case of aggregating different elements that should be dealt with separately. In late 2023 the American banking giant decided to update its targets to align them with the NZE. This would have increased the ambition of the bank's oil and gas Scope 3 emissions intensity target. But instead of accepting that 1.5°C-alignment would require a reduction of its financing of oil and gas production, it added clean electricity financing into its oil and gas portfolio. As long as grows its clean energy portfolio sufficiently — which given renewables and storage deployment trends seems likely — JPMorgan Chase could meet its Energy Mix target without reducing its financing to its many hundreds of oil and gas clients, and without these clients reducing their production levels.[72]

Robust energy sector targets should be disaggregated not just into fossil fuel and power sectors, but also by each main fossil fuel sub-sector (coal, oil, gas). Most banks in our analysis have an energy target that combines oil and gas. Barclays, TD and UBS combine coal with oil and gas. Only Crédit Agricole and BNP Paribas have standalone oil targets, and only BNP Paribas has a gas-only target (see Table 2)

d. Leaving the door open to large-scale use of offsets

It is now widely accepted that the great majority of carbon offsets generated in both regulated and voluntary markets do not definitively represent actual emission reductions.[73] If offsets were ever to be used at a large scale to meet emission reduction targets, they would render apparently 1.5°C-aligned targets out of alignment.

The NZBA's new guidelines continue to allow banks to accept their clients meeting their 2030 and other interim targets through unlimited use of offsets. The only restriction is that they "should always be additional and certified."[74] But this is a meaningless requirement: time and again over the past few decades it has been shown that offset quality control efforts are deeply flawed and beset with fraud, and that additionality claims are often at the very least subject to major doubt.[75] Attempts at offset quality control have also proven incapable of preventing human rights abuses linked to land-use offsets.[76]

Table 2: Diversity of oil and gas target sub-sectoral coverage, types and scopes

a. Different sub-sectoral coverage, sometimes mixing coal and even renewables with oil and gas

Sectors	Number of targets
Coal, Oil and Gas	4
Oil and Gas	37
Gas	1 (BNP Paribas)
Oil	3
Oil, gas, renewables, biogenic fuels	1 (JPMC)

b. Different target types, with many financed emissions targets

Target type	Number of targets
Financed emissions (absolute)	20
Credit exposure	8
Physical intensity	9
Financed emissions (intensity)	5
Financed emissions lending intensity	2
Temperature rating	2

c. Different Scopes

Scopes included in targets	Number of banks
Scope 1, 2 and 3	20
Scope 1 and 2 / Scope 3 (two different targets)	6 (Bank of America, BMO, RBC, Scotia Bank, Mizuho and ING)
Scope 3	3 (BPCE, Deutsche Bank, and UniCredit)

Many of the types of projects that are supported by carbon offsetting seem laudable, at least in their intentions – examples include those that aim to protect ecosystems, deploy renewables, or disseminate improved cook stoves. Carbon offsets are just generally a very bad way of paying for them. A better option is offered by the approach of Beyond Value Chain Mitigation (BVCM) which the Science Based Targets initiative promotes as "a mechanism through which companies can accelerate the global net-zero transformation by going above and beyond their science-based targets."[77] Companies generate good publicity with BVCM activities and hopefully positive climate, social and environmental outcomes, but not offsets that undermine the integrity of emission reduction targets.

e. Target ranges which include non-1.5°C aligned scenarios

Among the 243 targets of the 30 banks in our analysis, 28 targets from nine banks are based on ranges instead of a single objective. The use of target ranges is most common in the fossil fuel, electricity, steel and commercial real estate sectors. The upper bound range (more ambitious reduction objective) is often based on a 1.5°C-aligned scenario (e.g. IEA NZE), while the lower range usually corresponds to a scenario aligned between 1.5°C and 2°C (e.g. IEA SDS/B2DS/APS, CRREM 2°C, MPP TM). This means that even though a bank may claim that a target is 1.5°C-aligned, the target could in reality be met with a reduction that is aligned only with 2°C.

The use of these target ranges indicates that banks are unwilling to commit to a 1.5°C alignment, or even that they have prematurely abandoned this objective.

f. Poor quality emissions data

The poor quality of corporate emissions data is a major challenge for any financial institution setting emission-based targets. Data availability and quality can vary widely across sectors and jurisdictions. One key issue impacting data reliability is that emissions numbers are usually based upon self-reporting by corporations. Data issues seem to be most acute in the real-estate sector, where data availability varies widely across jurisdictions, and for which accurate data is needed at the level of many thousands of individual buildings.

PCAF has developed a data quality scoring system which is now widely used by financial institutions to indicate the type and quality of data they are using (see Table 3). Only 17 out of the 30 banks in our analysis transparently disclose sectoral PCAF data scores.

Time lags in emissions data are often observed, especially because of delays in corporate emissions reporting. This may mean that indicators are not available for a given reporting year and result in inconsistencies where data is used from different reporting years and may result in restatements in later years because of data corrections. Aggregating together data from different sources (e.g., reported vs. estimated) can also generate inconsistencies and create lack of comparability issues.

As an example, Californian public pension fund Calstrs announced in April 2024 that it would delay reporting on its 2023 portfolio emissions for a year because of the discovery of inaccuracies and inconsistencies including "significant data and calculation issues" in its 2022 disclosures. One problem was using data from different providers for different years and different companies. Another was

Table 3: PCAF data quality scoring

PCAF Score	Method		Description
1	**Reported emissions**		Emissions data from company disclosures (with third-party certification)
2			Emissions data from company disclosures (without third-party certification)
2	**Estimated emissions**	Physical activity-based	Emissions data estimated from company energy consumption volume and emission factor
3			Emissions data estimated from company production and emission factor
4		Economic activity-based	Emissions data estimated from company sales and emission factor
5			Emissions data estimated from financing and investment balance to the company and emission factor

Source: PCAF

the use of data points (for both emissions and corporate value) from different times in the year.[78]

As pressure on companies to report their emissions from investors, regulators and standard setters has been increasing and data providers have been improving their analyses, the quality of emissions data is likely improving.

But this creates its own problems, because as emission calculation methodologies improve, it becomes difficult to know to what extent interannual changes in reported emissions (and so progress toward meeting targets) reflect actual changes in emissions, or just methodological and reporting changes (for more emission data issues see Box 5).

Box 5: Attempts to improve corporate emissions data quality and disclosures

The problems with corporate emissions data quality and accessibility are recognized by many international entities and likely every financial institution that is now attempting to report on its progress toward meeting its emission targets. Banks and other financial institutions should use their influence with their clients to ensure better emissions data. It is unclear to what extent financial institutions have stressed the need for better data in their client engagement, but if they have emphasized this, it does not seem to have had a significant impact.

The recognition of emission data problems led French President Emmanuel Macron, and GFANZ Co-Chair Michael Bloomberg, to form a Climate Data Steering Committee (CDSC) that includes government officials and leaders from regulatory bodies and international agencies. The CDSC surveyed stakeholders on the key data challenges around net-zero transition planning. The top four challenges, noted by more than 80% of respondents, were limited corporate disclosures on Scope 3 emissions, inconsistent reporting of emission reduction targets by both corporates and financial institutions, and inconsistent financed emissions disclosures.[79]

The CDSC survey informed a report published in November 2022 which recommended the establishment of a Net Zero Data Public Utility (NZDPU) to be hosted by the UN Climate Convention. The NZDPU is to initially focus on free and accessible reporting of company and financial institution data for Scope 1, 2 and 3 emissions; net-zero targets and actions planned to meet these targets; and reporting on the use and characteristics of carbon credits. [80]

The quality and transparency of corporate and financial institution emissions reporting is likely to improve in the coming years under pressure from regulators and through the impacts of voluntary initiatives like the NZDPU and the reporting standards from the International Sustainability Standards Board (ISSB), as well as potentially the use of artificial intelligence.[81] One positive impact of regulations is that emissions data will increasingly need to be verified by auditors.

g. Lack of transparency on target design and reporting

Even if targets were well-designed and ambitious, it would in many cases be difficult to evaluate this due to a lack of transparency in target design. Banks often fail to disclose adequate data on key target design issues such as which parts of corporate value chains are covered, which of the bank's financial services are considered in scope, which gases are included, exactly which formulas are used, and what data sources are. Information is rarely provided on how targets relate to the scenarios that they are supposedly aligned with. And even where information on key design features is provided, there may not be the details or sufficiently clear language necessary to evaluate how each design feature is interpreted and applied.

One area of opacity is that financial institutions rarely if ever specify which value of Global Warming Potential (GWP) for methane or other gases they use in their CO2e calculation.[82] GWPs are a tool for comparing the warming impact of CO2 with that of other greenhouse gases. But the values set by the IPCC for GWPs have varied over time as the science behind them has changed.[83] GWPs also vary according to the timescale over which a gases warming impact is evaluated.[84]

The record of NZBA members on transparently reporting their progress towards achieving their targets is also decidedly mixed. Some banks in our analysis do not communicate annually (e.g. Goldman Sachs), and some do not have dedicated climate reports or a dedicated climate section in their integrated annual reports. Somewhat surprisingly, a few banks that are generally ahead of their peers in terms of climate ambition stand out for the poor quality of their reporting on progress toward their targets. Some banks publish target methodology papers with reporting on progress toward meeting targets, but these are not always updated annually.

3. ROBUST SECTORAL DECARBONIZATION TARGET TYPES

Well-designed and ambitious decarbonization targets should be just one part of robust financial institution climate transition plans.[85] **Robust transition plans should include a broad decarbonization strategy that includes engagement and sectoral policies, including policies to end financing for new fossil fuel projects and the companies developing them, plans to finance the decommissioning of existing fossil fuel infrastructure, and targets for increasing climate solutions financing.**

The recent focus on setting financed emission targets has overshadowed the progress that was previously being made on sectoral policies, mostly for coal. Researchers at Harvard Business School have showed that banks with coal policies have significantly reduced their support for the sector, and that these reductions have forced companies to both accelerate coal plant retirements and reduce emissions from existing plants. The authors make a rough estimate that current bank exit policies reduced coal power emissions between 2015-2021 by around one gigaton of CO2e — equivalent to the lifetime emissions of 20 million gasoline-powered vehicles.[86] **So while bank decarbonization targets may have an important role to play in decarbonizing the real-world economy, they should not distract banks from setting and applying effective sectoral policies.**

Ensuring that decarbonization targets are effective tools to assist banks to help decarbonize the real economy will require a major change in how targets are set. **In particular, financed and facilitated emissions targets that use corporate value, revenue, or other volatile financial variables are of little use in ensuring real-world emission reductions.**

The most promising sectoral target types are likely to be those which:

- reduce financing to fossil fuel supply
- reduce absolute client emissions (without the use of an attribution factor)
- lower the emissions-intensity of high fossil fuel-demand industrial sectors, and
- require bank clients to adopt robust 1.5°C-aligned decarbonization strategies.

See Table 4 for a summary of the pros and cons of the target types which Reclaim Finance recommends as most robust. See also Appendix 2 for key criteria for robust decarbonization targets and Appendix 3 for more detail on target formulas currently used by banks. **It must also be emphasized that to be effective, these target types must also address the shortcomings in coverage, ambition and transparency addressed in Part 2 above.**

Table 4: Pros and cons of recommended sectoral target types

Target type	Main sectoral application	Formula	Pros	Cons
Absolute sectoral portfolio emissions (ASPE)	Any	$\sum_c CE_c$ where c = Company c CE = Company emissions	• Simplicity • Most direct reflection of real-world emissions and link to carbon budgets, and scenarios/pathways • Clear indication of portfolio emission trajectory • Indicates if bank engagement with clients may be working • May encourage banks to push clients to phase out high-emission activities	• Multiple counting of corporate emissions across financiers • Lack of comparability of emissions intensity between banks of different sizes • May not provide as much incentive to improve portfolio efficiency as a physical intensity metric
Sectoral portfolio financing volume (SPFV)	Fossil fuels	$\sum_c FIN_c$ where c = Company c FIN = Company credit exposure/capital markets finance amount	• Simplicity, potential for transparency in terms of design and reporting • Relevant for sectors that must be phased-out (esp. fossil fuels) • Sets important and clear signal to fossil fuel companies and investors of shrinking availability/affordability of capital without robust transitions	• Not relevant for most non-fossil fuel sectors • Does not a priori create an incentive for banks to prioritize shift from highest intensity clients and does not give clear mathematical relationship between target and emission pathways
Sectoral portfolio weighted average physical intensity (WAPI)	Non-fossil fuel industrial sectors	$\sum_c \frac{FIN_c}{TOT\ FIN} \times CEI_c$ where c = Company c FIN = bank financing of company TOT FIN = Total sectoral financing CEI = Company emissions intensity	• Comparability between banks of different sizes • Benchmarking against intensity-based pathways • May encourage banks to push clients to use more carbon-efficient technologies and processes and / or to reduce exposure to highly emissive clients (in order to reach objectives)	• Do not guarantee that absolute emissions are aligned with carbon budgets, and pathways/scenarios
Sectoral portfolio coverage (SPC)	Any	Portfolio companies are attributed a 1 if they have a SBTi-approved target or other indicator (e.g. verified transition plan), 0 otherwise. Coverage binaries are aggregated at the portfolio level using different formulas (e.g. weighted average).	• Simplicity and transparency • May encourage engagement with clients for adoption of science-based targets or other standards/indicators	• There is no guarantee that a company with a validated SBT will meet its target • Banks may take adoption of SBTs or other indicators as a signal they can drop their engagement efforts • Most SBTi formulas for portfolio aggregation use financial indicators (EVIC, revenue, assets, market capitalization etc.) [87] • Issue of legitimacy of third-party validating transition plans or other indicators

a. Fossil fuel supply subsectors

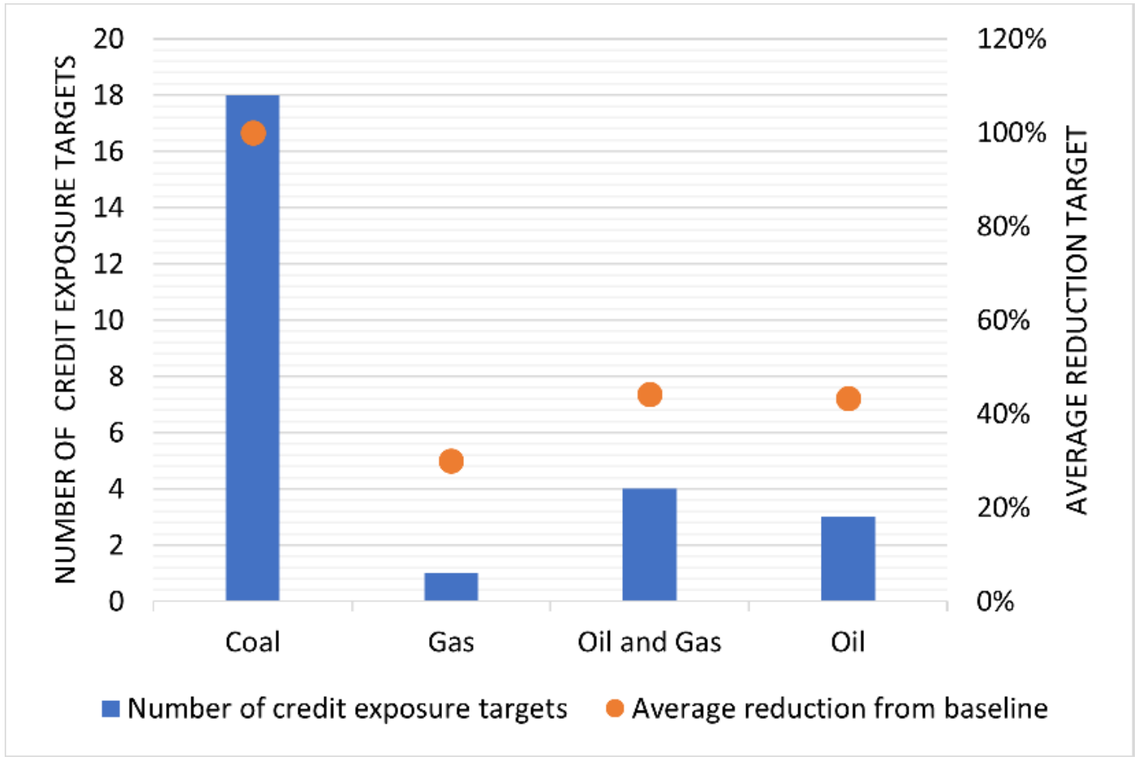
Sectoral portfolio financing volume (SPFV)

Given that the production and use of fossil fuels accounts for the majority of global greenhouse gas emissions, these are the most important targets to get right. For fossil fuels, targets to reduce financing volumes are likely to be more effective than emission-based ones, provided that clear and adequate criteria are used to define fossil fuel companies, something which is today often not the case.[88] **As is noted by the Accelerate Climate Transition (ACT) initiative, it is financial flows "which bear the transformative power of the economy", while emissions are by comparison a lagging indicator which show if the changes in financing are having their intended impact.[89]**

At least eleven banks in our analysis already have credit exposure targets covering either coal[90] (BBVA, Intesa Sanpaolo, MUFG, Santander, SMBC, Crédit Mutuel, BNP Paribas, Crédit Agricole, Société Générale, BPCE), oil (BNP Paribas and Crédit Agricole), gas (BNP Paribas) or oil and gas combined (BNP Paribas, ING and Société Générale) (see Figure 4). No banks have yet set targets to reduce their volume of capital markets financing for fossil fuel companies, but they should do so.

Financial volume targets avoid the problems of attribution and poor-quality emission data. As an increasing number of banks set targets to rapidly shrink financing to fossil fuel companies, this will send a clear market signal to these companies that new capital will become increasingly expensive and difficult to secure, and this should help push them to either transition away from fossil fuels or return capital to shareholders as part of a long-term managed phaseout.

Figure 4: Number and average reduction of fossil fuels exposure targets for 30 major banks analyzed by Reclaim Finance



Fossil fuel companies can be exempted from financing restrictions if they are genuinely in transition. This would require them to have stopped developing new fossil fuel infrastructure and to be running down their production volumes in line with the implementation of robust transition plans, which should also include plans for decommissioning existing fossil fuel assets while protecting the rights of workers and local communities.

b. Fossil fuel demand sectors

Sectoral portfolio weighted average physical intensity (WAPI)

Targets for fossil fuel-intensive industrial sectors that produce products that the world will continue to need over the long term, should be based on physical intensity targets (such as kg CO2 per MWh for power generation or tons of CO2 per ton of steel produced). These avoid the attribution problem and have the potential to push banks to ensure that their clients transition to cleaner technologies and processes. Intensity metrics are also useful for comparing the climate impact of financial institutions of different sizes and the ambition of their targets.

WAPI targets, however, must be equally or more ambitious than the minimum intensity ambition set by 1.5°C-aligned sectoral decarbonization pathways.

About half of the 243 targets in our analysis are WAPI-type targets (seven banks[91] inappropriately use WAPI for setting oil and gas targets).

A further 12 targets are based on the alignment of sectoral physical intensity to an industry-agreed benchmark. These alignment score targets have been set for the aluminum, steel and, above all, shipping sectors. They are based on benchmarks developed by joint industry initiatives such as the Poseidon Principles for maritime shipping. A key determinant of the adequacy of these targets is whether the benchmark scenarios are 1.5°C aligned (three of the eight shipping alignment score targets in our analysis are based on the non-1.5°C aligned International Maritime Organization 2018 Strategy).[92]

WAPI targets are aligned with the recommendations of the Paris Agreement Capital Transition Assessment (PACTA).[93] They are close to the Sectoral Decarbonization Approach which the SBTi recommends financial institutions should use.[94]

c. For all sectors

Absolute sectoral portfolio emissions (ASPE)

Absolute sectoral portfolio emission targets are the sum of all the emissions from the companies in a bank's sectoral portfolio without the use of an attribution factor. **ASPE targets are not dependent on volatile financial indicators and would be simpler and more transparent than financed or facilitated emission targets. They are particularly relevant for fossil fuel sub-sectors where they should be used to supplement financial targets.** They should also be used to supplement intensity targets for non-fossil fuel sectors.

Banks commonly claim that they are engaging with their clients to push them to reduce their emissions, and ASPE targets would indicate if these efforts are effective. The targets would also dissuade banks from taking on new high-emission clients and encourage them to drop clients that are not reducing their emissions. This should pressurize companies to increase their decarbonization efforts. Some transactions could be excluded from these targets if they are with companies that are already implementing robust long-term plans to shrink their emissions on a 1.5°C pathway.

The use of ASPE methodology would greatly increase the apparent scale of bank Scope 3 emissions and it would mean multiple counting of emissions between different banks as all of a company's emissions would be allocated to each one of its financiers. Neither of these

issues is particularly problematic. **What is important in financial institution emissions accounting is not to develop an exact number for the emissions resulting from the activities of each financial institution, but to develop standardized methodologies that can be applied across the finance sector, and that can assist financial institutions to do their share in ensuring meaningful real-economy emission reductions, as well as allowing stakeholders to hold these institutions accountable to their climate goals.**

As PCAF points out, double counting "is a frequent and inherent aspect of GHG accounting" which "does not need to be seen as problematic" as long as it does not interfere with decarbonization goals and that accounting methodologies are transparent.[95] PCAF explains that all financial institutions using its methodologies will be subject to the same exposure to double counting, and none will be significantly more impacted than others.

Furthermore, while a bank would be "penalized" by having to account for all of a client's emissions, it would be "rewarded" by all those emissions going off its books if it ceases financing a particularly high-carbon client. And if a high-carbon client reduces its emissions in alignment with a 1.5°C scenario, these large emission reductions will be reflected in the bank's ASPE reporting and the bank will be incentivized to encourage these reductions by continuing to finance the client.

ASPE targets are not yet used by any of the banks in our analysis presumably at least partly because of concerns that any bank that did adopt them would suddenly see an apparent massive increase in its Scope 3 emissions. Responsible banks however should adopt these targets and explain clearly why they are superior to financed and facilitated emission targets. The "first mover" problem could also be mitigated if PCAF were to recommend the use of ASPE targets or if the NZBA were to require them.

Sectoral portfolio coverage targets (PCTs)

A final set of targets that can be useful if applied carefully and in tandem with other robust target types are portfolio coverage targets. These refer to the percentage of a financial institutions' portfolio companies that have adopted certain commitments. They are currently mostly used by investors to encourage uptake of Science Based Targets (SBTs), but also could be used for other commitments, such as the adoption of 1.5°C transition plans that are validated by a credible third party such as a regulator. **While transition plans are overall more relevant than SBTs alone, the lack of normative standards that would ensure their robustness would require financial institutions to set their own expectations — which should take into account the "red lines" for transition plans identified by Reclaim Finance.**

Banks with near-term targets validated under the Science Based Targets initiative (SBTi) which chose to use the portfolio coverage method commit to engaging with their clients so that they set their own validated SBTs. These banks must target a linear path to 100% of their clients having SBTs by 2040.[96]

PCTs are only as robust as their underlying metrics — for example they require credible validation standards for transition plans and targets. PCTs based on SBTs are weakened by the fact that while SBTi validates targets, it does not certify compliance with these targets. PCTs should therefore be used together with other recommended target types.

An indicator that Reclaim Finance has not yet seen in bank targets but which merits more attention to how it can be incorporated in both targets and policies is the extent to which corporate capital expenditure (capex) plans are aligned with 1.5°C. Planned capex on items such factories, smelters and resource exploration and exploitation are likely the best indicator of a company's emissions trajectory. PACTA has a tool allowing investors to track corporate capex alignment, and NGOs including Carbon Tracker Initiative and Reclaim Finance have used planned capex to evaluate the climate alignment of oil and gas companies and utilities.[97]

APPENDIX 1 - BRIEF PROFILES OF SELECT GFANZ NET-ZERO ALLIANCES

1. Net-Zero Asset Owner Alliance (AOA)

- **Members:** 89[98]
- **Total assets under management:** $9.5 trillion (c.10% of total assets held by pension funds and re/insurers globally).[99]
- **Scenarios:** "shall" use IPCC no or limited overshoot 1.5°C scenarios.[100]
- **Convenors:** UN Environment Programme Finance Initiative (UNEP-FI) and Principles for Responsible Investment (PRI)

The AOA is far ahead of the other sectoral net zero alliances in terms of its production of reports and position papers. It produces a detailed and annually updated target-setting protocol, and has released numerous reports and calls to action on issues such as how asset owners should engage with policy makers and asset managers.[101] It has gone further than any of the other alliances in recognizing the need to stop developing new fossil fuel infrastructure.[102] It allows its members to set targets based on the emissions of the companies in their portfolios divided by the value of the portfolios. This means that financed emissions will appear to decline as long as portfolio value grows more rapidly than corporate emissions.

Despite its frequently cited reputation as the "gold standard" among net-zero alliances,[103] the AOA has key weaknesses in its target-setting guidance. The AOA sets out four types of targets for its members:

- Engagement (with corporates and asset managers)
- Financing the transition
- Sub-Portfolio (different asset classes such as listed equity and debt, private equity and debt, infrastructure and real estate, are described as sub-portfolios)[104]
- Sectoral

Asset owners must set engagement targets but can choose two of the other three types. This means that AOA members do not have to set emission reduction targets for high-emitting sectors, and few do. **Out of 72 asset owners with 2030 targets listed on the AOA's website as of September 2023, only 10 had explicitly set absolute targets.** Portfolio targets hide the extent of asset owners' involvement in key high-emission sectors, how much they intend to cut emissions from these sectors, and their progress at reaching these cuts.

The AOA is the only alliance to set what appear to be clear (sub-)portfolio targets that are at least close to being 1.5°C-aligned (>40% reduction CO2e by 2030). However these targets can be based on the carbon intensity of the sub-portfolios, which is calculated by dividing the emissions of the companies or other entities in an asset class by the value of the sub-portfolio. Portfolio intensity targets are particularly easy for asset owners to meet as their main raison d'être is to grow the value of their assets, and as their portfolio grows, its emission intensity will fall as long as the underlying absolute emissions grow more slowly than portfolio value.

For instance, if the value of an asset owner's portfolio doubled between 2020 and 2030, it would hit a target of a 50% intensity reduction by 2030, even if emissions from the companies flatlined over this decade. A doubling of corporate value over a decade for a portfolio would represent strong performance but would not be unusual: as an example, the total enterprise value of the companies in the S&P 500 index rose by 122% in the ten years up to September 2023.

2. Net Zero Asset Managers initiative (NZAM)

- **Members:** More than 325 (> 244 have disclosed targets)[105]
- **Total assets under management:** US$57.5 trillion (>50% of global assets under management).[106]
- **Commitment:** to set 2030 targets "consistent with a fair share of the 50% global reduction in CO2 identified as a requirement in the IPCC special report" on 1.5°C.[107]
- **Scenarios:** "sectoral or regional exposure" . . . "should be in line with 1.5°C scenarios"[108]
- **Convenors:** CERES, Institutional Investors Group on Climate Change (IIGCC), Asia Investor Group on Climate Change (AIGCC), Investor Group on Climate Change, PRI and CDP

NZAM's AUM is currently around $9 trillion lower than it was in November 2022,[109] shortly before US fund management giant Vanguard pulled out of the initiative in response to attacks from US climate denialists.[110] Despite Vanguard's exit, and that of a handful of small asset managers, NZAM's membership has continued to grow, albeit slowly.[111]

With responsibility for managing such a huge part of the world's total investable capital, NZAM could theoretically play a leading role in decarbonizing finance. Unfortunately, NZAM's leadership has adopted an approach to target setting which requires very little from its members.

The initiative encourages its members to set targets not on the emissions in their portfolio, but on the proportion of assets in their portfolio that are supposedly managed in line with reaching net zero by 2050. To be "consistent" with its commitment to contribute its "fair share" of the goal of halving global emissions by 2030, all assets in NZAM members' portfolios should logically be managed in line with at least halving their financed emissions by this date. But NZAM members can set any target they want for the percentage of assets in 2030 that should be aligned with reaching net zero by 2050. NZAM also allows its members to choose from a broad range of options for defining "aligned with net zero".

According to an analysis from November 2022, out of 169 NZAM members that had disclosed targets, 36 targeted 100% of their assets in 2030 being aligned with net zero by 2050, and 63 had committed more than 75% of their assets. However, 72 had targeted less than half of their assets, with at least one (Lazard Asset Management) committing less than 10%.[112]

Out of the first 80 NZAM members to set targets, less than a fifth had set absolute emission targets. Around a third did not set absolute or intensity emission reduction targets, but rather portfolio coverage targets for the portion of assets invested in companies with commitments to submitting targets to the Science-Based Targets initiative (SBTi).[113]

3. Paris Aligned Asset Owners (PAAO)

- **Members:** 57 (mostly small- to medium-sized public sector pension funds in the UK and northern Europe)[114]
- **Total assets under management:** US$3.3 trillion
- **Commitment:** to set targets for 2030 or sooner to reduce Scope 1, 2 and 3 portfolio emissions, and to increase investments in climate solutions. The targets are to be "consistent with a fair share" of the 50% cut in global CO2 identified in the IPCC's 1.5°C special report.[115]
- **Convenors:** CERES, IIGCC, IGCC and AIGCC
- **Scenarios:** no or low overshoot 1.5°C scenarios[116]

PAAO signatory targets are to be based on the recommendations in the Net Zero Investment Framework (NZIF). The framework was originally released in 2019 by the four investor networks behind the PAAO. An NZIF 2.0 was published in June 2024.[117] It recommends

setting emission reduction and climate solution finance targets, as well as targets for increasing the percentage of net-zero "aligned" and "aligning" assets in separate asset classes, and for the percentage of companies within key sectors that are subject to engagement and stewardship actions. The NZIF allows portfolio targets to be set on an absolute or intensity basis.

4. Net-Zero Insurance Alliance (NZIA) (and Forum for Insurance Transition to Net Zero (FIT))

The Net-Zero Insurance Alliance (NZIA) has been the highest profile victim of the US climate denialist attack on responsible finance. The alliance, which was launched by eight large European re/insurers in July 2021, grew to 31 members over the following year. These companies together represented around 11% of world insurance premiums. The alliance started to unravel in May 2023, and within several months most of its key members had left.[118] The insurance companies felt particularly vulnerable to threats of anti-trust lawsuits from US red-state officials partly because insurance is a very concentrated industry, and partly because insurers are mainly regulated at the state level in the US.

Before its untimely demise the NZIA worked with PCAF to develop a methodology to measure and report "insurance-associated emissions".[119] Several months later in January 2023, the alliance produced a target-setting protocol that uses the PCAF methodology.[120] The protocol required cuts in insurance-associated CO2e emissions of at least 34% by 2030 (compared to the AOA's 40% financed emissions target). Several important business lines of insurance and reinsurance remained out of scope of the targets. Targets could be based on intensity metrics, although they should result in absolute emission reductions in line with the 34% target.

In April 2024 the NZIA was officially closed and replaced by the Forum for Insurance Transition to Net Zero (FIT).[121] The FIT is chaired by the UN Environment Programme. It is not a member of GFANZ. The FIT has a broader membership than the NZIA, with 19 founding member insurance company "participants" and one consultative group of government regulators and supervisors, and another with civil society groups and academics. It also includes a legal team with leading experts on antitrust and competition law from major US and UK law firms. It will not require its members to set decarbonization targets but will work on developing frameworks for net-zero insurance, target-setting methodologies. An initial work product will be a framework for net-zero transition plans for insurers.[122]

APPENDIX 2 - RECOMMENDED THEMATIC CRITERIA FOR ROBUST BANK DECARBONIZATION TARGETS

The following table presents thematic criteria we recommend for more robust decarbonization target-setting.

Theme	Criteria
Target types and metrics	Fossil fuel sectors shall use financial (credit exposure and capital markets volumes) targets and total (unattributed) absolute client emission targets. Physical intensity targets are preferred for most other sectors. Progress towards targets shall always be complemented by the disclosure of total (unattributed) absolute emissions from all clients in each sector. Alignment (deviation) score targets can be used, including when prescribed by sectoral guidelines (for example Poseidon Principles, Sustainable Steel Principles etc.), but should always be also expressed in terms of their equivalent in physical intensity reduction. Banks shall not use financial intensity targets. **Other metrics** Banks shall disclose for each sector several additional metrics, such as: • % of sectoral portfolio covered by target • total exposure, % lending/investing book of sector • PCAF data quality scores: absolute average, weighted average, and distribution per sector.
Attribution factors and portfolio aggregation	Targets shall not use attribution factors that use company value or other similar volatile factor. Relative exposure weighting shall be preferred for aggregated indicators which cannot be aggregated through summation (e.g. physical intensity, alignment scores, temperature rating) at the portfolio level.
Benchmark scenarios and pathways	Targets shall be based on 1.5°C-aligned (no or low overshoot) scientifically robust scenarios that rely on limited volumes of negative emissions. Such pathways include the IEA NZE (2023 update), and the IPCC's C1 pathways filtered by the reasonable negative emission ranges identified by the IISD.[123] For the sake of comparability, international scenarios (e.g. IEA NZE) shall be preferred to regional/industry-led scenarios. Proprietary scenarios shall not be used. Where scenarios offer several pathways, banks shall use the most ambitious (e.g. "Striving For" pathway for shipping sector IMO Guidelines). Banks should always benchmark against scenarios which are the closest to/most representative of their own sectoral portfolio.
Ambition	Bank targets shall be aligned with a minimum 45-50% GHG emission reduction 2020-2030. Banks shall set a net-zero emission target for 2050 at the latest and align targets with sustaining at least net zero emissions thereafter.

Theme	Criteria
Target ranges	Targets shall not be based on a range, but only on a single value to be reached at the target date.
Base year	Base year shall be recent and representative, i.e. GHG emissions of the base year are not unusually different from the those of the previous years and reflect the normal functioning of the entity
Disaggregation	Targets shall be disaggregated by sector, asset class, and when relevant by GHG gases (e.g. CO2 and CH4 for fossil fuels; CH4 and N2O for agriculture etc.). Scope 1 and 2 targets shall be set separately from Scope 3. Reporting shall be done in both aggregated and disaggregated numbers. Energy targets must separately cover coal, oil, gas, and power sectors.
Offsets	Targets shall not take into account offset/carbon credits, whether these are retired/purchased by the bank itself, or by its borrowers/clients. This provision applies regardless of the certification status of offsets given that no certification body has so far been shown to be capable of reliably weeding out fake or otherwise problematic credits. The ability to use offsets is also likely to disincentivize emission reductions. An exception may be made for carbon removals that aim to offset residual emissions left once a client's absolute emissions have been reduced 90% from 2020 levels (provided that a widely accepted certification process for carbon removals has been developed by this time).
Data quality	Methodologies shall present PCAF-based data quality metrics in a disaggregated manner, both at the sector and asset class levels. Banks shall report any data issues, such as missing data or temporal lags.
Reporting	Banks shall report on their absolute emissions and targets in their annual reporting. All historical values between baseline year and reporting year shall be compiled and disclosed together with targets, expressed in the same metric, in order to have a direct vision of progress. Rebaselined and/or recalculated values (methodological changes) shall be clearly highlighted, explained and disclosed along with their previous values.

APPENDIX 3 - SECTORAL TARGET FORMULAS USED BY BANKS

Decarbonization targets used by banks can be classified into several main types. Reduction targets can be based on different metrics, such as:

- Absolute emissions (kgCO2(e))
- Financial metrics (EUR, USD etc.)
- Physical intensity metrics (gCO2(e) per output unit (e.g. MWh, TJ, pkm, rpk/rtk, m^2)
- Financial intensity metrics (gCO2(e)/EUR, USD etc.)
- Alignment scores (%)
- Temperatures (temperature rating alignment)

Retrieving or estimating client emissions is the first step in the calculation of target indicators at the portfolio level.

PCAF highlights four main methods of estimating client emissions:

- Directly through company (audited) reporting
- Using third party databases
- Using physical ratios. It can be done for instance with the following formula in the energy sectors with output and emission factors data:

$$\sum_{c,\,t} PROD_{c,t} \times EF_{c,t}$$

where c = Company c
t = Technology t
PROD = Company production/output
EF = Emission Factor

- Using economic ratios.

Treatment of loan exposure and company value

Committed vs. drawn loan exposure: Loan exposure is expressed in bank targets either as total committed amount or as drawn/outstanding amount. PCAF and PACTA[124] both recommend using the drawn/outstanding amount: of the targets in Reclaim Finance's analysis 107 are based on committed amount and 84 on the drawn/outstanding amount.

Company value: Company value may be estimated using (i) Enterprise Value Including Cash (EVIC) for listed companies (ii) Total Equity + Debt for unlisted companies or (iii) Total Assets if the latter values are not available.

In the case of EVIC and/or facilitated finance, some banks use 3-year rolling averages to reduce interannual variability.

1. "Absolute emissions" (kgCO2(e))

Formula 1.1: Financed emissions

Most banks disclose financed emissions according to the standard PCAF formula, which weights the client companies' emissions with an attribution factor, a ratio between financing amounts and company value. This absolute financed emissions formula is used in a total of 29 targets, mostly for fossil fuels, as well as for steel, agriculture or automotive targets. Company value proxies may be subject to fluctuations (especially volatile components such as EVIC) and the evolution of financed emissions may therefore be uncorrelated with that of borrower/client emissions.

$$\sum_{c} \frac{FIN_c}{CV_c} \times CE_c$$

where c = Company c
FIN = Company exposure
CV = Company value
CE = Company emissions

Formula 1.2: Weighted (relative exposure) average emissions

In very few cases (only in the coal sector) a weighted average absolute emissions formula was used, weighting the company emissions by their respective relative exposure in the sectoral portfolio.

$$\sum_{c} \frac{FIN_c}{TOT\ FIN} \times CE_c$$

where c = Company c
FIN = Company exposure
TOT FIN = Total sectoral financing
CE = Company emissions.

2. Financial (EUR/USD)

The only type of financial target in our sample is based on credit exposure. Our analysis contains 26 credit exposure targets from 11 banks, mostly for coal, but also covering oil and gas. All coal-related exposure targets correspond to a 100% loan exposure reduction, usually by 2030 (OECD coal mining) and 2040 (non-OECD coal mining/ coal-fired-power plants).

3. Physical intensity (kgCO2(e)/activity unit)

Physical emissions intensity targets allow comparison with benchmark scenarios and indicate to which extent a sectoral portfolio is aligned/converges with a certain trajectory (e.g. SBTi SDA). They should be used for non-fossil fuel industrial sectors.

Formula 2.1/2.1 bis: Weighted (relative exposure) average physical intensity (WAPI)

The most common formula for calculating sectoral physical portfolio intensity is the relative exposure weighted average. Company emission intensity (reported or calculated/estimated based on emission and output data) are weighted by the bank's relative exposure to each company. This formula is recommended by PACTA for most sectors.[125]

This formula is simple and intuitive and has the advantage of not including a corporate value variable. However, carbon-intensive companies may still be financed if their relative share of the lending/capital markets portfolio is small.

$$\sum_{c} \frac{FIN_c}{TOT\ FIN} \times CEI_c$$
$$\sum_{c} \frac{FIN_c}{TOT\ FIN} \times \frac{CE_c}{PROD_c}$$

where c = Company c
FIN = Company exposure
TOT FIN = Total sectoral financing
CE(I) = Company emissions (intensity)
PROD = Company production/output

Formula 2.2/2.2 bis (Real Estate): Financed emissions physical intensity ratio

Another method consists in calculating a ratio between "financed emissions" (cf. Formula 1.1) and "financed production", which is the weighted sum of company outputs using the same attribution factor. Like PCAF financed emissions, this formula uses potentially volatile company value components, but the fact that it is the ratio of attribution factor-weighted sums makes it much more complex to know how it may be affected by this volatility. This formula may seem less intuitive than the weighted average physical intensity (Formula 2.1) and it requires more data. An intensity ratio formula is less skewed towards the largest borrower/client in a portfolio than the weighted average formula, so a financier could be less incentivized to reweight away from highest emitters.

$$\frac{\sum_c \frac{FIN_c}{CV_c} \times CE_c}{\sum_c \frac{FIN_c}{CV_c} \times PROD_c}$$

where c = Company c
FIN = Company exposure
CV = Company value
CE = Company emissions
PROD = Company production/output

A similar formula is used for the real estate sector and specifically recommended by PCAF. Company value and emissions are replaced by building value and emissions, and the output is expressed in floor area (m^2, with some variations in the calculation, such as the "Energy Reference Area (ERA)" concept). The formula is therefore the ratio between financed emissions and financed floor area. PCAF recommends that building values should be fixed at the property value at origination (or the latest available value, or in the case of last recourse a market estimate for similar assets), so there are no volatility issues with the attribution factor (which is also called "loan-to-value" (LTV)). In the case of unsecured financing, however, PCAF and the NZBA recommend the value of a building should be replaced by company value, and unsecured financing emissions (resp. total assets area) added to secured mortgage.[126]

Real estate related formulas

a.

$$\frac{\sum_b \frac{FIN_b}{BV_b} \times BE_b}{\sum_b \frac{FIN_b}{BV_b} \times FA_b}$$

or b.

$$\frac{\sum_b \frac{FIN_b}{BV_b} \times BE_b + \sum_c \frac{FIN_c}{CV_c} \times CE_c}{\sum_b \frac{FIN_b}{BV_b} \times FA_b + \sum_c \frac{FIN_c}{CV_c} \times Total\ FA_c}$$

where b = Building b
FIN = Building financing
BV = Building value
BE = Building emissions
FA = Building floor area

Formula 2.3: Financed emissions intensity (physical)

A few banks in our sample also use a financed emissions physical intensity metric which follows PCAF in using a company value attribution factor:

$$\sum_c \frac{FIN_c}{CV_c} \times CEI_c$$

where c = Company c
FIN = Company exposure
CV = Company value
CEI = Company emissions intensity

3. Financial intensity

Financed emissions lending intensity (FELI) or Carbon Footprint

The "financed emissions lending intensity" (FELI) (or "Carbon Footprint" according to PCAF terminology) is the only financial intensity metric used. It is calculated as the absolute financed emissions (using the PCAF definition) divided by the total financing to the sector. It is used by Morgan Stanley in their three targets (energy, automotive, power). TD uses a financed and facilitated emissions lending intensity target for its energy (coal, oil and gas) target.

$$\sum_c \frac{FIN_c}{CV_c} \times \frac{CE_c}{TOT\ FIN} = \frac{Financed\ emissions}{Total\ sector\ financing}$$

where c = Company c
FIN = Company exposure
TOT FIN = Total sectoral financing
CV = Company value
CE = Company emissions.

5. Alignment score

These target types used mainly in the shipping (eight banks), steel (three banks) and aluminum (one bank) sectors. The alignment is to trajectories described in the Poseidon Principles (PPs), Sustainable Steel Principles (SSPs) and Sustainable Aluminum Finance Framework (SAFF). These are all initiatives from the Center for Climate Aligned Finance (CCAF) co-led by Rocky Mountain Institute (RMI), industry players and signatory financial institutions.

Alignment scores express the deviation between a financial institution sectoral portfolio trajectory and a benchmark trajectory. A portfolio is aligned if the alignment score is zero or negative. It adopts a convergence approach, that is the target aims to align the portfolio at a set date (here 2030). For more clarity, alignment score targets should be complemented with their equivalent in intensity terms.

It is notable that many bank consider their portfolios to be almost/already aligned. This can be explained by differences in the versions of the standards/pathways used (shipping) or rather low standards ambition and/or portfolios skewed towards less carbon-intensive clients (steel and aluminum).

6. Temperature Rating

Temperature Rating (TR) targets are one of the approaches developed by the SBTi (along with the Sectoral Decarbonization Approach (SDA) and Portfolio Coverage (PC)). TR targets are used more at the asset class level (corporate loans, listed equity, corporate bonds or private equity portfolios) rather than at the sector level. Only ten TR targets were reported by the 30 banks in our sample.

GHG reduction targets are usually used to estimate temperature ratings at the client level, which are then aggregated at the portfolio level. The SBTi guidance proposes seven different methods.[127] The only one which is used in our sample is Weighted Average Temperature Score (WATS) which weights clients' targets based on their respective proportion in a portfolio.

Temperature Rating targets present the advantage of being straightforward in terms of communication related to alignment but are less transparent in terms of calculation and scoping.

Focus on the Shipping Sector

In the Poseidon Principles the alignment score is calculated by using an Annual Efficiency Ratio (AER) at the vessel level (in gCO2e/deadweight-tonnage per nautical mile), then an alignment score (Alignment Delta, AD) at the vessel level, and an aggregate alignment score at the portfolio level by weighting the vessel alignment scores by their respective relative exposure.

$$\mathrm{AD_{PTF}} = \sum_{\mathrm{vessel}} \mathrm{AD_{vessel}} \times \frac{\mathrm{FIN_{vessel}}}{\mathrm{TOT\ FIN}}$$

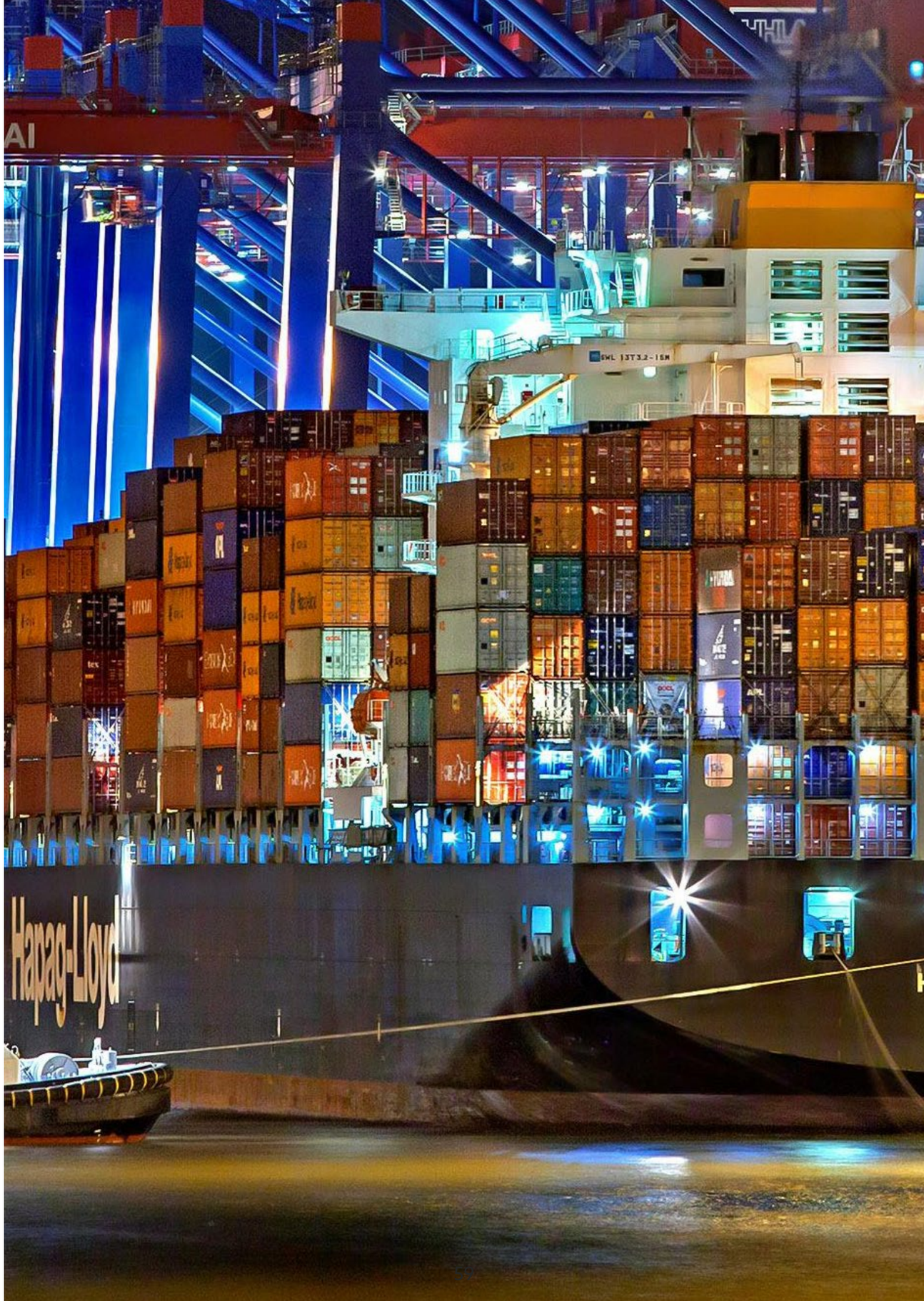
where $$\mathrm{AD_{vessel}} = \frac{(\mathrm{AER_{vessel}} - \mathrm{Required\ AER_{vessel}})}{\mathrm{Required\ AER_{vessel}}}$$

and $$\mathrm{AER_{vessel}} = \frac{\sum_i \mathrm{F} \times \mathrm{EF}}{\sum_i \mathrm{D} \times \mathrm{T}}$$

where
PTF = portfolio
i = travels
F = fuel consumption
EF = fuel emissions factor
D = distance travelled (nm)
T = tonnage, usually deadweight at maximum summer draught (dwt)

IMO released a first version of the Poseidon Principles in 2018, and revised guidelines in 2023 differentiating two pathways: "Minimum" and "Striving For". IMO 2018 guidelines are not 1.5°C aligned while IMO 2023 revised guidelines target net zero by 2050. IMO 2018 guidelines consider only Scope 1 Tank-to-Wake emissions (fuel combustion during operational use of financed vessels) while IMO 2023 revised guidelines also consider Scope 3 Well-to-Tank fuel production emissions. Therefore, alignment scores differ significantly whether they use the 2018 IMO 2050 trajectory, 2023 IMO Minimum trajectory, or 2023 IMO Striving For trajectory.

The Poseidon Principles only consider international maritime freight vessels with a deadweight tonnage of more than 5,000 t. Passengers vessels may be included in future versions.



APPENDIX 4 - OBSERVATIONS ON BANK DECARBONIZATION TARGETS

We list below various issues we see in the targets set by the 30 banks in our analysis with a focus on lacunae and inconsistencies between banks and targets. Regulators and the NZBA must ensure consistency between bank target-setting practices.

General observations

Theme	Sub-theme	Comments
Coverage	Sectoral boundaries	• Sectoral boundaries are often **not clearly defined**: there is a need for a **standardization of organizational, sectoral and emissions boundaries for each sector.** • Banks should disclose the share of overall financing for each sectoral portfolio.
	Financial services	• **Most targets seem to include only (part of) corporate/commercial credit lending portfolios.** • There is no coherence in the use of drawn/outstanding or committed loan exposure (~50/50 distribution among the targets in our analysis). • **Some material financial services are explicitly excluded:** ◊ Banks often state that they have adopted a gradual approach, progressively increasing the scope of sectors and financial services covered by their targets. ◊ **Only six banks in our analysis include emissions from capital markets activities** (sometimes partially, in only a few sectors and/or with a 33% weighting).
	Scopes	• **Only 21% of targets include all scopes** (most consider only Scopes 1 and 2). A few banks state that in some sectors most clients do not set Scope 3 targets, and/or that Scope 3 data is still scarce and/or of low quality. • **Some (material) scopes are ignored or not completely covered in some sectors.** • For transportation sectors (Automotive, Shipping, Aviation), there are **inconsistencies in the accounting of fuel lifecycle emissions** (only Tank-to-Wheel/Wake emissions vs. full-cycle Well-to-Wheel/Wake emissions).
	GHGs	• **GHG coverage is not explicitly disclosed in about half of targets. This is in part because most (62%) target numerators are expressed in CO_2e, as company / third-party reporting is often aggregated and proxies based on emission ratios using CO_2e. No target is aimed solely at a non-CO_2 GHG.** • **Some (material) GHGs are explicitly excluded in a few cases** (e.g. CH_4 for Energy sectors).

Theme	Sub-theme	Comments
Target setting	Target types	• **On average, banks have set around eight targets (min.3, max. 16), covering seven sectors (min. 3, max. 13).** • **More than 65% of targets use a physical intensity metric. The sample also contains 31 absolute emissions, 26 financial, 12 alignment scores, 10 temperature rating, and five financial intensity metrics/target types.** • Except for the Energy and Automotive sectors (absolute financed emissions and credit exposure or physical intensity targets), **banks do not set more than one target metric type for the same sector.**
	Offsets	• **Five banks state that they allow their clients to use offsets,** some even explicitly subtracting these from their client's absolute emissions in the disclosed emission intensity formulas, while **nine banks do not consider them, and the rest have not disclosed any clear position on the subject.**
	Target reduction ranges	• Bank-specific reduction target averages range from 30% to 55% (23% to 48% for physical-intensity targets). • Sector-specific reduction target averages range from 17% (Aluminum) to 100% (Coal) (17% to 53% for physical-intensity targets). • **Overall, 2030 target ambition does not seem sufficient**, even if some portfolios may be less carbon-intensive than sector average (e.g. steel or aluminum, for which some banks aim to maintain or even increase their portfolio intensity, integrating more emissive clients with "sufficient transition ambition"), which is likely due to geographic concentration of clients.
	Benchmark scenarios	• Some **targets** are clearly **based on scenarios that are not 1.5°C-aligned** (IEA SDS/B2DS/APS, ICAO/CORSIA, IMO/Poseidon Principles (2018 version), CRREM 2.5°C etc.) • Some banks use target ranges (most of the time, the lower bound is 1.5°C-aligned while the upper corresponds to a well-below 2°C scenario). • **Within the same sector, different scenarios can be used, hindering comparability between targets.**
	Methodologies/ Formulas and Data	• **Only 12 banks transparently disclose their portfolio aggregation calculation formulas.** • **Within the same sector and among the same metric type, methodologies and formulas are inconsistent** (e.g. several ways to calculate portfolio-aggregated emission intensity such as weighted average vs. global ratio, with vs. without PCAF-based attribution factor). • In some sectors (e.g. real estate), economic activity-based (e.g. revenue) emission factors/proxies are often used, with **low PCAF data quality scores; data temporal lags** are also very common (esp. regarding emissions data, e.g. in the coal sector).

Sector-wise observations

Sector	Number of targets (banks)	Subsectors	Scopes	Baseline values	Reduction targets	Comments
Agriculture	2 (Barclays, NatWest)	Primary farming: livestock and dairy	All Scopes			• Financed emissions / Temperature rating • Lack of available scenarios and guidelines sometimes mentioned as reason for not setting targets.
Automotive	30 targets (28 banks).	• 28 cover only Light-Duty Vehicles (usually with Gross Vehicle Weight Rating < 3.85 t/8,500 lbs.); only Morgan Stanley also covers medium/heavy trucks. Some banks state lack of methodologies for Heavy-Duty Vehicles. • Usually, only financing to vehicle manufacturers is included, under the rationale that only they have control over vehicles design (ICEV vs. P/HEV/BEV). Only Santander has a specific "auto lending" (both financed and leased passenger cars) target (Scope 1+2) relating to Santander Consumer Finance (SCF). BPCE has included its leasing activities in its Automotive target.	Scope 1+2 (manufacturing, more material for EVs) and/or Scope 3 (3.11 end-use, more material for ICEs); EV Scope 3 emissions are not accounted for (related to Power sector emissions)	Baseline values range between 100 and 260 gCO2e/vkm	Reduction targets between 7% and 66%	• Inconsistencies in scoping / calculations: ◊ between TTW and WTW; WTW should be the norm ◊ For tailpipe emissions, WLTP test emission estimates are known to be lower than real-word CO2 emissions ◊ Some banks use a 150,000 km average lifetime, others 200,000 km
Aviation	16 targets (16 banks)	• Scoping not clear/consistent: ◊ commercial airlines (passengers and/or belly freight?) and/or dedicated cargo? ◊ scheduled flights only ◊ leased aircraft emissions? ◊ operational Scope 1 TTW emissions and/or Scope 3 WTT emissions etc.		Difficult to compare targets (scopes, scenarios, methodologies, CO2 vs. CO2e, rtk vs. rpk/pkm etc.) although baseline values in the same range (~80 -140 gCO2e/rpk)	Reduction targets between 9% and 56%	

Sector	Number of targets (banks)	Subsectors	Scopes	Baseline values	Reduction targets	Comments
Cement	16 targets (16 banks)		Only Scopes 1 and 2 considered (although Scope 3 is material for some cement companies)	Baseline values in the same range (~350-580 kgCO2e/t cement)	Reduction targets between 16% and 67%	Output expressed in t of cement or cementitious products (little difference, ~5% according to some estimates)
Coal	29 targets (including 4 also covering oil and gas) from 18 banks. 18 credit exposure targets. All exposure targets have 100% target with target year ranging from 2025 to 2040. Seven banks have targets to end thermal coal mining exposure by 2030 for OECD and 2040 for non-OECD countries.	Usually, all the thermal coal value chain, sometimes specifically only thermal coal mining (i.e., without Scope 3); Only 1 coal mining target explicitly covers metallurgical coal (Deutsche), although a few banks do have met coal exclusion policies.	Scope 1 to 3, sometimes only Scope 1 and 2		Financed emissions reduction targets range between 37% and 90%	• Scoping not clear/consistent: ◊ Inclusion of clients according to a diversity of criteria such as % of revenues linked to coal ◊ Need to always include Scope 3 for coal mining (combustion in power plants, furnaces etc.) • Some banks use inadequate target metrics for this sector (e.g. absolute financed emissions, lending intensity)
Energy	46 targets (1 covers oil, gas and power; 4 cover coal, oil and gas; 37 cover oil and gas; 3 cover oil only, 1 covers gas only) (33 banks)	Sectoral scoping should be standardized: • Most banks consider O&G value chain upstream/integrated players' Scope 1 to 3 emissions; some banks set separate targets for Scope 3; 3 banks do not consider Scopes 1 and 2 • Midstream and downstream services are most often disregarded (some banks state that pure midstream/downstream players do not measure/disclose their emissions and that the target metrics used for upstream/integrated players are not adapted to them); notably Citi includes emissions from midstream transportation (pipeline) project finance • Some banks explicitly include natural gas liquids (NGLs)		• For absolute financed emissions targets: ◊ Baseline values range between 7 and 150 MtCO2e ◊ Reduction targets range between 12% and 75% • Credit exposure reduction targets range between 12% and 89% (baseline around several billion dollars) • For physical emissions intensity targets: ◊ Baseline values range between 3 and 8 gCO2e/MJ (Scope 1+2); ~60 gCO2e/MJ (Scope 3) ◊ Reduction targets range between 24% and 45% (Scope 1+2); 9% and 30% (Scope 3)	• Banks largely use inadequate metrics: out of the 46 targets about one third have an absolute financed emissions metric, and more than half use PCAF-based attribution factors. 8 are credit exposure targets, and 9 physical intensity targets (without attribution factor) • CH4 is sometimes not accounted for (although it should have a separate target)
Power	30 targets (29 banks)	Power generation	Nearly all the banks consider only Scope 1, ignoring material Scope 3	Baseline values (physical portfolio intensity) range between 150 and 500 gCO2e/kWh	Reduction targets (2030) range between 40% and 76%, and final intensities between 50 and 280 gCO2e/kWh	Renewables and biomass emission factors are considered zero

Sector	Number of targets (banks)	Subsectors	Scopes	Baseline values	Reduction targets	Comments
Real Estate	25 targets (15 commercial, 10 residential) (16 banks)	Scoping should be detailed more precisely: • Building ownership/use only accounts for 75% of total lifecycle emissions, while embodied emissions are never taken into account • Only four banks consider explicitly Scope 3.13 (downstream leased assets). • Geographical scope is often restricted to one core country of operation (where data is more available)		Baseline values in the same range (~21-73 kgCO2e/m^2)	Reduction targets between 15% and 63%	Data is often unavailable (e.g. EPCs) or low-quality, banks often have recourse to proxies, leading to overall low PCAF data quality scores (>4)
Shipping	12 targets (12 banks)	Partial coverage of the fleet (international freight >5,000 t only)	Scope 1 or Scope 1 and 3	Because of alignment scores (<= 0% goals) and different methodologies/pathways used, comparison is easier for physical intensity targets (baseline between 6 and 12 gCO2/(dwt x nm) and reduction targets around 30%)		Inconsistent use of pathways: banks need to update and use latest IMO 2023 Striving For pathway and estimate WTW emissions.
Steel	21 targets (21 banks) (HSBC target includes Aluminum in Steel & Iron target)		Scope 1 and 2; Scope 3 is most often excluded (even if material for some companies)	Baseline values (portfolio intensity) average at 1.5 tCO2e/t crude steel	Targets range between an increase / stabilization of portfolio intensity and 42% reduction	Low comparability between targets because different metrics (physical intensity, alignment score, financed emissions) and scenarios are used
Transport	Only NatWest sets Transport targets, covering separately freight road, passenger rail and passenger road subsectors		Baseline values in the same range (~30-60 kgCO2e/tkm/pkm)	Baseline values in the same range (~30-60 kgCO2e/tkm/pkm)	Reduction targets between 19% and 31%	NatWest sets both “Passenger Road” and Automotive Scope 3 targets

GLOSSARY: ACRONYMS AND TECHNICAL TERMS

Acronym	Meaning
ACT	Accelerate Climate Transition
AOA	(Net Zero) Asset Owner Alliance
ASPE	Absolute Sectoral Portfolio emissions
AUM	Assets Under Management
BEV	Battery Electric Vehicle
CCAF	Center for Climate Aligned Finance
CDP	Carbon Disclosure Project
CDSC	Climate Data Steering Committee
CH4	Methane
CMA	Capital Markets Activities
CO2	Carbon Dioxide
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CRREM	Carbon Risk Real Estate Monitor
CSRD	Corporate Sustainability Reporting Directive
EBA	European Banking Authority
ECB	European Central Bank
EFRAG	European Financial Reporting Advisory Group
EOGP	Evolving Oil and Gas Pathway
EPC	Environmental Performance Certificate
ERP	Emissions Reduction Plan
EVIC	Enterprise Value Including Cash
FELI	Financed Emissions Lending Intensity
FIT	Forum for Insurance Transition to Net Zero
GCAM	Global Change Assessment Model
GCEL	Global Coal Exit List
GFANZ	Glasgow Financial Alliance on Net Zero
GHG	Greenhouse Gas
GOGEL	Global Oil and Gas Exit List
GWP	Global Warming Potential
ICEV	International Combustion Engine Vehicle
IEA	International Energy Agency
IEA APS	Announced Pledges Scenario
IEA B2DS	Beyond 2°C Scenario
IEA SDS	Sustainable Development Scenario
IEEFA	Institute for Energy Economics and Financial Analysis
IFRS	International Financial Reporting Standards
IIGCC	Institutional Investors Group on Climate Change
IISD	International Institute for Sustainable Development

IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
ISSB	International Sustainability Standards Board
LTV	Loan-to-Value
MPP	Mission Possible Partnership
MPP PRU	Mission Possible Partnership Prudent Scenario
MPP STS	Mission Possible Partnership Sector Transition Strategies
MPP TM	Mission Possible Partnership Technology Moratorium Scenario
NGFS	Network for Greening the Financial System
NZ	Net Zero
NZAM	Net Zero Asset Managers initiative
NZBA	Net-Zero Banking Alliance
NZDPU	Net Zero Data Public Utility
NZIA	Net-Zero Insurance Alliance
OECD	Organization for Economic Cooperation and Development
OEM	Original Equipment Manufacturers
ONZ	Orderly Net Zero Scenario
OSFI	Canadian Office of the Superintendent of Financial Institutions
PAAO	Paris Aligned Asset Owners
PACTA	Paris Agreement Capital Transition Assessment
PCAF	Partnership for Carbon Accounting Financials
PCT	Portfolio Coverage Targets
pkm	Passenger-Kilometers
PP	Poseidon Principles
PRI	Principles for Responsible Investment
RMI	Rocky Mountain Institute
SAFF	Sustainable Aluminum Finance Framework
SAR	Sixth Assessment Report
SBTi	Sciened-Based Targets initiative
SDA	Sectoral Decarbonization Approach
SPC	Sectoral Portfolio Coverage
SPFV	Sectoral Portfolio Financing Volume
SSP	Sustainable Steel Principles
TCFD	Task Force on Climate-Related Financial Disclosures
TJ	Terajoules
TR	Temperature Rating
TTW	Tank-to-Wheel/Tank-to-Wake
UK CCC BNZ	UK Climate Change Committee Balanced Net Zero Pathway
UNEP-FI	UN Environment Programme-Finance Initiative
WAPI	Weighted Average Physical Intensity
WATS	Weighted Average Temperature Score
WLTP	Worldwide Harmonized Light Vehicles Test Procedure
WTT	Well-to-Tank
WTW	Well-to-Wheel/Well-to-Wake

References

1. Only one Chinese bank, the Hong Kong-based Bank of East Asia, has joined the NZBA.
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TARGETING NET ZERO
The need to redesign bank decarbonization targets

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance's priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of financial players, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

contact@reclaimfinance.org

RECLAIM Finance