SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi FINANCIAL SECTOR NEAR-TERM SCIENCE-BASED TARGETS EXPLANATORY DOCUMENT

Version 2.0

May 2024

ABOUT SBTi

The Science Based Targets initiative (SBTi) is a corporate climate action organization that enables companies and financial institutions worldwide to play their part in combating the climate crisis.

We develop standards, tools and guidance that allow companies to set greenhouse gas emissions reduction targets in line with what is needed to keep global heating below catastrophic levels and reach net-zero by 2050 at the latest.

The SBTi is incorporated as a charity, with a subsidiary that hosts our target validation services. Our partners are CDP, the United Nations Global Compact, the We Mean Business Coalition (WMBC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF).

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The SBTi reserves the right to revise this document according to a set revision schedule or as needed to reflect the most recent emissions scenarios, regulatory, legal or scientific developments, and greenhouse gas accounting best practices.

VERSION HISTORY

Version	Change/Update Description	Release Date	Effective Dates
Pilot	The pilot version of the Criteria and Recommendations for Financial Institutions.	October 2020	October 2020 to January 2022
1.0	No changes made to the criteria. Version changed from pilot to 1.0 to recognize the end of the pilot phase.	February 2022	February 2022 to June 2022
1.1	Clarification for loan coverage metric, noting that financed emissions may be used to cover the 67% minimum threshold. Clarification to the coverage footnote (footnote B), that small- and medium-sized enterprise lending does not have to be included in the calculation of the minimum 67% coverage.	July 2022	July 2022 to November 31, 2024
2.0	Updates to criteria FI-C10, FI-C12, FI-C15, FI-C16, FI-C17.1, FI-C17.2, FI-C17.3, FI-C17.4, among others, and various clarifications – see the accompanying Main Changes Document for a summary of changes and the development process.	May 28, 2024	From November 30, 2024

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EXECUTIVE SUMMARY

The scientific community has clearly stated the need to reach net-zero global emissions by mid-century to limit global warming to 1.5 degrees Celsius (°C) and to reduce the destructive impacts of climate change on human society and nature. While financial institutions' business models are vulnerable to climate disruptions, greater attention is also being given to the influence of investment and lending portfolios on climate outcomes. This transition is marked by unprecedented growth of environmental, social, and corporate governance (ESG) investments, a profusion of high-level climate commitments by financial institutions (FIs) and burgeoning financial regulatory action on climate-related financial disclosures.[1] FIs are increasingly seeking to lead zero-carbon transformation rather than just minimize risks related to climate impacts.

To decarbonize the global economy in alignment with the goals established by the Paris Agreement, all economic actors in the real economy need to reduce their greenhouse gas (GHG) emissions at a rate sufficient to be consistent with the emissions pathways established by climate science. FIs differ from other economic sectors in that they provide finance and other services to the companies that are responsible for reducing GHG emissions, rather than exercising direct control over GHG emission reductions. The central enabling role of finance is recognized in the Paris Agreement's Article 2.1(c) on "making finance flows consistent with a pathway toward low GHG emissions and climate-resilient development."

The SBTi near-term target framework for FIs aims to support FIs in their efforts to address climate change by providing resources for science-based target setting. The framework includes target-setting methods, criteria, target-setting tools and this Explanatory Document. This Explanatory Document includes the following:

- Business case for setting science-based targets.
- Guidance for FIs to use the target validation criteria and recommendations, target-setting methodologies and tools to prepare near-term targets for submission to the SBTi for approval.
- Case studies from global FIs on their application of target-setting methods.
- Recommendations about how FIs can communicate their science-based targets, as well as how they aim to contribute to reducing GHG emissions in the real economy through the implementation of their targets.
- Recommendations on steps that FIs can take to achieve their targets, building on the understanding that setting targets is only one of various steps (high-level commitments, measurement and disclosure of financed emissions, scenario analysis, target setting, transition plans and implementation actions, reporting) that FIs need to take to ultimately reduce GHG emissions in the real economy.

[1] On September 14, 2020, New Zealand announced it was the first country to require annual climate risk reporting by large banks, asset managers and insurers. Meanwhile, the UK has made it mandatory, from April 6, 2022 on, for Britain's largest businesses to disclose their climate-related risks and opportunities, in line with Taskforce on Climate-Related Financial Disclosures (TCFD) recommendations. Similarly, starting in 2024, sustainability reporting will be mandatory in the EU for large companies, including banks and insurance companies. Also, the U.S. Securities and Exchange Commission proposed in 2022 the inclusion of climate disclosures in line with the TCFD and the Greenhouse Gas Protocol.

The business case for setting science-based targets

FIs have historically focused on maximizing economic return on investment as a guiding principle and business model. However, the meaning of fiduciary duty, that is FIs' legal and ethical obligation to act in their clients' best interests, is shifting in the face of climate change. The new business case for FIs to set science-based targets for their investment and lending portfolios is based on a four-part rationale: resilience, policy, demand and innovation. Adoption of science-based targets can help FIs augment their resilience and competitiveness in the face of extreme weather events and other climate-related risks. By becoming change makers rather than change takers, FIs can effectively anticipate climate policy and regulatory shifts. Clients are increasingly demanding climate actions by their FIs, and science-based targets help to provide transparent credibility. Finally, science-based targets help direct FI innovation toward potentially higher-margin products that support emissions reductions in the real economy.

How to set science-based targets

FIs' largest impact on climate change is through their investment and lending activities; thus, it is essential they prioritize target setting in these areas. The SBTi has adopted an asset class-specific approach to enable robust and meaningful targets. After an extended stakeholder engagement process, the SBTi has selected four methods that link FIs' investment and lending portfolios with climate stabilization pathways, each of which can be used for one or more asset classes:

- Sectoral Decarbonization Approach (SDA): Emissions-based physical intensity targets are set for real estate and mortgage-related investments and loans, as well as for the power generation, cement, transport, pulp and paper, iron and steel, buildings, FLAG (forest, land and agriculture), aluminum, aviation and maritime shipping sectors.
- SBTi Portfolio Coverage method: Engagement targets are set by FIs to have a portion of their borrowers and/or investees set their own SBTi-approved science-based targets such that the FI is on a linear path to 100% portfolio coverage by 2040.
- The Temperature Rating method: FIs can use this approach to determine the current temperature alignment of their portfolios and take actions to align them to ambitious temperature goals by engaging with portfolio companies to set emissions reduction targets.
- The Fossil Fuel Finance Targets (FFF) method: FIs can use this approach to set targets to disclose, arrest, transition and phase out its financial activities related to fossil fuel projects and companies.

The SBTi recognizes that these methods are neither exhaustive nor comprehensive and welcomes review of additional methods. In addition to setting targets for their investment and lending activities, FIs are required to set targets for their operations (i.e., scope 1 and 2 emissions) consistent with a 1.5°C pathway. FIs may also set targets for the remaining scope 3 categories, as defined by the GHG Protocol (GHGP) Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

How to communicate targets

The SBTi has developed communications guidelines, a communications pack and a template that provides instructions for FIs on how to best:

- Define a headline target that sets out which asset classes are included in their targets and how much of their total portfolio is covered.
- Define targets for individual asset classes that include the method they have used as well as specific target language.
- Outline the actions they will take to reach their headline and asset class-specific target(s).

The SBTi recognizes that currently there is insufficient clarity about which FI actions lead to GHG emissions in the real economy. To make further progress in this field the SBTi requires that, after target approval, FIs disclose actions or strategies taken during the year to meet scope 3 portfolio targets, and disclosure of progress against all approved targets on an annual basis. As FIs set targets, this reporting will help to identify which actions are most effective to realize GHG emission reductions in the real economy.

How to track progress and achieve targets

Actions FIs can take to fully integrate climate change in their organizations and services and influence GHG emission reductions in the real economy include:

- Engaging key stakeholders, such as companies, service providers and policymakers on complementary components of climate action.
- Public disclosure of strategies employed to reduce the impact of the FI on climate change.
- Integration of climate change in governance and decision making.

How to join the SBTi and submit targets for approval

The pilot version of the Financial Sector Science-Based Targets Guidance (here re-named Financial Sector Near-Term Science-Based Targets Explanatory Document) was published in October 2020. It was followed by a pilot target validation project involving 20 FIs that lasted until February 2022. The first generation of science-based targets provides proof of concept that catalyzes further action and target setting among peer FIs. From the conclusion of the pilot onward, all interested FIs are invited to follow the five-step SBTi Call to Action process:

1. Commit to set a science-based target,
2. Develop a target,
3. Submit the targets for validation,
4. Announce the approved targets and
5. Disclose target progress.

1. INTRODUCTION

The former governor of the Bank of England, Mark Carney, has warned that the global financial system is backing carbon-producing projects that will raise the temperature of the planet by over 4°C – severely overshooting what is required to achieve the goals of the Paris Agreement and stay well-below 2°C.[2] At the same time, extreme weather events and other climate impacts pose growing threats to FIs' economic models. While many FIs are working on reducing their exposure to risks from climate impacts, the SBTi Financial Sector Near-Term Science-Based Targets Explanatory Document provides a near-term framework for FIs to reduce their impact on the climate. It is designed to clarify, improve and accelerate FIs' alignment with the temperature goals of the Paris Agreement.

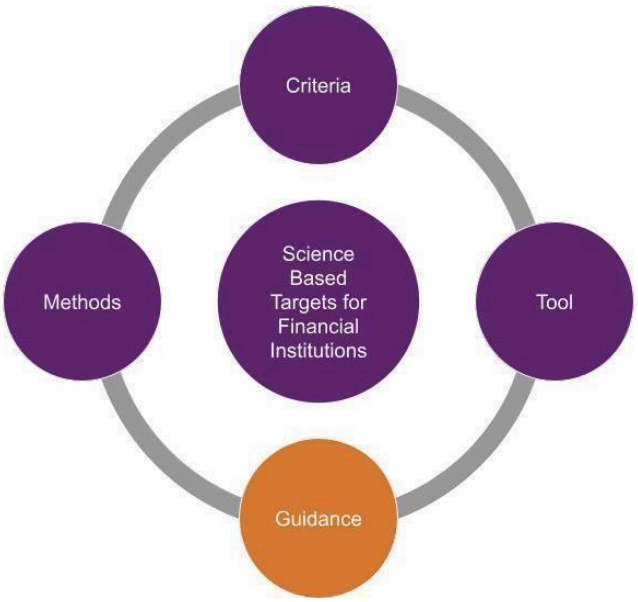
To decarbonize the global economy in alignment with the goals of the Paris Agreement, all economic actors in the real economy need to reduce their greenhouse gas (GHG) emissions at a rate sufficient to remain aligned with the emissions pathways established by climate science. Corporate emissions do not occur in a vacuum, but rather within a broader economic and regulatory system that creates a complex web of incentives and disincentives to reduce emissions. In many ways, all actors across a given value chain, namely the upstream and downstream activities associated with each company's operation, and those connected through policy and other incentives, share influence over the direct emissions of each actor and therefore share responsibility for reducing them. FIs have unique influence over other actors through their provision of investment and lending services. To drive Paris-aligned systemic decarbonization, it is critical to leverage shared influence and responsibility for aligning incentives as well as eliminating barriers to emission reductions.

1.1 Purpose of this document

Recognizing the pressing need for a tailored, yet standardized approach for FIs, the SBTi launched a project in 2018 to develop target-setting methods, target validation criteria and recommendations, a target-setting tool and a guidance for FIs to align their lending and investment portfolios with the ambitions of the Paris Agreement (see Figure 1.1).

[2] For more information on Mark Carney's statement, please see this article.

Figure 1.1: Components of the SBTi's near-term target framework for FIs



Source: Authors (2020).

This Explanatory Document is a part of the science-based target-setting framework for FIs that ties the three other components together, namely the target validation criteria and recommendations, target-setting methods and description of an open-source tool for target-setting methods. FIs are invited to use the criteria, recommendations and methods to formulate their targets. The criteria will also be used by the SBTi Target Validation Team (TVT) to assess FIs' near-term target submissions.

In addition, this document provides recommendations to FIs on how to set science-based targets for scope 1, 2 and 3 emissions (Sections 4 and 5), informed suggestions on communicating targets and actions (Section 6), examples of actions FIs can take to achieve their targets (Section 7) and instructions on committing to the SBTi and submitting targets for validation (Section 8). The Appendices include further information on the target-setting methods, the SBTi Finance Tool (which is freely available through the project website along with all other project resources to facilitate target setting) and case studies.

To date, more than 200 FIs have publicly committed to set emissions reduction targets through the SBTi. This list can be found in the target dashboard on the SBTi website. The list of FIs with validated near-term science-based targets as of March 2024 is included in Table 1.1 in alphabetical order.

Table 1.1: FIs with SBTi-validated targets

Accent Equity AB	EQT AB	Mirae Asset Securities
Actiam NV	Eurazeo	Montagu
AIA Group Limited	EV Private Equity	Naspers

AIB Group Plc	Formue AS	NatWest Group
AkademikerPension	FSN Capital Partners	Nonghyup Financial Group Inc
Altor Fund Manager AB	Fubon Financial Holdings	Norron Asset Management
Amalgamated Bank	GENUI GmbH	Pension Danmark
Andera Partners	Great Southern Bank	Permira
Arendals Fossekompani ASA	Groupe Bruxelles Lambert	Pictet Group
Argos Wityu Partners S.A.	Grupo Financiero Banorte, S.A.B. de C.V.	Piraeus Financial Holdings SA
Astorg	Hana Financial Group	PostFinance AG
Avanza Bank Holding AB	Hannon Armstrong	ProCredit Holding AG & Co. KGaA
Aviva plc	Hg Capital	Raiffeisen Bank International AG
Axcel Management	If P&C Insurance Holding Ltd	Rathbones Group Plc
Bank Australia	IK Investment Partners Limited	Schroders
Bank of Ireland Group	Industrial Bank of Korea	Shin Kong Financial Holding Co., Ltd.
Bendigo and Adelaide Bank Limited	Infratil Limited	Shinhan Financial Group
Bregal Investments	Intermediate Capital Group	SinoPac Financial Holdings Company Limited
Bupa	Investindustrial	SK Securities Co., Ltd
CapMan plc	JAB Holding Company	Storebrand ASA
Carnegie Fonder AB	JB Financial Group Co., Ltd.	Sycomore Asset Management
Cathay Financial Holding Co., Ltd	Julius Bär Group Ltd.	Taishin Financial Holdings
Cinven Limited	KB Financial Group	Taiwan Cooperative Financial Holding Co., Ltd.
COFRA Holding AG	Kirkbi A/S	Terra Alpha Investments LLC
Commerzbank AG	La Banque Postale	Tribe Impact Capital
CTBC Financial Holding Co., Ltd.	Landsbankinn	Triodos Bank N.V.
CVC	Legal & General America	Türkiye Sinai Kalkinma Bankasi A.S.
Desjardins Group	Legal & General Assurance Society	UNIQA Insurance Group AG
DeVolksbank N.V.	Legal & General Capital Investments Limited	Vakifbank
DGB Financial Group	Legal & General Reinsurance	Varma Mutual Pension Insurance Company

D'Ieteren Group SA/NV	Liontrust Asset Management Plc	Velliv, Pension & Livsforsikring A/S
Direct Line Insurance Group plc	Livingbridge	VP Capital
E.SUN Financial Holding Co., Ltd.	Meanings Capital Partners	Woori Financial Group
EMK Capital	MidEuropa	Yuanta Financial Holding Co Ltd

Source: SBTi Target Dashboard (2024).

1.2 Audience

The SBTi defines an FI as an entity that generates five percent or more of its revenue from investment, lending or insurance activities. This includes but is not limited to banks, asset managers and private equity firms, asset owners and insurance companies and mortgage real estate investment trusts (REITs). Currently, public FIs are not covered within the SBTi framework.

The current near-term target-setting framework covers lending and investment activities. Additional audiences and asset classes (e.g., insurance underwriting) are expected to be addressed in the FI Net-Zero (FINZ) Standard, which will require both near- and long-term targets that are consistent with achieving net-zero across FIs' portfolios by 2050.

Equity REITs, namely real estate companies that own or manage income-generating properties and lease them to tenants, are not a target audience of this project and shall pursue the regular target validation route for companies.

Real economy companies that have more than five percent of revenue from financial activities are encouraged to use SBTi to set targets on those activities in addition to their corporate targets. For real-economy companies going through the corporate target validation route that have some financial activities, the general approach proposed for incorporating their scope 3, category 15 emissions (if and when relevant) is for the company to:

1. Disclose if it is involved in any kind of financial activities (e.g., loans, equity and debt investments, project finance). If yes, then calculate the % revenue coming from all financial activities. If the revenue from financial activities represents more than five percent of revenue, then check the asset classes involved.
2. Calculate the percentage of revenue coming from in-scope asset classes as listed in Table 5.2. Only required and optional asset classes would be relevant. Financing related to all other asset classes (e.g. personal loans, sovereign debt) would currently be out of scope.
3. If those activities are in scope and represent greater than five percent of total company revenue, then a financed emissions inventory would need to be compiled to see how relevant they are in emissions terms relative to the other scope 3 categories. Since real-economy companies (that are going through the corporate target validation route but have some financial activities) must set one or more near-term targets that collectively cover(s) at least two-thirds (67%) of their total (reported and excluded) scope 3 emissions (considering the minimum boundary of each scope 3 category in conformance with the GHG Protocol (GHGP) Corporate Value Chain (Scope 3) Accounting and Reporting Standard), then it may be the case that the company would

not need to cover their financed emission sources with FI targets if their other scope 3 categories made up over 67% of their total scope emissions and are already being covered by near-term targets.

4. Once the financed emissions inventory is compiled, the target boundary should be defined and the need to include the financed emissions will depend on their size relative to the other scope 3 emissions.
5. If the company wants or needs to cover these financed emissions sources, then it can use this Guidance document to set targets.

1.3 Context

FIs differ from other economic sectors: they provide finance and other services to the companies that are responsible for reducing GHG emissions, rather than exercise direct control over GHG emission reductions. The central enabling role of finance is recognized in the Paris Agreement, which contains Article 2.1(c) on "making finance flows consistent with a pathway toward low GHG emissions and climate-resilient development."

As reflected by Article 2.1(c), FIs require an approach within the SBTi that is tailored to their role and recognizes that climate target-setting is one of numerous activities needed for systemic transformation. Due to the lack of complete understanding and evidence regarding the climate impacts of FIs' investment and lending portfolios, the SBTi's financial sector project focuses on trackable activities. Activities that connect financial flows with GHG emission reductions in the real economy include physical and transition risk assessment, emissions measurement and disclosure, target setting, tracking of mitigation actions and performance and disclosure. Thus, the SBTi near-term target framework for FIs contributes to the wider portfolio transition framework through its transparent and robust target-setting platform and disclosure requirement regarding actions taken by FIs to achieve targets.

1.4 What are science-based targets?

Targets adopted by companies to reduce GHG emissions are considered "science-based" if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement—to limit global warming to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C.

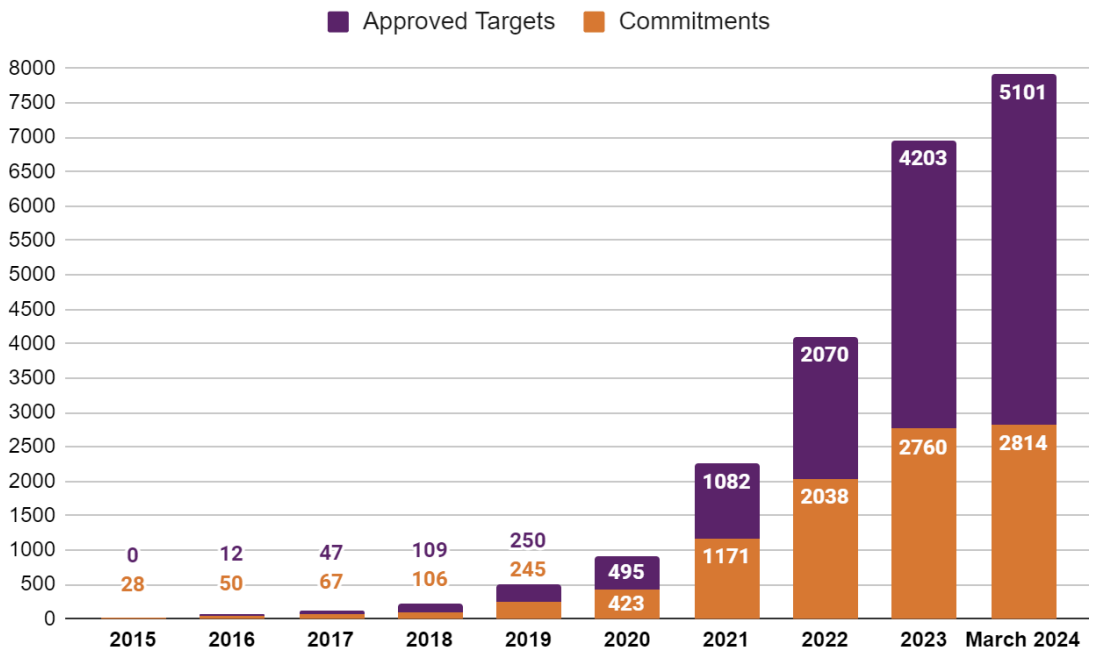
Among companies globally, there is a growing momentum for science-based target setting through the SBTi. As of March 2024, 7,915 companies and FIs have publicly joined the SBTi, among which 5,101 companies have had their targets officially approved (see Figure 1.2).[3]

The pace at which companies have set science-based targets and committed to set targets doubled each year between 2017 and 2023. When the SBTi was launched in 2015, science-based target-setting emerged as a novel corporate sustainability practice. Since then, the initiative is on track to maintain an exponential rate of growth, and science-based targets have now become a shared language for ambitious corporate climate goals.

[3] For more information on committed and approved companies, please visit the SBTi Target Dashboard.

The SBTi has made substantial progress against its goal of making science-based target-setting a standard business practice for companies seeking to play a leading role in driving down global GHG emissions.

Figure 1.2: SBTi-validated targets since June 2015

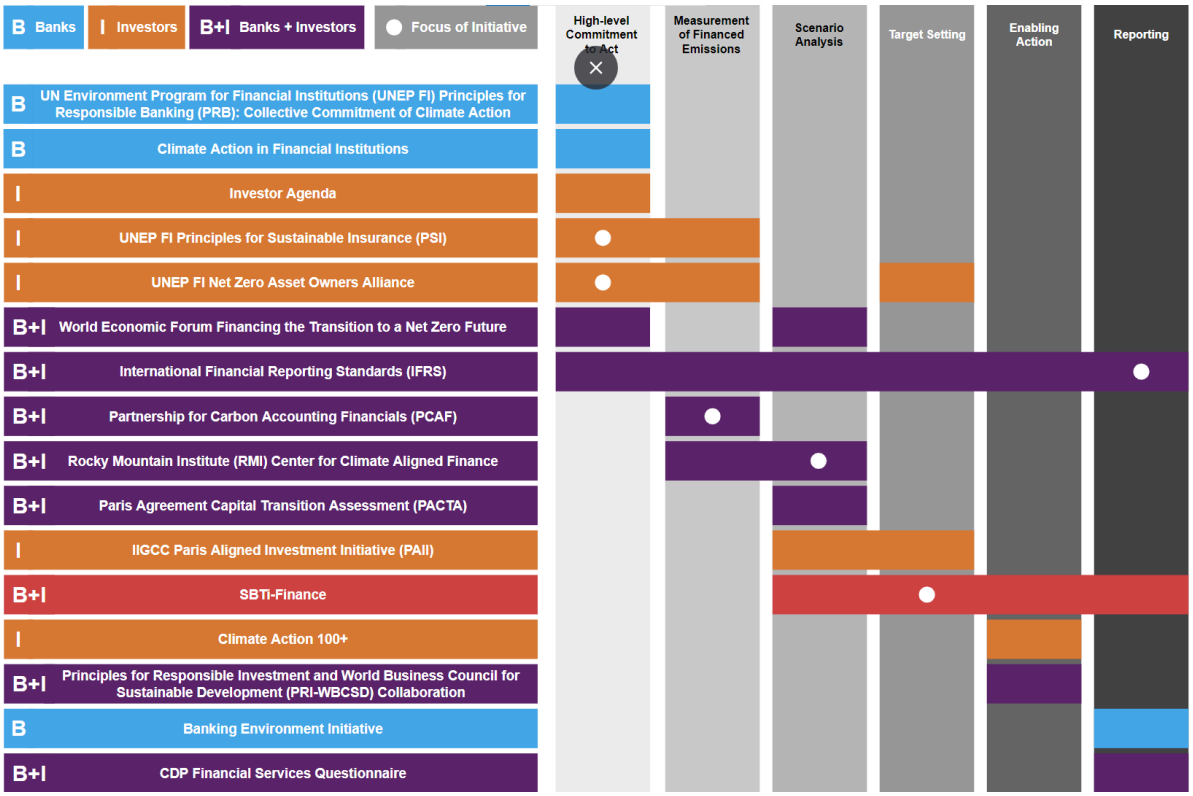


Source: SBTi (2024).

1.5 How is the financial sector addressing climate?

FIs are increasingly attuned to climate, both in terms of adaptation to warming and reducing climate impacts of investment and lending portfolios. Steps in this latter mitigation category can be categorized into six rubrics: high-level commitments to act, measurement and disclosure of financed emissions, scenario analysis, target setting, transition plans and implementation actions and reporting. Table 1.2 summarizes various financial sector initiatives alongside these rubrics.

Table 1.2: Relevant initiatives that support FIs' climate actions



Notes: UNEP = United Nations Environment Program; IIGCC = Institutional Investors Group on Climate Change
Source: Authors (2023).

The SBTi's financial sector project is focused on the target-setting component in the broader portfolio transition process. The first climate mitigation step for many FIs is a high-level commitment to act through an international initiative such as the UN-convened Net-Zero Asset Owners Alliance, Principles for Responsible Banking, the Investor Agenda or reporting via International Financial Reporting Standards S2 climate-related disclosures. To develop emissions metrics, the Partnership for Carbon Accounting Financials (PCAF) provides asset class methods and data resources for quantification of financed emissions. The Institutional Investors Group on Climate Change (IIGCC) Paris-Aligned Investment Initiative builds from a high-level commitment to set out a range of actions investors should take to align their portfolios. Target setting with the SBTi is intended to provide specific, near-term components of the high-level commitments and build on the financed emissions and scenario analysis. After the targets are set and published, the SBTi seeks to harmonize with action and reporting-focused initiatives to facilitate implementation, accountability and compilation of evidence.

Outside of the areas described in Table 1.2, FIs are also mitigating their climate impact by measuring emissions intensity of their portfolios and distinguishing green versus grey financing. The emissions intensity approach calculates emissions per economic unit, often grams of carbon dioxide (CO_2) equivalent (gCO_2e)/$ assets under management, to quantify sector differences and track changes over time. Green versus grey metrics are exemplified by WRI's Green Targets tool, which illustrates the distribution of banks' sustainable finance

commitments relative to their fossil fuel finance.[4] The SBTi financial sector project complements and augments these approaches with its focus on target setting.

1.5.1 Framework development process

Science-based target-setting resources for FIs have been developed through an inclusive multi-stakeholder process, including consultation with an Expert Advisory Group (EAG) representing FIs, consultants, nongovernmental organizations (NGOs) and academic institutions; FIs participating in method road testing and a broad, inclusive Stakeholder Advisory Group (SAG), which provides input at key milestones in the framework development process.

The development process of the Financial Institutions' Near-Term Criteria Version 2.0 followed a streamlined version of the procedures outlined in the Standard Operating Procedure for Development of SBTi Standards because the project was already in an advanced stage of development when the procedure was formally adopted. However, the SBTi adhered to the procedures and processes where possible, which included multiple rounds of research and drafting, public consultation, pilot testing and approvals by the Technical Council and SBTi Board.

Highlights and milestones from the development process can be found in the Development Process section of the SBTi Financial Sector webpage.

[4] For more information, please see WRI's Green Targets tool for banks.

2. BUSINESS CASE FOR FIS TO SET SCIENCE-BASED TARGETS

FIs are uniquely positioned to influence other actors through their investment and lending activities. To drive Paris-aligned systemic decarbonization, it is critical to leverage shared influence and responsibility for aligning incentives as well as eliminating barriers to emissions reductions.

FIs that set science-based targets commit to align their lending and investment portfolios with the level of ambition required to achieve the temperature goals of the Paris Agreement. This commitment, along with the strategy and actions that will be taken to achieve the targets not only contribute to the transition to a net-zero economy but also bring substantial benefits to the FI. Key benefits include the following:

- **Build business resilience and increase competitiveness:** Performing scenario analysis and applying methods to set science-based targets enable FIs to align with the zero-carbon economy, to identify and capitalize on a range of opportunities and to mitigate climate risks and increase competitiveness by gaining insights into the transformations faced by the economic sectors they lend to and invest in.
- **Drive innovation:** As science-based targets include a long-term vision, FIs can plan future financing options that prioritize the zero-carbon transformation. Engaging with their clients, FIs can develop innovative financial products and services that enable customers to reduce emissions in the real economy.
- **Build credibility and reputation:** As compared to targets initiated solely by FIs, science-based targets have higher credibility with stakeholders since they are based on the latest available science and validated against a set of robust criteria developed through a multi-stakeholder consultative process. FIs with science-based targets can serve as lower-risk options for long-term shareholders and investors that are seeking to hedge climate-related risks. In addition, FIs with science-based targets demonstrate leadership in sustainability, which improves an FI's reputation with all stakeholders.
- **Influence and prepare for shifts in public policy:** Science-based targets help FIs adapt to changing policies and send a stronger signal to policymakers, allowing the industry to better influence policy decisions. FIs with science-based targets are much better positioned to respond to future regulatory adjustments as governments ramp up their climate action.
- **Demonstrate leadership:** While metrics and methods to set science-based targets for FIs are new and best practice is still evolving, this is no reason to delay action. FIs that undertake the target-setting process lead the way and push the market toward the most credible and practical solutions.

3. THE SBTi FINANCIAL INSTITUTIONS' NEAR-TERM CRITERIA

Please refer to the SBTi Financial Institutions' Near-Term Criteria.

4. HOW TO SET SCIENCE-BASED TARGETS

4.1 Compiling a GHG inventory

4.1.1 Setting organizational and operational boundaries for a GHG inventory

An institution-wide GHG inventory is the foundation to setting science-based targets. The SBTi requires that FIs follow the GHGP Corporate Standard, Scope 2 Guidance and Corporate Value Chain (Scope 3) Accounting and Reporting Standard to measure and report GHG emissions.

This section presents target validation criteria that are relevant to GHG emissions inventory and target boundary and introduces the concepts of organizational and operational boundaries from the GHGP Corporate Standard. It also denotes where this framework deviates from or goes beyond these existing standards for setting targets on FIs' investment and lending activities.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0
FI-C1 – Organizational Boundary: Parent companies must include the emissions of all subsidiaries in their target submission, in accordance with the boundary criteria outlined below. FIs should submit targets only at the parent- or group-level, not the subsidiary level. In cases where both parent companies and subsidiaries submit targets,[5] the parent company's target must also include the emissions of the subsidiary if it falls within the parent company's emissions boundary, given the chosen inventory consolidation approach.[6] Targets may be submitted at a subsidiary level if the subsidiary is a legal entity. Multiple subsidiaries within a group may submit targets but must do so separately, and their target language must explicitly state the specific target-setting entity.
FI-C2 – Greenhouse Gases (GHGs): Scope 1 and 2 targets must cover all relevant emissions of the seven GHGs required by the GHGP Corporate Standard.[7] If optional targets for scope 3, categories 1–14 are set, they shall also cover all relevant GHGs. Coverage of all relevant GHGs is recommended, where possible, for FIs' scope 3 portfolio targets. If FIs are unable to cover all GHGs for scope 3 portfolio targets, they shall cover carbon dioxide (CO_2) emissions at a minimum, unless otherwise specified.
FI-C3 – Scopes: FIs must set targets that cover institution-wide scope 1 and scope 2 emissions, as defined by the GHGP Corporate Standard, and scope 3 investment and lending activities as defined in FI-C14 and FI-C15. FIs may set targets for remaining scope 3 emissions categories as specified in FI-R2.
FI-C4 – Scope 1 and 2 Allowable Exclusions: FIs must not exclude more than 5% of total combined scope 1 and scope 2 emissions from either the boundary of the GHG inventory or the target

[5] Brands, licensees, and/or specific regions or business divisions (with the exception of banks' asset management businesses) of an FI will not be accepted as separate targets unless they fall outside of a parent company's chosen consolidation approach.
[6] For example, asset owners with asset management businesses that submit targets at the group level must include all assets owned or managed by group-owned asset managers in their submission. However, although the SBTi strongly recommends banks to cover their asset management businesses in their scope 1, 2, and 3 target boundaries, it is currently optional as an exception under this version of the criteria. If FIs make such an exclusion, they shall disclose it clearly in the target language (see Table 5.1).
[7] The seven GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

boundary.[8] Scope 3 target boundary requirements are outlined in FI-C14, FI-C15 and FI-R2.

4.1.2 Ensure the target boundary is aligned with the GHG inventory boundary

As a first step to compile a GHG inventory, an FI should define its organizational boundary by selecting a single consolidation approach based on a range of institution-specific considerations. The chosen consolidation approach should be applied consistently across its institutional structure. The boundaries of its science-based targets must align with the organizational boundaries of the GHG inventory.

The GHGP Corporate Standard defines three different approaches for determining the organizational boundaries of institutional GHG inventories:

1. Operational control: An FI accounts for 100% of the emissions from operations at which it has the full authority to introduce and implement operating policies as its direct (i.e., scope 1) emissions. It does not account for any of the emissions from operations in which it owns an interest but does not have operational control as direct emissions.
2. Financial control: An FI accounts for 100% of the emissions from operations at which it can direct financial and operating activities with a view to gaining economic benefits from those activities as its direct emissions.
3. Equity share: An FI accounts for direct GHG emissions and emissions from purchased electricity, heat and steam from operations according to its share of equity in the operation. The equity share reflects economic interest, which is the extent of rights a company has to the risks and rewards flowing from an operation.

To simplify the target-setting process, FIs should use the operational control or financial control approach and include all investment and lending activities in scope 3, category 15. For more information on this, please refer to the “Setting Organizational Boundaries” Chapter of the GHGP Corporate Standard.

4.1.3 Setting the operational boundary

After selecting an organizational boundary, an FI sets its operational boundary to distinguish between direct emissions from sources it owns or controls from indirect emissions. The GHGP Corporate Standard defines three scopes of emissions for setting organizational boundaries:

- **Scope 1**: Direct GHG emissions that are emitted from sources owned and controlled by a company.
- **Scope 2**: GHG emissions from the generation of electricity, heat and steam purchased by a company.
- **Scope 3**: “Indirect” emissions from a company’s value chain activities.

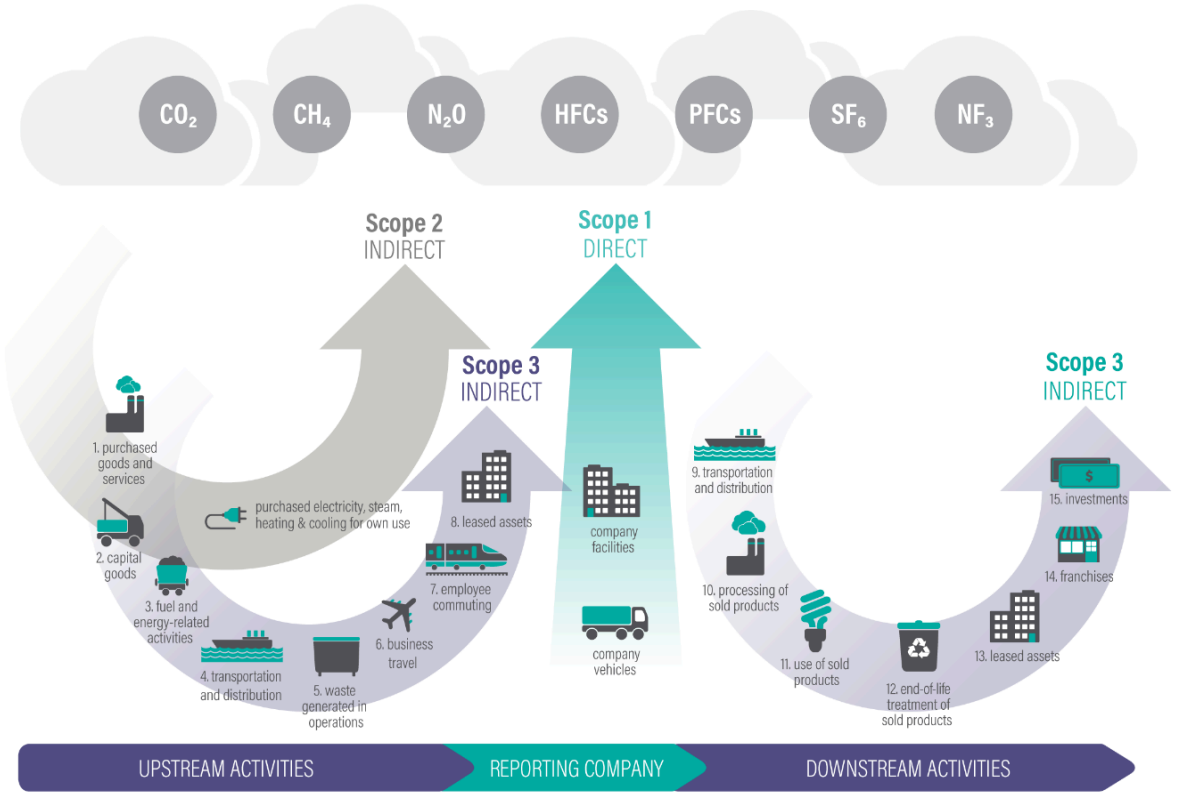
[8] This means that an FI must not exclude five percent from the inventory boundary and then also exclude a further five percent from the target boundary. Where FIs’ scope 1 or 2 emissions are deemed immaterial (i.e., under five percent of total combined scope 1 and 2 emissions), FIs may set their SBT solely on the scope (either scope 1 or scope 2) that covers more than 95% of the total scope 1 and 2 emissions. FIs must continue to report on both scopes and adjust their targets as needed, in accordance with the GHGP’s principle of completeness and following the FI-C21-Mandatory target recalculation.

The GHGP Corporate Value Chain (Scope 3) Standard further categorizes scope 3 emissions into 15 categories, where category 15 (investments) is designed primarily for FIs and is likely the most significant category for these institutions (see Figure 4.1). Together with the Technical Guidance for Calculating Scope 3 emissions, the Scope 3 Standard provides initial, high-level guidance to account for emissions from a set of asset classes.

For category 15, the Scope 3 Standard only requires the emissions measurement of corporate debt holdings with known use of proceeds. **This framework goes beyond this requirement and therefore expands the minimum boundary of category 15**. This means FIs shall follow the emissions measurement requirements in the relevant asset class methods and measure emissions of debt and equity investments with and without known use of proceeds, as well as loans, where applicable. Section 4.2 and Section 5.4 explain that among the current methods supported by the SBTi, only the SDA and Fossil Fuel Finance Targets (FFF) require the measurement of financed emissions of the relevant asset classes.

Measurement of all seven GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3) is required for scope 1 and 2 emissions. Considering data availability challenges, **FIs should cover all GHGs for category 15 if possible, with measurement of CO_2 as the minimum requirement**.

Figure 4.1: Overview of GHGP scopes and emissions across the value chain



Source: GHGP, Scope 3 Standard.

4.1.4 Choosing an inventory consolidation approach

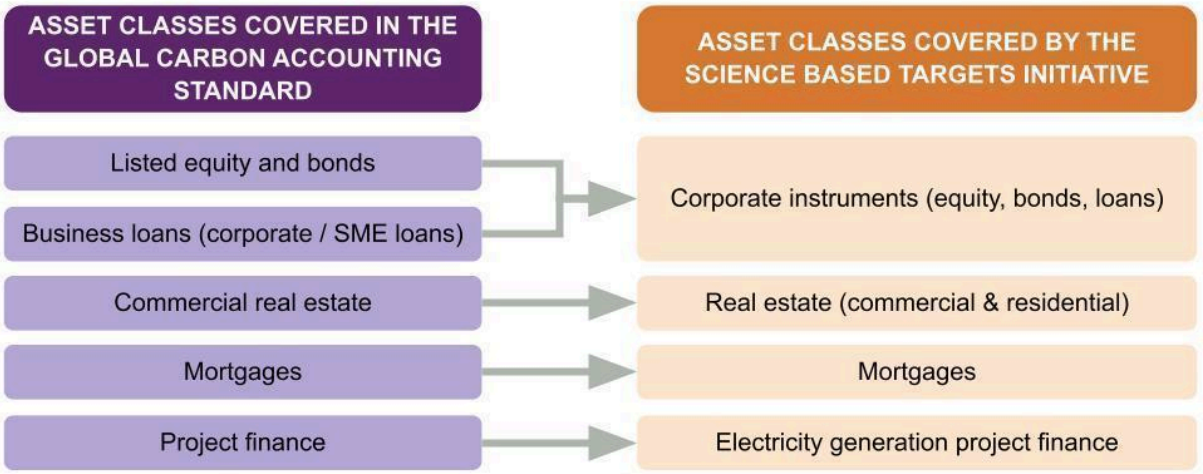
The GHGP Scope 3 Standard specifies that FIs may decide under which scope investment and lending activities are included, depending on the chosen consolidation approach. For instance, if an FI chooses the equity share approach, it has the flexibility to account for investment-related emissions from equity investments in scope 1 and scope 2. To simplify the target-setting process, **FIs should use the operational control or financial control approach** and include all investment and lending activities in scope 3, category 15.

4.2 Measuring financed emissions to facilitate target setting

Harmonized measurement and disclosure of financed emissions are key to ensuring comparability and transparency among FIs. The SBTi has identified the Global GHG Accounting and Reporting Standard for the Financial Industry, developed by the PCAF, as a freely available approach to measure portfolio-wide or asset-level financed emissions. The standard has been reviewed by the GHGP and is in conformance with the requirements set forth in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, for category 15 investment activities. The Standard provides detailed methodological guidance on measurement and disclosure of GHG emissions associated with loans and investments. The Standard is applicable to multiple geographies and includes GHG accounting methods for the asset classes covered in this Explanatory Document (i.e., mortgages, real estate, electricity generation project finance and corporate equity and debt). See Figure 4.2 for more information.

For FIs that are interested in understanding the overall exposure to emissions of their portfolios, they may use PCAF methods to conduct a portfolio-wide emissions screening and prioritize which part of a portfolio to focus on for target setting (i.e., asset classes and sectors). Following this prioritization, FIs measure emissions associated with their investing and lending activities to determine the emission baselines from which emission-based science-based targets are set. While the SBTi has determined required activities that FIs shall include in the target boundary, FIs may still set targets on optional activities if these activities are deemed significant and to increase the percentage of their investment and lending covered with targets (see Section 5.3 for more information on this topic).

Figure 4.2: Asset class coverage of Partnership for Carbon Accounting Financials[9]



Note: SME = Small- and medium-sized enterprise.
Source: PCAF (2020).

At the monitoring stage, FIs setting SDA targets shall annually measure their progress against the target, at which point, measuring portfolio emissions intensity and comparing it with the baseline intensity is required. For a more detailed explanation on how to use PCAF as a starting point for target setting, see Section 5.4.1 on the SDA. PCAF's asset class-specific methods facilitate a harmonized approach for measuring FIs' year-on-year absolute emissions of loans and investments, fostering transparency and accountability in the financial industry.

The PCAF Global GHG Accounting and Reporting Standard for the financial industry also incorporates a data quality scoring with specific guidance per asset class (see Figure 4.3). Data quality ranges from estimated data with very limited support with score 5 (i.e., economic-based sectoral emissions factors) to audited GHG emissions data on client-level with highest quality score 1. Economic-based sectoral emissions factors can easily be applied and are often the first step used for screening purposes to identify hotspots in a diversified lending and investment portfolio. Scoring and disclosing on the data quality enables FIs to develop a strategy to improve the data quality over time, collecting client-level data especially for the hotspot.

[9] PCAF asset class coverage reflects the methods developed for the first edition of the Global GHG Accounting and Reporting Standard. It is expected that PCAF will develop financed emissions methods for additional asset classes in the future.

Figure 4.3: PCAF's general data quality score card[10]

Source: PCAF (2020).

4.3 How to set a science-based target for scope 1 and 2 emissions

Scope 1 and 2 emissions are the starting point for setting science-based targets. While scope 3 emissions, in particular category 15 (investments) are more significant for FIs, scope 1 and 2 targets consistent with a 1.5°C pathway at a minimum are required for all FIs. Please refer to the SBTi Criteria Assessment Indicators for more details.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0
FI-C10 – Base and Target Years: Scope 1 and 2 targets must cover a minimum of five years and a maximum of 10 years from the date the targets are submitted to the SBTi for an official validation.[11] The choice of base year shall be representative of the FI's activities and shall be no earlier than 2015. Scope 1 and scope 2 targets must use the same base year.[12]
FI-C11 – Progress to Date: Targets that have already been achieved by the date they are submitted to the SBTi are not acceptable. The SBTi uses the year the target is submitted to the initiative or the most recent year[13] to assess forward-looking ambition. FIs must provide all the relevant GHG inventory data, including a most-recent-year GHG inventory, which must not be from earlier than two years prior to the year of submission.[14]

[10] This is a generic data quality score card. The PCAF Standard has asset-class specific data quality score cards with detailed description of data in relation to each score.
[11] For targets submitted for an official validation in the first half of 2024, the valid target years are 2028-2033 inclusive. For targets submitted in the second half of 2024, the valid target years are 2029-2034 inclusive.
[12] Scope 3 targets are recommended but not required to use the same base year as scope 1 and scope 2 targets.
[13] The most recent year used for scope 1 and scope 2 emissions must be the same year. The most recent year used for scope 3 emissions is recommended to be the same year as scope 1 and scope 2.
[14] For targets submitted for an official validation in 2024, the most recent inventory must be from no earlier than 2022 (i.e., the allowable most recent years are 2022 and 2023).

FI-C12 – Level of Ambition: At a minimum, scope 1 and scope 2 absolute emissions reduction targets will be consistent with the level of decarbonization required to keep global temperature increase to 1.5°C compared with preindustrial temperatures. Both the target time frame ambition level (base year to target year) and the forward-looking ambition level (most recent year to target year) must meet this ambition criterion.[15] Intensity targets for scope 1 and scope 2 emissions are eligible only when they are modeled using an approved 1.5°C sector pathway applicable to companies' business activities (e.g., scope 2 target using the Power Generation Sectoral Decarbonization Approach pathway).

4.3.1 Method for setting scope 1 and 2 SBTs for FIs

FIs are required to use the Absolute Contraction Approach (ACA) to set scope 1 and/or 2 emissions reduction targets. A Target-Setting tool is available for this method, which is the most straightforward approach for linking targets to 1.5°C pathways. It requires a minimum of 4.2% annual linear reduction in terms of absolute emissions between the base year and target year plus an adjustment for base years later than 2020.[16] For FIs using a base year earlier than the most recent year, targets must also have sufficient forward-looking ambition. Intensity targets for scope 1 and 2 emissions are only eligible when they are modeled using an approved 1.5°C sector pathway applicable to FIs' business activities.

[15] For example, using the cross-sector absolute reduction method, the minimum ambition of near-term scope 1 and 2 targets is a 4.2% linear annual reduction between the base year and target year plus an adjustment for base years later than 2020. Also, for companies using a base year earlier than the most recent year, scope 1 and/or scope 2 targets must also have sufficient forward-looking ambition.

[16] The paper Foundations of Science-Based Target Setting provides supplementary technical information on how science-based target-setting methods have been developed in accordance with the best available climate science.

5. APPROACHES TO SETTING SCOPE 3 PORTFOLIO TARGETS

5.1 Background and brief literature review

At the start of this work, the SBTi assessed various methods and tools on their applicability to support target setting for FIs. Triggered by the recommendation of the TCFD, multi-data and service providers have developed methods and tools to perform scenario analysis and assess climate-related financial risks, which are not designed to set climate targets.
Prior to this project, existing target-setting methods for FIs could be categorized into four approaches:

1. Sector-based approach: Global carbon budget is divided by sector and emission reductions are allocated to the sector (sometimes within an asset class) on the portfolio based on the sector's budget.
2. Absolute-based approach: Percent reduction in absolute emissions required by a given scenario is applied to all portfolios equally.
3. Economic-based approach: Based on the assumption that the sum of all economic actors' gross profits worldwide equates to global GDP, a portfolio's share of emissions is determined by the sum of the gross profit of portfolio companies.
4. Capacity-based approach: Alignment with various climate scenarios is assessed based on physical asset-level production capacity and technology-type data (e.g., vehicles manufactured per year, gigawatts [GW] electricity, etc.)

The lack of comprehensive emissions data has led some stakeholders to explore the use of capacity-based approaches that use physical asset data for climate alignment assessment purposes. An example of a capacity-based approach is the Paris Agreement Capital Transition Assessment (PACTA) method produced by the 2 Degrees Investing Initiative (2dii).[17] The capacity-based method provides data that FIs could use to understand sector-based alignment with technology-specific metrics, rather than a GHG emissions-based metric. Previously in 2019, the SBTi road-tested the PACTA method with a select group of FIs. However, further development would be needed for this method to be potentially incorporated into the SBTi target framework for FIs.

Among the approaches developed prior to this project, the sector-based approach is considered most tangible for the financial sector because it enables FIs to manage the emissions they financed in specific sectors of the economy. As such, FIs can assess their portfolios per asset class or sector, steer asset-level financed emissions within the global carbon budget assigned to each sector and monitor their improvements in emission reductions more transparently.

This level of influence in the real economy is difficult to achieve with the other three approaches. Absolute-based targets could be achieved by shifting or lowering the exposure to certain sectors within the portfolio without having a clear impact on the real economy. An economic-based approach is sensitive to economic fluctuations in gross profits of portfolio

[17] Additional information is available via the PACTA website.

companies (e.g., target achievements can be influenced if the actual gross profit of the portfolio companies deviates strongly from the global GDP projections). Lastly, the capacity-based approach can be limited as a robust linkage between capacity factors and utilization rates with the global carbon budgets has yet to be proven.

5.2 Overview of asset class-specific methods

For the current phase of this project, the SBTi supports four methods for FIs: the Sectoral Decarbonization Approach (SDA), the Portfolio Coverage method, the Temperature Rating method, and the Fossil Fuel Finance Targets (FFF) method. The SBTi developed criteria specific to these four methods (FI-C17.1–FI-17.4), which are used to assess the targets set using these methods. These methods use asset class approaches to link FIs' investment and lending portfolios with climate stabilization pathways. An asset class-oriented approach was chosen for this framework to take into consideration the varying degree of data availability, market liquidity and levels of ownership of different asset classes.[18]

Among these four methods, the SDA and the FFF methods require emissions measurement on an asset class level. The SDA is applicable to all asset classes covered in the current project phase wherever sector methods are available[19] while the FFF method is applicable to all asset classes covered in Table 1 in the Financial Institutions' Near-Term Criteria Version 2.0 that is related to the fossil fuel sector. The Portfolio Coverage and Temperature Rating methods take an engagement-oriented approach focused on portfolio companies' actions to measure and reduce emissions. Both methods are applicable to all sectors for the corporate instrument asset classes.[20] Portfolio Coverage is a financial sector analogue to supplier engagement targets for "real economy" companies' scope 3 emissions. The Temperature Rating method expands the scope of the Portfolio Coverage method and enables FIs to assess the ambition of portfolio companies based on their public GHG reduction targets, as compared to approved science-based targets only. The FFF method involves setting targets on the disclosure, arrest, transition and phaseout of fossil-fuel related assets and activities, as per the criteria in FI-C17.4.

FIs may use one or more of these four methods to develop asset class-level targets for a science-based target submission (see Section 5.3 for more guidance on this topic).[21] Table 5.1 provides a target language template that FIs will need to use when submitting targets to the SBTi.

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[18] An initial project survey distributed in February 2018 with 34 responses from FIs and other stakeholders also indicated that, in the order of votes received, corporate loans, listed equity, project finance, real estate and mortgages are asset classes considered most important for inclusion in the framework.

[19] The sector and asset class coverage of SDA is listed in Table 5.3.

[20] See Table 5.2 for more information on the applicability of methods to different asset classes.

[21] The SBTi is developing a set of principles or "meta-criteria" to evaluate the use of alternative methods for near-term science-based targets for FIs. In 2019, the SBTi Technical Working Group developed the following criteria for new methods: maintains global carbon budget, consistency with SBTi theory of change and GHG measurement and disclosure practices, technology agnostic and practicality of application, as well as that the method should be freely available. The meta-criteria will update and expand this original work to provide a more comprehensive guide for methods developers. In general, SBTi methods for FIs' portfolios are expected to follow the GHGP principles of relevance, completeness, consistency, transparency and accuracy. For more information, see https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf.

Table 5.1: Target language template for FIs

Scope 1 and 2 Targets
Absolute target: [FI name] commits to reduce absolute scope 1 and 2 GHG emissions [XX]% by [target year] from a [20xx] base year. **Renewable electricity procurement target**: [FI name] commits to increase active annual sourcing of renewable electricity from [XX]% in [base year] to 100% by [year before 2030] and to continue active sourcing of 100% renewable electricity through 2030. *or* [FI name] commits to maintain zero absolute scope 1 GHG emissions from [base year] through [target year] and commits to increase active annual sourcing of renewable electricity from [XX]% in [base year] to [XX]% by [target year]. *or* [FI name] commits to continue active annual sourcing of 100% renewable electricity from [base year] through 2030.
Scope 3, Categories 1-14 Targets [optional]
Absolute targets: [FI name] commits to reduce absolute [enter scopes] GHG emissions [XX]% by [target year] from a [20xx] base year. *or* **Intensity targets:** [FI name] commits to reduce [enter scopes] GHG emissions [XX]% per [unit] by [target year] from a [20xx] base year. *or* **Engagement targets:** [FI name] commits that [XX]% of its suppliers/customers [by spend / revenue / emissions] covering [name scope 3 categories], will have science-based targets by [target year].
Scope 3 Portfolio Targets – Headline Target
[FI name]'s portfolio targets cover [XX]% of its total investment and lending by [unit] as of [base year].[1] As of [("that year") or (year)], required activities made up [XX]% of [FI name]'s total investment and lending by [unit], while optional activities made up [XX]% and out-of-scope activities made up [XX]%. *The unit selected should be financed emissions (if quantified) or otherwise linked to the asset classes covered. For example, asset managers should use assets under management, while private equity firms should use invested capital (including cash) and other FIs may use total assets. If financed emissions are used, FIs must also provide the above headline target based on a financial asset metric for comparability purposes (with FIs that solely use a financial asset metric). FIs with activities that span across lending, investments and/or asset management may add an additional breakdown of % coverage of their loan, investment or asset management portfolio individually.* *Separately, banks must also include the following footnote for the headline target:* [1] These targets and coverage % [do not] include third-party asset management activities.

Third-party asset management activities made up X% of total investment, lending and asset management activities by [metric (e.g., loan value and assets under management)].		
Scope 3 Portfolio Targets – Asset Class Target		
Asset Class	**Method**	**Target Output Example**
Real estate	SDA	[FI name] commits to reduce its real estate [investment / loan] portfolio GHG emissions [XX]% per square meter by [target year] from a [20xx] base year. *or* [FI name] commits to maintain the GHG emissions intensity of its real estate investment/loan portfolio at or below [the base-year emissions intensity] $kgCO_2e/m^2$ from [base year] through 2030 and finance only 1.5°C-aligned real estate assets.
Residential mortgages (consumer loan)	SDA	[FI name] commits to reduce its mortgage portfolio GHG emissions [XX]% per square meter by [target year] from a [20xx] base year.
Electricity generation project finance	SDA	[FI name] commits to reduce its electricity generation project finance portfolio GHG emissions [XX]% per MWh by [target year] from a [20xx] base year. or [FI name] commits to continue providing electricity generation project finance for only renewable electricity through 2030. or [FI name] commits to maintain the GHG emissions intensity of its electricity generation project finance portfolio at or below [the base-year emissions intensity] gCO_2e/kWh from [base year] through 2030 and finance only 1.5°C-aligned electricity generation projects.
Corporate instruments (equity, bonds, loans)	SDA	[FI name] commits to reduce GHG emissions from the [XX] sector within its [asset class] portfolio [XX]% per ton of [metric] by [target year] from a [20xx] base year.

	Portfolio Coverage	[FI name] commits to [XX]% of its [eligible] [asset class] portfolio by [unit] setting SBTi-validated targets by [target year] from a [20xx] base year.
	Temperature Rating	[FI name] commits to align its scope 1 + 2 portfolio temperature score by [unit] within the [XX] sector of its [asset class] portfolio from [X.XX]°C in [base year] to [X.XX]°C by [target year]. [FI name] commits to align its scope 1 + 2 + 3 portfolio temperature score by [unit] within the [XX] sector of its [asset class] portfolio from [X.XX]°C in [base year] to [X.XX]°C by [target year].
	Fossil Fuel Finance Targets*	[FI name] commits to publicly disclose on an annual basis all of its financial activities by [financial metric(s)] as well as the GHG emissions attributed to its [loans, investments and/or assets under management] that are related to projects and companies in the [coal, oil and/or gas] sectors separately. [FI name] commits to immediately end all new financial activities related to: (i) projects and companies involved in new coal mines, extensions or expansion of coal mines or new unabated coal-fired power plants; and (ii) new long-lead time upstream oil and gas projects and midstream infrastructure dedicated to new long-lead time upstream oil and gas projects; and (iii) [(companies engaged in such projects) and/or (including those provided to companies that are dedicated to such oil and gas activities)]. [FI name] commits to reduce GHG emissions from the [coal, oil and/or gas] sector[s] within its [corporate loan, investment and/or asset management] portfolio [XX]% by [target year] from a [20xx] base year. [FI name] commits to phase out all financial activities to all [non-decommissioning] coal projects and coal companies by [target year]. ** FIs shall disclose the definitions used to define coal and oil & gas projects, companies and value chain.*
Action Plan to Achieve Targets		

[FI name] will implement the following strategy and actions to achieve its targets:

- Example: [FI name] aims to steer its [XX dollar amount] of corporate equity, bonds and loan book in power generation, steel, cement and aviation through actively supporting clients' SBT achievement and zero-carbon transformation. For example, [FI name] will offer more favorable interest rates to borrowers that set and stay on track to meet ambitious climate goals. [FI name] selected these actions because [add reasons].

Source: Financial Institutions' Near-Term Criteria Version 2.0 (2024).

5.3 Defining the boundary of portfolio targets

To seek approval from the SBTi, FIs shall follow FI-C14 and FI-C15 to set target(s) on their investment and lending activities.[22] Depending on the composition of their portfolios, an FI may be able to meet FI-C15 using methods that do not require measurement of financed emissions. Therefore, it is possible that FIs do not need to quantify any financed emissions of their holdings or only need to do so in a partial manner.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[23]
FI-C14 – Requirement to Set Target(s) on Investment and Lending Activities: All FIs shall set targets for their investment and lending activities as required by FI-C15, irrespective of the share of quantified scope 3 portfolio emissions as compared to the FI's total scope 1, 2 and 3 emissions. FIs may choose from the applicable methods for target setting, by asset class, as defined in Table 1.
FI-C15 – Portfolio Target Boundary: FIs are required to set one or more near-term targets for relevant activities in their portfolios according to Figure A-1, Table 1 and the following provisions:[24] • Relevant Activities: FIs shall determine relevant activities based on either financed emissions[25] or on an appropriate financial asset metric (such as loan value, invested value and/or assets under management). The selected approach must be consistently applied in determining the 67% minimum coverage requirement[26] and when considering the 5% materiality exclusion. • Minimum Coverage: FIs must ensure that their targets collectively cover at least 67% of their Portfolio Target Boundary (PTB). To calculate the minimum coverage, the denominator shall include the following: o All "Required Activities" in Table 1. o All "Optional Activities" in Table 1, subject to the following exclusion:

[22] Partial targets will not be officially recognized and published by the SBTi even if they meet all relevant criteria.
[23] Please see this document for the references to tables and figures below.
[24] Although the SBTi strongly recommends banks (i.e., an FI with a banking license and a banking business that makes up a majority of its revenues) to cover their asset management businesses in their scope 1, 2, and 3 target boundaries, it is currently optional and may be excluded from the Portfolio Target Boundary coverage requirements as an exception under this version of the criteria. If such an exclusion is made, it shall be disclosed clearly in the target language (see Table 5.1). In situations where ambiguity arises regarding the applicable minimum coverage requirement for a specific activity, including its sector/market specifications, the more stringent criteria will prevail.
[25] If using financed emissions, a complete inventory must be disclosed for all "Required Activities" and "Optional Activities" in Table 5.2 that must include at least the scope 1 + 2 + 3 emissions of activities in the automotive and fossil fuel sectors and scope 1 + 2 emissions of activities in all other sectors. The SBTi strongly recommends, however, that FIs include the scope 1 + 2 + 3 emissions of activities in all sectors. Emissions estimates are acceptable, with the expectation that data quality will improve over time. The SBTi requires comprehensive and transparent disclosure of the methodology used to measure emissions and recommends the disclosure of data quality. The SBTi has identified the Global GHG Accounting and Reporting Standard for the Financial Industry by the PCAF as a freely available approach to measure portfolio-wide or asset-level financed emissions.
[26] This requirement is separate from the 67% minimum coverage requirement for the corporate loan asset class.

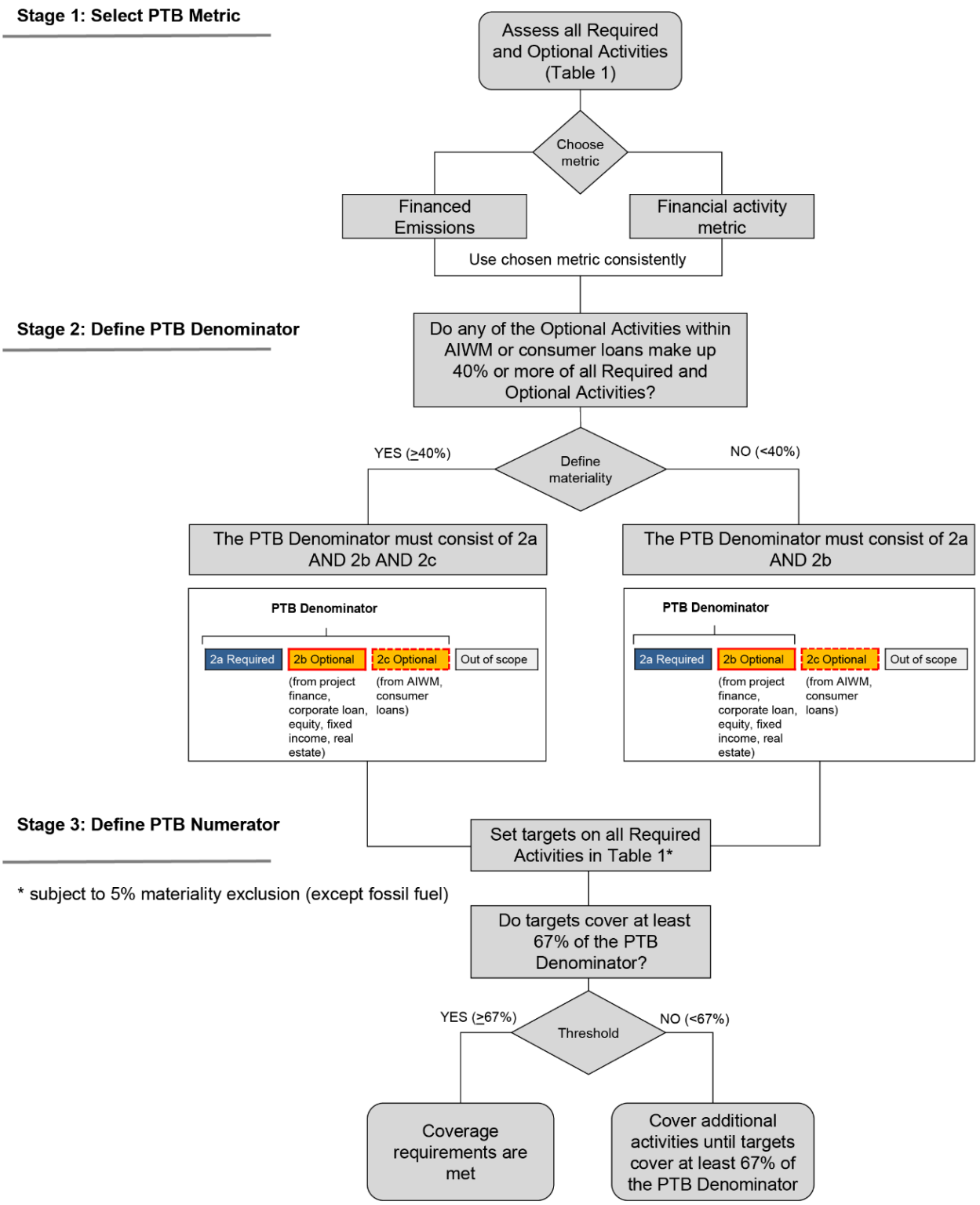
        - Any “Optional Activities” within the asset/investment/wealth management (AIWM) and consumer loan asset classes that make up less than 40% of all “Required Activities” and “Optional Activities” may be excluded from the PTB denominator.

    To calculate the minimum coverage, the numerator shall include all “Required Activities” and/or “Optional Activities” that are covered by targets. FIs may set targets using any of the available methods specified in Table 1.
- Required Activities: FIs must ensure that their targets cover all “Required Activities” subject to the below 5% materiality exclusion option.
- Exclusion of Non-Material Activities: FIs may exclude specific sub-asset classes categorized under “Required Activities” from their targets, provided these sub-asset classes constitute less than 5% of the Portfolio Target Boundary. Exclusions must apply to entire sub-asset classes uniformly and may not exempt any activities related to fossil fuels.
- Asset/Investment/Wealth Management: The AIWM asset class applies to situations where FIs are managing investment funds on the behalf of third parties. Assets that are owned by an FI but managed by third-party asset managers are considered the FI’s own investments and not AIWM. For the purposes of target validation, FIs shall define and disclose the types of asset management businesses they are involved with, which must align with the following categories:
    - Discretionary mandates apply to situations where the FI is granted discretion by the third party to make investment decisions (e.g., fund, index or security selection) without seeking prior approval from that third party.
    - Advisory mandates apply to situations where the FI provides recommendations and makes investments on behalf of the third party that are subject to that third party’s instructions or approval.
        - This includes situations where the FI selects funds for third parties to choose from but thereafter has no control over investment decisions (e.g., fund, index or security selection).
    - Execution-only mandates apply to situations where the FI only executes investment instructions and has no control over investment decisions.

FI-C16 – Base Year and Progress to Date: The choice of base year shall be representative of the FI’s activities and shall be no earlier than 2015. Targets that have already been achieved by the date they are submitted to the SBTi are not acceptable. The SBTi uses the year the target is submitted to the initiative (or the most recent data) to assess forward-looking ambition. The most recent data must not be from earlier than two years prior to the year of submission.

The Portfolio Target Boundary Process Tree (Figure 5.1) outlines the steps to be taken to determine overall coverage requirements. In sum, targets must be set on all Required Activities, subject to the option to exclude up to five percent of non-material activities (as laid out in FI-C15), as well as 67% of an FI’s Portfolio Target Boundary (as defined in FI-C15). In certain instances, FIs may need to set targets on some Optional Activities in order to meet the latter requirement. For example, mortgage REITs that only invest in residential mortgages and residential mortgage-backed securities would need to, at a minimum, cover 67% of its residential mortgages and residential mortgage-backed securities.

Figure 5.1: Portfolio target boundary (PTB) process tree



Source: Financial Institutions' Near-Term Criteria Version 2.0 (2024).

Financial sector activities have been organized into three categories: required, optional and out-of-scope activities in Table 5.2.

1) **Required activities**, if relevant, shall be included in the target boundary. For example, FIs shall include 100% of project finance, long-term corporate loans and equity and fixed-income investments in the electricity generation and fossil fuel sectors in the target boundary (if relevant).

   For corporate loans, coverage can be based on loan value or financed emissions. If using financed emissions, the scope 1 + 2 + 3 emissions of portfolio companies in the automotive and fossil fuel sectors shall be included in the calculation while the scope 1 + 2 emissions of portfolio companies in all other sectors shall be included. The SBTi, however, strongly recommends that FIs include the scope 1 + 2 + 3 emissions of portfolio companies in all sectors. Separately, FIs may select the loan outstanding amount, loan commitment amount, or exposure at default as the numerator of the attribution factor used to calculate financed emissions for corporate loans. FIs shall only make the choice once (i.e., they may not switch) during the target period.

   - Fossil fuel sector: Companies in the fossil fuel sector shall be defined according to the Boundary section of FI-C17.4.
   - All other sectors: The 67% minimum coverage requirement should apply to long-term loans to listed companies in all sectors other than the electricity generation and fossil fuel sectors. FIs, however, may also include any of the following in the calculation to determine if they have met this 67% minimum coverage requirement (based on loan value or financed emissions):
     - long-term loans to electricity generation companies (which itself must have 100% coverage) and/or
     - loans to fossil fuel companies (which itself must have 100% coverage) and/or
     - commercial real estate asset loans (which itself must have at least 67% coverage based on base year activity or financed emissions) and/or
     - loans that are considered optional activities (e.g., SME loans).

     However, any Portfolio Coverage (PC) and/or Temperature Rating (TR) target(s) that are set on corporate loans must have 100% coverage within its target boundary since data is not an issue for these methods. In other words:

     A. If only SDA targets are set for corporate loans, then the 67% minimum coverage requirement must be met.
     B. If only PC and/or TR targets are set for corporate loans, then the 100% coverage must be met (which satisfies the 67% minimum coverage requirement).
        a. e.g., if an FI only has loans to companies in the steel and cement sectors and decides to set a target to reach 50% SBT portfolio coverage, the target must cover all of its borrowers (i.e., targeting half of all of its borrowers having SBTi-validated targets) and not 67% of them (i.e., not targeting half of 67% of its borrowers having SBTi-validated targets).

C. If SDA targets as well as PC and/or TR targets are set for corporate loans, then the PC and/or TR targets must have 100% coverage within their target boundaries and all of the SDA, PC and/or TR targets combined must meet the 67% coverage requirement.
    a. e.g., If an FI had $25 of loans and covered 50% of its $10 in loans to "all other sectors" with SDA targets and 100% of its $15 in SME loans with a Portfolio Coverage target, then the FI can be considered to have met the 67% minimum coverage requirement [((50% * $10) + (100% * $15)) / ($10 + $15) = 80%]. The SBTi, however, strongly recommends that FIs go beyond the minimum coverage requirements.

General purpose long-term loans to FIs, REITs, real estate companies and infrastructure companies all fall under this threshold and shall be covered accordingly.

For equity and fixed income, all investments (direct holdings and via funds invested in assets) in equity and debt securities (regardless of how they are traded) that are issued by listed companies (i.e., those that have equity listed and traded on a stock exchange, including FIs, REITs and real estate companies) shall be covered by targets.

All FIs shall also cover their equity investments in private companies (i.e., those that do not have equity listed and traded on a stock exchange) in line with the SBTi Private Equity Sector Science-Based Target Guidance. Note that targets are only currently required for a private equity investment if the FI has a board seat in the portfolio company, among other conditions. Private equity firms shall develop targets for their private equity investments, as well as any other relevant asset classes in line with Table 5.2. FIs are encouraged to use the Portfolio Coverage method to cover all private equity investments, regardless of the percentage share the firm has in its investees.

The coverage requirements for equity- and fixed-income investments apply to all securities in the banking book while securities in the trading book are optional and assets that have already been sold are out of scope. Meanwhile, investments in fund of funds (i.e., funds that invest in funds, which invest in funds or assets) are optional.

Commercial real estate loans (i.e., loans for the purchase, refinance, maintenance or operation of real estate assets [i.e., residential and service buildings] that are not provided to consumers) and investments in real estate assets are also required to be covered by a scope 3, category 15 targets, if not already covered by scope 1 and 2 and/or scope 3, categories 1-14 targets.

2) **Optional activities** may be included by FIs in the target boundary.[27] Besides meeting the 67% coverage floor, there is no other minimum coverage requirement on optional activities, and FIs may cover as much of these activities as they wish. For example, FIs that wish to set targets on the optional category of residential mortgage consumer loans (i.e., loans extended to individuals to purchase or refinance a home) shall use the SDA method and could determine the target boundary themselves.

[27] Over time, SBTi may update "optional activities" to be required, depending on factors such as changes in availability of data or FIs' readiness to set targets on certain asset classes.

Small & Medium Enterprises (SMEs): Loans to SMEs are also optional, and FIs shall use either the SBTi definition or the relevant national/regional regulatory definition(s) to determine the applicable coverage requirement. For target validation, companies may set targets through the streamlined validation route if they meet the SBTi definition of an SME or they may choose to set targets through the standard validation route.

3) **Out-of-scope activities** cannot currently be covered by available methods or do not apply to the project audience. Asset classes not listed in Table 5.2 are likely also out of scope. For example, infrastructure project finance and investments in infrastructure assets are currently out of scope. However, loans to infrastructure companies and investments in equity/debt securities issued by infrastructure companies are in scope. Emissions accounting and target-setting methods are necessary before out-of-scope activities can become in scope. While the current Financial Institutions' Near-Term Criteria Version 2.0 covers near-term targets for lending and investment activities, the potential addition of new activities (e.g., insurance underwriting) can be explored under the FINZ Standard, which will require both near- and long-term targets.

FIs shall include their asset management businesses in their scope 1, 2 and 3 target boundaries based on the following[28]: Assets managed under discretionary mandates must follow the coverage requirements outlined in Table 5.2 (based on the underlying asset), while assets administered under advisory mandates are optional or out of scope (depending on the underlying asset) and assets under custody or execution-only mandates are out of scope. Assets that are owned by an FI but managed by third-party asset managers are considered the FI's own investments (i.e., not asset management) and shall follow the requirements outlined in Table 5.2.

The SBTi aims to strike the right balance between robustness and practicality for the criteria. Factors such as data availability, FIs' level of influence and sector's contribution to climate change have been taken into consideration when determining if an activity should be required and the corresponding minimum coverage requirements. As more data becomes available, methods become more mature, and FIs gain more experience in target setting, the SBTi may revise Table 5.2 in future criteria updates.

Table 5.2 presents these three categories of activities, the minimum coverage for required activities (only relevant to required activities) and applicable method(s) for each activity type:

- **When only one method is listed**, it means that it is the only applicable method for the specific financial activity. For example, only the SDA can be applied to electricity generation project finance.
- **When multiple methods are listed**, FIs may choose one or more of the methods to set targets that collectively meet the specific minimum coverage requirement for these products. However, each specific loan/investment can only be covered by one target method in order to ensure that all assets are being covered. It is also important that the targets are clear and transparent for external stakeholders to be able to understand and

[28] The SBTi strongly recommends banks to cover their asset management businesses in their scope 1, 2 and/or 3 boundaries, though it is optional as an exception under this version of the criteria. If such an exclusion is made, it shall be disclosed clearly in the target language (see Table 5.1).

track which target/method a current as well as future loan/investment would fall under. As such, the boundaries of each target must be clearly defined (e.g., by sector or asset class). For example, FIs may use both the SDA (for sectors where the method is available) and the Temperature Rating method (for all other sectors) to collectively cover 100% of their corporate bonds portfolios. Where the FFF method is applicable, FIs are recommended to use this method to address their fossil fuel-related activities until the Oil and Gas Sector Guidance is available.

The SBTi also allows certain asset classes and activities to be grouped together under one target as long as they follow the same criteria (the strictest set, if different) under the same target method. For example, one target could cover all:

- Listed equity investments, corporate bond investments and corporate loans.
- Loans to public and private companies.
- Listed equity and private equity investments.
- Financing for the same sector (e.g., electricity generation project finance and corporate loans).

Table 5.2: Required coverage in portfolio target setting for financial institutions

Legend

Required Activities	
Optional Activities	
Out of Scope	

Asset Class[a]	**Sub-Asset Class**	**Sector / Market Specifications**	**Minimum Coverage Requirement**	**Applicable Methods**[b]
Asset / Investment / Wealth management (AIWM)[c]	Discretionary mandates	Underlying assets are Required Activities	See respective asset classes	
		Underlying assets are Optional Activities	Optional	See respective asset classes
		Underlying assets are Out of Scope	n/a	n/a
	Advisory mandates	Underlying assets are Required or	Optional	See respective asset

		Optional Activities		classes
		Underlying assets are Out of Scope	n/a	n/a
	Execution-only mandates (brokerage services)	Underlying assets are Required or Optional Activities, or Out of Scope	n/a	n/a
	Assets under custody (custody services)	Underlying asset is Required, Optional or Out of Scope	n/a	n/a
Consumer loan	Residential mortgages		Optional	SDA
	Motor vehicle loans		n/a	n/a
	Other consumer loans		n/a	n/a
Project finance	Electricity generation project finance (direct and/or via funds)		100% of base-year activity (MWh)	SDA
	Fossil fuel project finance (direct and/or via funds)		100% of base-year financed emissions	SDA / FFF[d]
	Real estate project finance (direct and/or via funds)		Optional	SDA[e]
	Other project finance (e.g., infrastructure projects/assets)		n/a	n/a
Corporate loan[f]	Long-term (more than one year) corporate[g] loans	Electricity generation (listed and private companies)	100% of base-year activity (MWH) or financed emissions	SDA / PC / TR
		Fossil fuel (listed and private companies)	100% of base-year loan value or financed emissions	SDA / PC / TR / FFF[d]
		All other sectors (listed companies)	100% within target boundary of any PC and/or TR target(s) AND 67% of base-year	SDA / PC / TR

			loan value or financed emissions across all SDA, PC, TR target(s), to be calculated across any mix of required and optional corporate loans and commercial real estate asset loans[h]	
		All other sectors (private companies)	Optional	SDA / PC / TR
	Short-term corporate[g] loans (one year or less, such as line of credit, intraday, and overdraft facilities)	Fossil fuel (listed and private companies)	100% of base-year loan value or financed emissions	SDA / PC / TR / FFF[d]
		Electricity generation and all other sectors (listed and private companies)	Optional	SDA / PC / TR
	Long- and short-term small- and medium-sized enterprise (SME)[i] loans	Fossil fuel (listed and private companies)	100% of base-year loan value or financed emissions	SDA / PC / TR / FFF[d]
		Per SBTi definition or national/regional regulatory definition	Optional	SDA / PC / TR
	Supranational, sovereign, sub-sovereign (including municipal), government and government agency loans[j]		n/a	n/a
Equity[k] (investment)	Common and preferred stock of corporates[g] and SMEs[i] and private equity (direct holdings and co-investments)	Electricity generation and fossil fuel (listed and private companies)	100%	SDA / PC / TR / FFF[d]
		All other sectors (listed companies)	100%	SDA / PC / TR
		All other sectors (private	Per SBTi Private Equity Guidance[l]	SDA / PC / TR

		companies)		
	via Funds (invested in assets, e.g., exchange traded funds, mutual funds, hedge funds, other collective investment schemes)	Electricity generation and fossil fuel (listed and private companies)	100%	SDA / PC / TR / FFF[d]
		All other sectors (listed companies)	100%	SDA / PC / TR
		All other sectors (private companies)	Optional	SDA / PC / TR
		with non-transparent strategy[m]	n/a	n/a
	via Fund of Funds (funds invested in funds)		Optional	SDA / PC / TR
Fixed income[k,n] (investment)	Corporate[g] and SME[i] bonds and private debt (direct holdings and co-investments)	Electricity generation and fossil fuel (listed and private companies)	100%	SDA / PC / TR / FFF[d]
		All other sectors (listed companies)	100%	SDA / PC / TR
		All other sectors (private companies)	Optional	SDA / PC / TR
	via Funds (invested in assets, e.g., exchange traded funds, mutual funds, hedge funds, other collective investment schemes)	Electricity generation and fossil fuel (listed and private companies)	100%	SDA / PC / TR / FFF[d]
		All other sectors (listed companies)	100%	SDA / PC / TR
		All other sectors (private companies)	Optional	SDA / PC / TR
		with non-transparent strategy[m]	n/a	n/a

	via Fund of Funds (funds invested in funds)		Optional	SDA / PC / TR
	Securitized fixed income, including asset-backed securities, mortgage-backed securities, covered bonds (direct holdings or via funds)		Optional (if a method is available for the underlying assets, such as for real estate assets) or out of scope	SDA
	Supranational, sovereign, sub-sovereign (including municipal), government and government agency bonds (direct holdings or via funds)[j]		n/a	n/a
Real estate[o]	Consumer loans: residential mortgages		Optional	SDA
	Real estate project finance (construction)		Optional	SDA[e]
	General purpose loans to real estate companies		See corporate loan asset class	
	Long-term (more than one year) commercial real estate asset loans (residential and service buildings)[p]		67% of base-year activity (m^2) or financed emissions	SDA
	Short-term (one year or less) commercial real estate asset loans[p]		Optional	SDA
	Direct investment in real estate assets (for own use or investment purposes, if not already covered by scope 1 + 2 and/or scope 3 categories 1–14 targets)		67% of base-year activity (m^2) or financed emissions	SDA
	Equity and fixed-income (investment in real estate companies)		See respective asset classes	
	Investment in real estate funds (listed and private)	REITs and real estate companies (listed)	100%	SDA / PC / TR
		Real estate assets	67% of base-year activity (m^2) or financed emissions	SDA
		REITs and real estate companies (private)	Optional	SDA / PC / TR

Other[q]	Cash and cash equivalents[r]	n/a	n/a
	Derivatives	n/a	n/a
	Debt and equity securities underwriting, advisory services (e.g., mergers and acquisitions)	n/a	n/a
	Commodities trading	n/a	n/a
	Insurance underwriting, reinsurance, credit guarantees	n/a	n/a

Notes:
[a] Asset finance falls under scope 3, categories 1–14 emissions. Separately, Islamic financing shall be categorized in the asset class listed in Table 5.2 that is closest in accounting nature (e.g., sukuk as fixed income).
[b] SDA = SBTi Sectoral Decarbonization Approach or sector-specific guidance; PC = SBT Portfolio Coverage; TR = Temperature Rating; FFF = SBTi Fossil Fuel Finance Targets.
[c] Although the SBTi strongly recommends that banks (i.e., FIs with a banking license and a banking business that makes up a majority of their revenues) cover their asset management businesses in their scope 1, 2 and 3 target boundaries, it is currently optional and may be excluded from the Portfolio Target Boundary coverage requirements as an exception under this version of the criteria. If such an exclusion is made, it shall be disclosed clearly in the target language (see Table 5.1). In terms of minimum coverage requirements for FIs that do cover their asset management business, if an FI manages or administers assets under discretionary (which is required) and advisory (optional) mandates that all fall within the Portfolio Target Boundary and are each invested in corporate bonds (required), private debt (optional) and sovereign bonds (out of scope), then only the corporate bonds under discretionary mandates are required to be covered by targets, while the private debt under discretionary and advisory mandates and corporate bonds under advisory mandates are optional (but still subject to the 67% Portfolio Target Boundary coverage requirement). Meanwhile, all assets under execution-only mandates are out of scope, whether they are invested in corporate bonds, private debt or sovereign bonds.
[d] FIs required to set targets for the fossil fuel sector according to the coverage requirements outlined in Table 5.2 may set such targets using any of the available methods specified in Table 5.2 or use the requirements described in FI-C17.4. The SDA method is expected to be available upon the publication of the SBTi Oil and Gas Sector Guidance.
[e] Please refer to the forthcoming Buildings Sector Guidance for embodied emissions targets.
[f] FIs may select the loan outstanding amount, loan commitment amount or exposure at default as the numerator of the attribution factor used to calculate financed emissions for corporate loans. However, FIs must apply this consistently (i.e., they may not switch) during the target period.
[g] For the purposes of Table 5.2, “corporate” includes FIs. For example, corporate bonds include bonds issued by FIs.
[h] For example, if an FI decides to set a target to reach 50% SBT portfolio coverage on its corporate loans, then it must target half of all of its borrowers having SBTi-validated targets, and not half of 67% of its borrowers having SBTi-validated targets, since data (whether a borrower has or doesn’t have an SBTi-validated target in this case) is not an issue. If SDA targets as well as PC and/or TR targets are set for corporate loans, then the PC and/or TR targets must have 100% coverage within their target boundaries, and all of the SDA, PC and/or TR targets combined must meet the 67% minimum coverage requirement. For example, if an FI had $25 of loans in total and covered 50% of its $10 in corporate loans to “all other sectors” with SDA targets and 100% of its $15 in SME loans with a PC target, then the FI may be considered to have met the 67% minimum coverage requirement [((50% * $10) + (100% * $15)) / ($10 + $15) = 80%]. If using financed emissions to calculate target coverage, the scope 1 + 2 + 3 emissions of portfolio companies in the automotive and fossil fuel sectors shall be included in the calculation while the scope 1 + 2 emissions of portfolio companies in “all other sectors” shall be included. The SBTi, however, strongly recommends that FIs include the scope 1 + 2 + 3 emissions of portfolio companies in all sectors and go beyond the minimum coverage requirements.
[i] As the definition of small- and medium-sized enterprises (SMEs) may vary from region to region, FIs shall use either the SBTi definition or the relevant national or regional regulatory definition(s) to determine the applicable coverage requirements in Table 5.2. For target validation, companies may set targets through the streamlined

validation route if they meet the SBTi definition of an SME or they may choose to set targets through the standard validation route. For more information on the SBTi's definition and target-setting option for SMEs, please see our FAQ regarding the SME target-setting route.

[j] The SBTi does not currently validate targets for cities, local governments, public sector institutions, educational institutions or non-profit organizations. However, government ownership does not necessarily mean that an entity is a public sector institution. If an entity's primary objective is to fulfill public needs and interests (over profit motives), then it should be considered a public sector institution. If an entity operates in a commercial market or has a commercial orientation and aims to generate profits while providing services, then it should be considered for target validation.

[k] The coverage requirements for equity- and fixed-income investments apply to all securities in the banking book while securities in the trading book are optional and assets that have already been sold are out of scope.

[l] All FIs shall cover their private equity investments based on the requirements provided in the SBTi Private Equity Sector Science-Based Target Guidance. Note that targets are currently required only for a private equity investment if the FI has a board seat in the portfolio company, among other conditions.

[m] This optionality is restricted to cases where the disclosure of underlying holdings negates the investment strategy (e.g., some hedge funds).

[n] Fixed-income investments include convertible bonds and other hybrid instruments.

[o] Real estate assets with no operational emissions are out of scope.

[p] Commercial real estate asset loans refer to all loans for the purchase, refinance, maintenance or operation of real estate assets (i.e., residential and service buildings) that are not provided to consumers. General purpose loans to REITs or real estate companies may be included under "all other sectors" of corporate loans.

[q] Emissions accounting and target-setting methods are necessary before out-of-scope activities may become in scope. The potential addition of new asset classes may be explored under the SBTi FINZ Standard.

[r] Cash equivalents may include commercial paper, certificates of deposit, time deposits, banker's acceptance and short-term repurchase agreements.

Source: Financial Institutions' Near-Term Criteria Version 2.0 (2024).

Table 5.2 shows that investments and corporate loans in real estate require a minimum coverage of 67% of investment and lending activity (m^2). In ensuring this coverage, FIs should prioritize the inclusion of assets in regions where buildings' emissions data or buildings' energy-related data are available, or where data quality is generally higher quality. However, this should not deter institutions from including assets in regions where only proxy or average data are available.[29]

Similarly, corporate loans to companies in "all other sectors" require a minimum coverage of 67%. To determine the coverage, FIs could screen the emissions of their lending portfolio to identify emissions hotspots, which would help in making an informed decision on which sectors to cover for target setting. They could also prioritize loans issued to companies in high-emitting sectors.

For investments via funds and collective investment schemes (that invest in assets), the applicable coverage requirements and target-setting method(s) shall be set based on the underlying holdings. For example, if an FI invested in a fund that invests in corporate bonds, then the FI could set a Portfolio Coverage or Temperature Rating target on the underlying companies. To achieve this target, the FI could both engage the underlying companies directly as well as engage its fund managers themselves to set targets.

[29] This recommendation is also applicable to the optional (required for mortgage REITs) residential mortgage asset class.

5.4 Description of methods to set portfolio targets

This subsection provides an overview of methods available to set targets on FIs' investment and lending portfolios. Detailed method descriptions and instructions for application are included in the Appendices.

5.4.1 Sectoral Decarbonization Approach method

The Sectoral Decarbonization Approach (SDA) is a method for setting physical intensity targets that uses convergence of emissions intensity. An intensity target is defined by a reduction in emissions relative to a specific business metric, such as production output of the company (e.g., metric ton CO_2e per ton product produced). The SDA generally assumes global convergence of key sectors' emissions intensity by 2050. For example, the emissions intensity of steel production in China, the United States and Brazil is assumed to reach the same level by 2050, regardless of its current diversity.[30] Regional pathways have not been incorporated into this method in most cases.
The SDA is the only applicable method for some asset classes, as specified in Table 5.2. For the remaining asset classes, SDA can be used on its own or with one or both other methods to collectively meet the minimum required boundary coverage.

The SBTi first developed the SDA for companies in 2015 using the International Energy Agency (IEA) Energy Technology Perspectives (ETP) scenario data. The method development process is described in the SBTi's SDA report published in 2015.[31]

The SBTi provides a 1.5°C-aligned pathway for sectors such as Power, FLAG, Buildings, Cement, Maritime shipping and Steel that enables companies in those sectors to submit 1.5°C-aligned targets for official recognition.[32]

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[33]
FI-C17.1 – Sectoral Decarbonization Approach Targets: FIs' targets using the SDA are considered acceptable when the following conditions are met: • Boundary: FIs shall set SDA targets for their real estate assets as well as electricity generation project finance as specified in Table 1. SDA targets may also be set for other activities listed in Table 1, such as residential mortgages, corporate loans, listed and private equity and debt for sectors for which SBTi sector-specific guidance is available. • Ambition: Portfolio SDA targets must meet the minimum ambition level indicated by sector-specific methods for 1.5°C pathways. When a 1.5°C pathway for a sector is not available, a well-below-2°C pathway may be used instead. FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are of equal or greater ambition than the minimum target ambition level required by the relevant SBTi tool. FIs that already finance only renewable electricity projects (which may also include projects and assets such as energy storage and other directly related energy infrastructure) in the base year may set targets to continue doing so through 2030.

[30] Each sectoral budget is maintained, to the extent the sum of sectoral activity does not go beyond that projected for the scenario (for homogeneous sectors) and no new businesses are created.
[31] Please find the report here: https://sciencebasedtargets.org/wp-content/uploads/2015/05/Sectoral-Decarbonization-Approach-Report.pdf. The original method was also described in Krabbe et al. (2015).
[32] Please find more project information here: https://sciencebasedtargets.org/sectors.
[33] Please see this document for the references to tables and figures below.

Separately, FIs that meet all the following conditions may set an emissions intensity maintenance target up to 2030 for an electricity generation project finance portfolio:

i. A portfolio emissions intensity that is at or below the 2030 sector intensity level in a 1.5°C-aligned pathway for the power sector (100 gCO_2e/kWh).
ii. At least 80% renewable or other zero-emission electricity generation project financing.
iii. A commitment to maintain the base-year portfolio emissions intensity through 2030 and finance only 1.5°C-aligned electricity generation projects,
    - where 1.5°C-aligned financing for the power sector is defined as a commitment to finance only new capacity from zero-emission sources and/or additional exposure to existing capacity if the infrastructure has an emissions reduction plan consistent with limiting warming to 1.5°C with no or limited overshoot.

FIs that meet the following conditions may set an emissions intensity maintenance target up to 2030 for an investment or lending portfolio of real estate assets:

i. A portfolio emissions intensity that is at or below the 2030 sector intensity level in a 1.5°C-aligned pathway for the real estate sector (based on SBTi sector-specific guidance).
ii. A commitment to maintain the base-year portfolio emissions intensity through 2030 and finance only 1.5°C-aligned real estate assets,
    - where 1.5°C-aligned financing for the real estate sector is defined as a commitment to finance only new developments that are zero-carbon-ready (i.e., highest energy efficiency class based on local rating schemes and uses either renewable energy directly or an energy supply that will be fully decarbonized by 2050, such as electricity or district heat) and/or existing developments if they have an emissions reduction plan consistent with limiting warming to 1.5°C with no or limited overshoot.

- Time Frame: Portfolio SDA targets must cover a minimum of five years and a maximum of 10 years from the date the targets are submitted to the SBTi for an official validation.[34] The SBTi recommends that the same base year be used for all SDA targets and that the most recent year be used as the base year. The SBTi encourages FIs to develop additional long-term targets in accordance with the SBTi FI Net-Zero Standard upon its publication.
- Scope of Borrower and/or Investee Emissions: FIs shall set targets for emissions scopes as required by the relevant SBTi sector-specific guidance.[35]

FIs can use the existing SBTi target-setting tools developed for companies to set targets on the relevant asset classes or sectors (see Table 5.3). An inventory of emissions must be conducted before modeling targets in the tool.

Table 5.3 summarizes the sectors covered by the SDA, the corresponding emission intensity units required by the method, the available temperature alignment pathways and relevant target-setting tools (as of publication). FIs will need to check the relevant SBTi sector webpage(s) for the most up-to-date information. A list of the sector-specific requirements and guidance is also available in the SBTi Criteria Assessment Indicators. Total emissions and activity data are required for the Aviation, FLAG and Maritime shipping SDA tools. If activity data is not available or FIs use a different emissions intensity unit, they will not be able to set an SDA target and should use the Portfolio Coverage or Temperature Rating method instead.

[34] For example, for targets submitted for an official validation in the first half of 2024, the valid target years are 2028-2033 inclusive. For targets submitted in the second half of 2024, the valid target years are 2029-2034 inclusive.

[35] A list of the sector-specific guidance and requirements is available in the SBTi Criteria Assessment Indicators.

Table 5.3: Sector coverage of SDA and available target-setting resources

Sector and Emission Intensity Units	Temperature Alignment	Available Target-Setting Tool
Aluminum (tCO_2e/ton)	Well-below 2°C	WB2°C Target Setting tool for FIs - SDA for Aluminum
Aviation (gCO_2e/revenue passenger km or revenue ton km)	1.5°C	Aviation tool
Buildings ($kgCO_2e/m^2$)	1.5°C	Target Setting tool (to be replaced by Buildings Sector tool)
Cement (tCO_2e/ton of cement or cementitious product)	1.5°C	Target Setting tool
Chemicals (TBD)	Not available Sector-specific guidance is in development	Not available
FLAG (tCO_2e/t fresh wt, tCO_2e/t fresh wt FPCM, tCO_2e/m^3)	1.5°C	FLAG Target Setting tool
Land Transport: passenger, freight, auto manufacturing (scope 3 – use of sold products) (tCO_2e/passenger-km or ton-km or vehicle-km)	1.5°C (for portfolio companies' scope 1 and 2, using Corporate Near-Term Tool) Well-below 2°C (for portfolio companies' scope 3, using Transport Tool)	Transport Tool
Maritime shipping (gCO_2e/ton nautical mile)	1.5°C Well-below 2°C (for portfolio companies' scope 3)	Maritime Transport tool
Oil and gas (TBD)	Not available Sector-specific guidance is in development	Not available
Power generation (tCO_2e/MWh)	1.5°C	Target Setting tool
Pulp and Paper (tCO_2e/ton)	Well-below 2°C	WB2°C Target Setting tool for FIs - SDA for Pulp and Paper
Iron and steel (tCO_2e/ton of hot rolled steel)	1.5°C	Steel Target Setting tool

Source: Authors (2024).

How to calculate physical emissions intensity for SDA targets

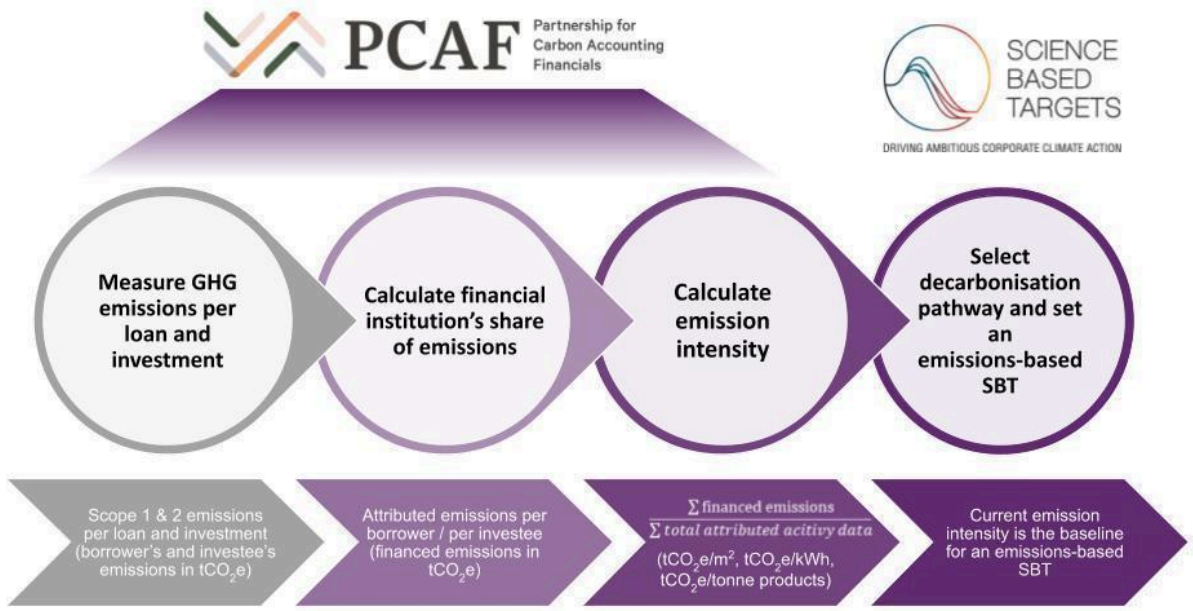
For FIs, determining portfolio emissions intensity is the starting point to apply the SDA for

target setting. Portfolio emissions intensity refers to financed emissions per unit of activity data (e.g., $kgCO_2e/m^2$, tCO_2e/MWh, tCO_2e/ton cementitious product). Four steps are taken to derive this:

1. Measure the absolute GHG emissions of each investment and/or loan in a specific asset class (i.e., scope 1 and 2 emissions of borrowers and/or investees and scope 3 emissions where possible or applicable).
2. Calculate the share of borrowers' and/or investees' emissions that should be attributed to the FI (i.e., financed emissions).
3. Calculate the share of borrowers' and/or investees' activity that should be attributed to the FI (i.e., attributed floor area, attributed annual electricity generated, etc.).
4. Divide the sum of financed emissions by the sum of attributed activity data of all investments and/or loans in the specific asset class.

Figure 5.1 illustrates the four steps to derive the emissions intensity baseline of an FI that applies the SDA.

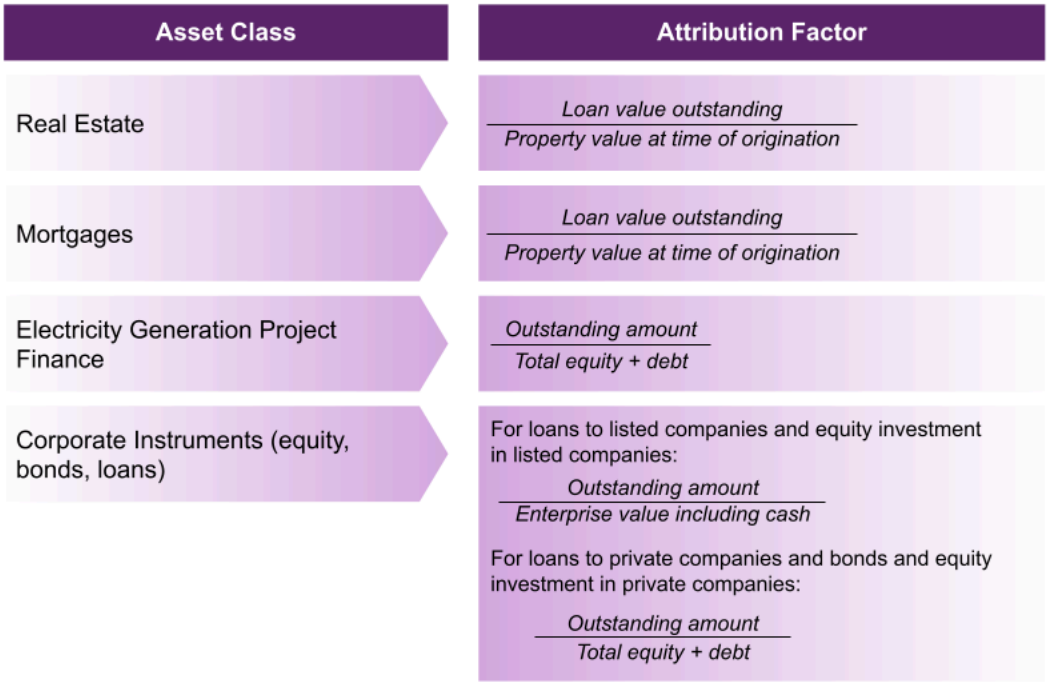
Figure 5.1: Steps to calculate baseline emissions intensity for setting SDA targets



Source: PCAF (2020).

It is important to note that the attribution factor to calculate an FI's share of emissions and share of activity data varies across asset classes, as shown in Figure 5.2.

Figure 5.2: Attribution factors for various asset classes in the PCAF framework



Source: PCAF (2020).

Detailed guidance on the methods to calculate financed emissions per asset class is provided in the Global GHG Accounting and Reporting Standard for the Financial Industry (PCAF, 2020).

Calculating the portfolio emission intensity is the first step FIs need to take to set emissions-based targets. This is followed by converging the projected emission intensity to the same level as the sector-specific decarbonization pathway in 2050.

SDA for mortgages (consumer loans) / real estate

A mortgage is a lending agreement to purchase a residential property in exchange for a regular repayment at interest, which the lender is entitled to with the condition that the loan becomes void upon the payment of the debt. Residential property refers to a building for a single family or multifamily that is used primarily for human dwelling (i.e., apartments and houses).

A real estate investment is the allocation of capital for partial or full ownership of property, real estate investment groups, real estate trading, REIT, etc. Both residential and service buildings under real estate investments and loans are included in this methodology. Residential buildings refer to private dwellings such as apartments and houses, whereas service buildings include properties related to trade, finance, retail, public administration, health, food and lodging, education and commercial services.

The minimum ambition of targets on a real estate portfolio is currently set using global decarbonization pathways, though a new Buildings Sector Guidance is being developed to use the Carbon Risk Real Estate Monitor (CRREM)-SBTi sectoral decarbonization pathways, which are in line with keeping global warming to 1.5°C. FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.

Separately, the low emissions intensity maintenance target option for investment or lending portfolios of real estate assets aims to accommodate FIs that have already achieved, at a portfolio level, the emissions intensity required to align with the 2030 sector intensity level in a 1.5°C pathway. It is meant to encourage FIs to maintain the enabling role they play in decarbonizing the real estate sector toward net-zero by only financing 1.5°C-aligned real estate assets. Nevertheless, the SBTi strongly encourages these FIs to further reduce their portfolio's emissions intensity. Additional follow-on targets must be aligned with the upcoming SBTi FINZ Standard to ensure that all post 2030 targets are compatible with net-zero pathways. Please see Table 5.1 for target language examples.

SDA for electricity generation project finance

Project finance is the financing of a project, such as infrastructure, and public and industrial assets using a limited-resource structure, including debt, equity and/or mezzanine. This method focuses on projects in the power sector; other types of project finance (other than in the fossil fuel and real estate sectors) are currently out of scope (see Table 5.2).

The minimum ambition of targets on an electricity generation project finance portfolio is set using global decarbonization pathways for power generation (i.e., the global electricity production projections and emissions intensity pathways used by the SBTi Target-Setting tool, per Table 5.3). FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool. A quick start guide is also available to support target development (SBTi, 2020).

FIs that already finance only renewable electricity projects in the base year may set targets to continue doing so. Please consult the RE100 Technical Criteria and the Scope 2 Quality Criteria in the GHGP Scope 2 Guidance for options for actively sourcing renewable electricity.

Separately, the low emissions intensity maintenance target option for electricity generation project finance portfolios aims to accommodate FIs that have already achieved, at a portfolio level, the emissions intensity required to align with the 2030 sector intensity level in a 1.5°C pathway. It is meant to encourage FIs to maintain the enabling role they play in decarbonizing the power sector toward net-zero by only financing 1.5°C-aligned electricity generation such as the development and operation of renewable and zero-emission electricity generation projects. Nevertheless, the SBTi strongly encourages these FIs to further reduce their portfolio's emissions intensity and set a target to continue only financing renewable electricity projects. Additional follow-on targets must be aligned with the upcoming SBTi FINZ Standard to ensure that all post 2030 targets are compatible with net-zero pathways. Please see Table 5.1 for target language examples.

SDA for corporate instruments

This methodology covers listed equity, private equity, corporate bonds and corporate loans. Targets are set on relevant "Required Activities" in Table 5.2, for which specific sectoral decarbonization pathways are available (e.g., power, iron and steel, cement, aluminum, pulp and paper, transport, commercial buildings, aviation, FLAG and maritime shipping).

Regarding emissions scopes of portfolio companies that shall be included in the targets, FIs shall refer to the relevant SBTi sector-specific guidance for SDA methods. A list of the sector-specific requirements and guidance is available in the SBTi Criteria Assessment Indicators.

5.4.2 Portfolio Coverage method

FIs may use the Portfolio Coverage method to set targets on their corporate instrument asset classes, including corporate loans and equity and fixed-income investments (see relevant "Required Activities" in Table 5.2) to drive adoption of science-based targets. This method can be used on its own or with the other three methods to collectively meet the minimum coverage for all "Required Activities."

To use the Portfolio Coverage method, FIs commit to engaging with their borrowers and/or investees to set their own science-based targets, which shall be validated by the SBTi,[36] such that the FI is on a linear path to achieve 100% science-based target coverage by 2040. As fulfillment of portfolio coverage targets means that borrowers' and/or investees' science-based targets have been approved by the SBTi, the 2040 timeline has been determined to allow borrowers and/or investees enough time to implement their target to ultimately achieve an economy-wide transition to net zero by 2050. The Criteria Assessment Indicators present information on the applicability of available science-based target-setting methods to various sectors and ongoing sector development work, which can help inform FIs' engagement efforts with borrowers and/or investees. For example, scope 3 targets may be required for specific sectors. Otherwise, if a company's relevant scope 3 emissions are 40% or more of total scope 1, 2 and 3 emissions, a near-term scope 3 target is required. SMEs, however, are not currently required to set scope 3 targets but must commit to measure and reduce their scope 3 emissions.

To define the coverage of the Portfolio Coverage target, FIs shall use one of the weighting approaches in the SBTi Finance Tool (listed in Appendix D) consistently throughout the target period. As the Portfolio Coverage (PC) method is binary, FIs can replace the outcome from the Temperature Rating method for the companies (i.e., TS in the formula) with the outcome of the PC assessment: 1 if the company has an SBTi-approved target or 0 if the company does not have an SBTi-approved target. This means that FIs can use the same weighting methods for both Temperature Rating and Portfolio Coverage; simply replace TS with PC in

[36] This differs from SBTi's latest criteria for corporates' supplier engagement targets, where suppliers' targets are not required to be approved but should only be set in line with SBTi's resources. SBTi stepped up the requirement for Portfolio Coverage targets given the rapidly increasing adoption of science-based targets and the SBTi's improved capacity to deliver timely target validations. In addition, requiring SBTi approval ensures that borrowers' and/or investees' scope 3 emissions are addressed as per SBTi's general criteria for corporates, where companies must set near-term scope 3 targets if their scope 3 emissions are more than 40% of their total emissions.

the formula. More instructions on applying this method in the SBTi Finance Tool can be found in the SBTi Finance Temperature Scoring and Portfolio Coverage Tool User Guide.

The ambition of the Portfolio Coverage method depends on the FI's starting point. Whereas an FI starting with 10% coverage in 2020 would need to increase coverage by 4.5% per year [(100%-10%) / (2040-2020)], an FI starting with 30% coverage would need to increase coverage by 3.5% per year [(100%-30%) / (2040-2020)]. An example of a Portfolio Coverage target could be that "Investment Firm A commits to 32.5% of its eligible equity portfolio by total assets setting SBTi-validated targets by 2025."

A science-based target is a useful indicator for investors to understand their borrowers' and/or investees' publicly committed trajectories to mitigate GHG emissions. However, it does not replace a robust assessment of the companies' business model or associated risks. For further recommendations on steps FIs can take to integrate climate change in their organization and achieve their targets in a manner that leads to GHG emissions reduction in the real economy, please refer to Section 7.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[37]

FI-C17.2 – Portfolio Coverage Targets: FIs' targets to drive the adoption of science-based emissions reduction targets by their borrowers and/or investees are considered acceptable when the following conditions are met:

- Boundary: FIs shall set engagement targets for activities as specified in Table 1.
- Ambition: FIs shall commit to having a portion of their borrowers and/or investees set their own SBTi-validated science-based targets such that they are on a linear path to 100% portfolio coverage by 2040 (using a weighting approach).[38] Fulfillment of portfolio coverage targets means that the SBTi has approved the borrowers' and/or investees' SBTs.
- Weighting Approach: FIs shall use one of the weighting approaches in the SBTi Finance Tool (listed in Appendix D of the Financial Sector Near-Term SBT Explanatory Document) consistently throughout the target period. As the Portfolio Coverage (PC) method is binary, FIs may replace the outcome from the Temperature Rating method for the companies (i.e., TS in the formula) with the outcome of the PC assessment: 1 if the company has an SBTi-approved target or 0 if the company does not have an SBTi-approved target. This means that FIs may use the same weighting methods for both Temperature Rating and Portfolio Coverage; they must simply replace TS with PC in the formula.
- Time Frame: The target year of FIs' Portfolio Coverage targets must be any year up to 2030 inclusive or within a maximum of five years from the date the targets are submitted to the SBTi for an official validation.[39] FIs may also set a second, longer-term 100% Portfolio Coverage target but only if it is in addition to one that meets the aforementioned time frame. The same base year shall be used for all Portfolio Coverage targets, and the SBTi recommends choosing the most recent year as the base year.
- Scope of Borrower and/or Investee Emissions: FIs' borrowers and/or investees shall follow the latest SBTi criteria required for companies as of the date of their target submission in order to set science-based targets. For example, near-term targets for corporates must cover at least 67% of scope 3 emissions when their scope 3 emissions are more than 40% of their total scope 1, 2, and 3 emissions.

[37] Please see this document for the references to tables and figures below.
[38] For example, an FI starting with 10% coverage in 2020 would need to increase coverage by 4.5% per year ((100% – 10%) / (2040 – 2020)) and reach at least 32.5% (10% + [(2025 – 2020) x 4.5%]) coverage by 2025.
[39] For example, for targets submitted for an official validation in the first half of 2026, the valid target years are up to 2030 inclusive. For targets submitted in the second half of 2026, the valid target years are up to 2031 inclusive.

5.4.3 Temperature Rating method

FIs may use the Temperature Rating method to address and cover corporate instruments, including corporate loans and equity and fixed-income investments (see relevant "Required Activities" in Table 5.2). This method is an extension of the Portfolio Coverage method that enables FIs to determine the current temperature score of their portfolio based on the public GHG emissions reduction targets (including science-based targets and any other valid public GHG targets that meet the method criteria) of their borrowers and/or investees. It enables the assessment of ambition of any corporate GHG emissions reduction targets against a wider range of temperature outcomes and allows FIs to understand the overall temperature rating of their portfolios and take actions to move portfolio companies toward better temperature ratings (e.g., well below 2°C (WB2C), 1.5°C). The method is open source and has gone through a separate consultation process. This approach can be used on its own or with the other three methods to collectively meet the minimum coverage for all "Required Activities."

Temperature Rating methodology

A range of methodologies currently exist to determine the temperature rating of investment portfolios. The "Alignment Cookbook," published by Institut Louis Bachelier, compares many of these methodologies to measure the alignment of investment portfolio with temperature trajectories (Raynaud et al., 2020). Currently the SBTi only recognizes the temperature rating methodology co-developed by WWF and CDP for target submissions as it has been created in collaboration with the SBTi, is fully open source, is fully transparent in methodology and output and has undergone a public consultation process. As such, only temperature scores calculated based on this methodology are currently recognized by the SBTi for target submissions. FIs may use the SBTi open-source tool or other third-party temperature scores produced according to this methodology. Stakeholders are advised to check the "Financial Institutions Tool" section on the SBTi Financial Sector webpage for the most recent methodology documentation. A video of how to use the SBTi Temperature Scoring tool for FI target submissions is also available.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[40]
FI-C17.3 – Portfolio Temperature Rating Targets: FIs' targets to align the Temperature Rating of their portfolios with the temperature goals set out in the Paris Agreement are considered acceptable when the following conditions are met: • Boundary: FIs shall set portfolio Temperature Rating targets for activities as specified in Table 1. • Ambition: FIs shall align their portfolio scope 1 and 2 temperature scores with a minimum 1.5°C scenario and in addition align their portfolio scope 1, 2 and 3 temperature scores with a minimum well-below 2°C scenario by 2040. Alignment with more ambitious scenarios such as 1.5°C across all scopes is highly encouraged. FIs shall commit to reducing their portfolio temperature scores such that they are on a linear path to the stated goal by 2040.[41] FIs shall set separate targets for scopes 1 and 2 and for scopes 1, 2 and 3. • Methodology: FIs shall calculate company-specific temperature scores and portfolio

[40] Please see this document for the references to tables and figures below.

[41] For example, an FI setting a Temperature Rating target with a base year of 2021, target year of 2027, starting portfolio scope 1 + 2 temperature score of 2.8°C, starting portfolio scope 1 + 2 + 3 temperature score of 3.0°C and a temperature alignment goal of 1.5°C for both scope 1 + 2 and scope 1 + 2 + 3 would need to reach at least a 2.39°C portfolio scope 1 + 2 temperature score [2.8°C – (2.8°C – 1.5°C) / (2040 – 2021) * (2027 – 2021)] and a 2.53°C portfolio scope 1 + 2 + 3 temperature score [3.0°C – (3.0°C – 1.5°C) / (2040 – 2021) * (2027 – 2021)] by 2027.

temperature alignment levels according to the published temperature rating methodology used by the SBTi. Temperature scores may be calculated using the SBTi open-source tool or other third-party temperature scores produced according to this method.[42]

- Data Consistency: FIs shall use the same source of temperature scores consistently throughout the target period or re-baseline if the source of temperature scores changes during the target period.
- Weighting Approach: FIs shall use one of the weighting approaches in the SBTi Finance Tool (listed in Appendix D of the Financial Sector Near-Term SBT Explanatory Document) consistently throughout the target period.
- Time Frame: The target year of FIs' Portfolio Temperature Rating targets must be any year up to 2030 inclusive or within a maximum of five years from the date the targets are submitted to the SBTi for an official validation.[43] The same base year shall be used for all Temperature Rating targets, and the SBTi recommends choosing the most recent year as the base year. The SBTi encourages FIs to develop long-term targets in accordance with the SBTi FI Net-Zero Standard upon its publication.
- Scope of Borrower and/or Investee Emissions: Temperature scores are calculated for FIs' borrowers' and/or investees' scope 1 and 2 and scope 1, 2 and 3 emissions, for both of which FIs must set separate targets. The temperature score of the portfolio company's parent company may be used if temperature scores are not available for the portfolio company.

The Temperature Rating method covers a broader group of companies than the strictly SBTi-approved Portfolio Coverage method, enabling the assessment of any public GHG emissions reduction target that meets the protocol criteria. The method is composed of three distinct components that will allow FIs to first quantify the temperature score of their portfolio:

1. **Target-level protocol**: The target protocol converts individual targets of various formats into temperature scores. This is achieved by generating simple regression models for estimated warming in 2100 from climate scenarios with short-, medium- and long-term trends in metrics like absolute emissions or emissions intensities. In addition to defining methods for disclosed targets, a default scoring approach is applied to all non-target disclosing companies.
2. **Company-level protocol**: Since companies may have multiple climate targets, covering different GHG emission scopes and time frames, a protocol is used to aggregate all target data to produce scores at a company level. This protocol defines the minimum quality criteria for determining the acceptability of a target to be scored and the steps required to identify and aggregate multiple targets to produce an overall company score. Following the SBTi corporate criteria, only forward-looking ambition is considered when assessing the targets, and past performance is not credited.
3. **Portfolio-level protocol**: The company scores are then aggregated to generate scores at a portfolio level. This consists of weighting company scores on the basis of GHG emissions and economic indicators to generate an overall weighted score for a specific portfolio. FIs shall use one of the weighting approaches in the SBTi Finance Tool consistently throughout the target period. More instructions on applying this method in

[42] For the purposes of target validation, FIs must provide the following information when submitting targets for an official validation: (1) the data provider and tool used (e.g., SBTi tool using data from [provider name], or temperature scores from [provider name]) and a link to public documentation stating the score provider's application of the published temperature rating methodology; and (2) the published IPCC 1.5°C scenario data used; and (3) the weighting approach used to generate a portfolio-level temperature rating and (4) the percentage of portfolio GHG emissions and/or portfolio value that is covered by public targets and the percentage of portfolio GHG emissions and/or portfolio value that is assessed using default scores in the reporting year. Stakeholders are advised to check the SBTi Financial Institutions webpage for the most recent documentation and tool.

[43] For example, for targets submitted for an official validation in the first half of 2026, the valid target years are up to 2030 inclusive. For targets submitted in the second half of 2026, the valid target years are up to 2031 inclusive.

the SBTi Finance Tool can be found in the Portfolio Coverage and temperature rating discussion included in Appendix E.

Aligning current temperature scores to temperature goals:

Base year temperature scores are produced at a scope 1 + 2 and a scope 1 + 2 + 3 level for each portfolio. FIs must then formulate targets to align this temperature to the desired temperature outcome, for example, 1.5°C. Table 5.4 presents the key steps to generate temperature scores and align targets with long-term temperature goals.

Table 5.4: Key steps to generate portfolio temperature scores under the Temperature Rating method

Step 1. Base Year Temperature Score	
Types of portfolio scores	Two portfolio-level temperature scores shall be generated based on company targets and/or default scores: ● Scope 1 + 2 score (°C) ● Scope 1 + 2 + 3 score (°C)
Boundary	The portfolio must reflect the holdings on a given date (e.g., first or last day of financial or calendar year).
	In addition to the two scores generated, FIs must provide the following information when submitting targets for an official validation as well as each year leading to the target year: ● The data provider and tool used (e.g., SBTi tool using data from [provider name], or temperature scores from [provider name]), and a link to public documentation stating the score provider's application of the published temperature rating methodology. ● The published Intergovernmental Panel on Climate Change (IPCC) 1.5°C scenario data used. ● The weighting approach used to generate a portfolio-level temperature rating. ● The percentage of portfolio GHG emissions and/or portfolio value that is covered by public targets and the percentage of portfolio GHG emissions and/or portfolio value that is assessed using default scores in the reporting year.
Step 2: Target Setting	
Minimum ambition thresholds	The scope 1 + 2 portion of the portfolio must be aligned to at least a 1.5°C score, and the scope 1 + 2 + 3 portion must be aligned to at least a well-below 2°C (1.75°C) score by 2040.
Target time frame	The target year must be any year up to 2030 inclusive or within a maximum of five years from the date the targets are submitted to the SBTi for an official validation. This means that the FI has a few years to engage

	companies to set targets or to adjust the portfolio holdings so the portfolio temperature is aligned to a linear pathway that will reach the stated temperature goals by 2040.
Target wording	Two targets must be set for each portfolio, addressing both operational (scope 1 + 2) and value chain (scope 1 + 2 + 3) emissions of the borrowers and investees. **Scope 1 + 2 target wording**: *FI A commits to align its scope 1 + 2 portfolio temperature score by [metric] within [asset class or sector] from X.XX°C in [base year] to X.XX°C by [target year].* **Scope 1 + 2 + 3 target wording**: *FI A commits to align its scope 1 + 2 + 3 portfolio temperature score by [metric] within [asset class or sector] from X.XX°C in [base year] to X.XX°C by [target year].*
Step 3: Temperature Rating	
Boundary	Each reporting year, and the target year temperature score must also be calculated on a given date in the calendar year or financial year, consistent with the approach used to calculate the base year temperature score.
Alignment ambition	A linear approach to 2040 is used to determine the minimum ambition required. A linear annual temperature reduction (LATR is generated based on the base year temperature score and the desired temperature goal in 2040. The minimum ambition must be at least 1.5°C by 2040 for scope 1 + 2 and well-below 2°C (1.75°C) for scope 1 + 2 + 3. LATR = (Base Year TS – Long-term TS) / (Long-term Target Year – Base Year). Where, LATR = Linear annual temperature reduction (°C/year) TS = Temperature score (°C) A company looking to be 1.5°C-aligned by 2040 starting from a portfolio S1 + 2 temperature score of 2.8°C in a 2021 base year would have to reduce its portfolio score by at least the following amount each year: LATR = (2.8°C – 1.5°C)/(2040 – 2021) = 0.0684°C/year Therefore, if an FI sets a maximum five-year target (from the target submission date), the maximum temperature of the portfolio in 2027 would be: 2.8°C – (2027 – 2021) * 0.0684°C = 2.39°C

Recalculation	The types of default scores must remain consistent across sectors. If changes to these models are implemented over the target period, the company will have to re-baseline the temperature of the fund. This will be based primarily on the sector-specific models that are modified over time.
Alignment options	The temperature score of any given portfolio can be aligned to a lower temperature score to achieve a target through the following hierarchy of actions: 1. **Engagement**: Engage existing borrowers/investees to set more ambitious targets, which would translate to lower temperature scores 2. **Adjustment**: FIs can adjust the portfolio holdings, moving the fund's capital to borrowers/investees with more ambitious targets 3. **Divestment**: FIs can remove borrowers/investees with no/low ambition targets and replace them with companies that have more ambitious targets The SBTi recommends that FIs focus on direct engagement as a measure that can most effectively lead to emission reductions on the ground, while recognizing that the latter two indirect strategies shall remain as complementary available measures.

Source: Authors (2020).

5.4.4 Fossil Fuel Finance Targets method

Fossil fuel combustion is the largest source of GHG emissions globally and the central driver of climate change. Fossil fuels are also the dominant source of energy for the global economy. FIs seeking to align with the Paris Agreement should explicitly and transparently address the role of fossil fuels in their investment and lending portfolios.

FIs shall set targets on their loans, investments and assets under management in fossil fuel-related projects and fossil fuel companies according to the coverage requirements outlined in Table 5.2. Targets that cover the fossil fuel sector may use any of the available methods specified in Table 5.2, including the Temperature Rating method or the FFF method described in this section. The SDA method will not be available until the SBTi Oil & Gas Sector Guidance is published. Where the FFF method is applicable, FIs are recommended to use this method to address their fossil fuel-related activities until the Oil & Gas Sector Guidance is available.

The FFF method is offered in the absence of an SBTi Oil & Gas Sector Guidance for corporates and the Financial Institutions Net-Zero Standard and therefore may only require a subset of possible criteria options as further guidance has not yet been released. For FIs that choose to use the FFF method, FIs commit to publicly disclose, arrest, transition and phase out its financial services to fossil fuel projects and companies.

First, disclosure supports consistent understanding of the full range of FIs' fossil fuel investments and lending activities, preserves credibility and creates an initial mechanism for FIs to help address justice and equity components of climate action. Second, credible targets

require the immediate cessation of financial support for the expansion of fossil fuel production capacity.

Third, FIs are essential for providing capital and engaging companies to transition to a 1.5°C pathway. The SBTi recognizes that the emissions impact of divestment from fossil fuel assets is not always clear or consistent as real economy companies, policymakers and other stakeholders will play a vital role in determining fossil fuel demand. FIs actively engaging companies to align with a 1.5°C transition is thus considered the "first-best" option to support climate stabilization and is recommended to be the basis of progress to the target(s) set. New financing dedicated to the decarbonization and permanent decommissioning of fossil fuel production and capacity is also highly encouraged to incentivize and enable the projects' and companies' transition to become 1.5°C-aligned. If using the option to cover new financial activities provided to companies that are dedicated to new long-lead time upstream oil and gas activities and midstream infrastructure dedicated to new long-lead time upstream oil and gas activities, then general purpose financing to oil and gas companies must be covered in the FI's Halt, and/or Transition targets, as well as Disclose targets.

Fourth, the IPCC 1.5°C emission pathways indicate that emissions from coal should reduce by four-fifths in 2030 relative to 2010 (Masson-Delmotte et al., 2018). Recent research on energy technologies shows that the share of uncompetitive coal plants worldwide is on track to increase rapidly to 60% in 2022 and to 73% in 2025 (Rocky Mountain Institute, 2020). The same report indicates that the trend is not limited to developed countries. In China and India, for example, 95% and 85%, respectively, of the coal fleet may become unprofitable by 2025. FIs should thus reduce their exposure to thermal coal as quickly as possible, to reach zero by 2030 in The Organization for Economic Co-operation and Development (OECD) countries and 2040 globally to reduce the risk of stranded assets, detrimental climate impacts and related losses. The phaseout of thermal coal financing is intended to accelerate energy transition and does not preclude support for transformation or decommissioning of existing facilities. Moreover, effective coal phaseout requires proactive consideration of a just transition to ensure viability and long-term stability (Jakob et al., 2020).

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[44]

FI-C17.4 – Fossil Fuel Finance Targets: FIs that are required to set targets for the fossil fuel sector may set such targets using any of the available methods specified in Table 1 or use the requirements described in this section.

- Boundary: FIs shall set targets for their fossil fuel-related projects and companies as outlined in Table 2 and below, that supersede the coverage requirements in Table 1.
  - Coal Company: Unless otherwise specified in Table 2, FIs shall define coal companies as those listed in the Global Coal Exit List (GCEL)[45] AND/OR companies with 10% or more of revenues from the coal value chain.
  - Coal Project: Unless otherwise specified in Table 2, FIs shall define coal projects as ring-fenced projects with 10% or more of their revenue generated in the coal value chain.
  - Coal Value Chain: When using a revenue threshold, the FI must disclose how the projects and/or companies were determined to be in-scope of the coal value chain, by

[44] Please see this document for the references to tables and figures below.
[45] The use of third-party lists within the FFF method criteria is intended to provide guidance and support for target-setting processes. Although the lists referenced herein have been included for the purposes of this version of the criteria, the SBTi intends to review its assessment procedures and inclusion of third-party lists on a periodic basis.

providing industry codes from an industry classification system such as the North American Industry Classification System (NAICS), Global Industry Classification Standard (GICS), Standard Industrial Classification (SIC) or Nomenclature of Economic Activities (NACE), and other relevant information for activities without a specific industry code. This must include at least exploration, extraction and the development or expansion of mines for all thermal coal grades as well as power plants (that use coal). The SBTi also recommends including all metallurgical coal grades and other segments of the value chain, such as mining services; any dedicated transport and logistics; processing; storage; trading; and any services dedicated to supporting the coal value chain (e.g., operations and maintenance; engineering, procurement and construction).

  - Oil and Gas Company: Unless otherwise specified in Table 2, FIs shall define oil and gas companies as those listed in the Global Oil & Gas Exit List (GOGEL) and all National Oil Companies (i.e., oil and gas companies fully or majority-owned by a national government) AND/OR companies with 10% or more of revenues from the oil and gas value chain.
  - Oil and Gas Project: Unless otherwise specified in Table 2, FIs shall define oil and gas projects as ring-fenced projects with 10% or more of their revenue generated in the oil and gas value chain.
  - Oil and Gas Value Chain: When using a revenue threshold, the FI must disclose how the projects and/or companies were determined to be in-scope of the oil and gas value chain, by providing industry codes from an industry classification system such as NAICS, GICS, SIC or NACE and other relevant information for activities without a specific industry code. This must include at least the exploration, extraction, and development or expansion of fields. The SBTi also recommends including other segments of the value chain, such as transportation and distribution infrastructure; terminals; storage; liquified natural gas; liquified petroleum gas; gas to liquids; refining; transportation of products; trading; marketing; and retailing.

- Disclose: FIs shall commit, via a publicly available policy published prior to submission of the FI's science-based target, to publicly disclose information at a portfolio level on an annual basis to provide a level of transparency that aids stakeholders' understanding of the extent of financial activities related to fossil fuel projects and companies. FIs shall disclose the following datapoints annually at a fixed point in time (e.g., the last day of the FI's fiscal year), beginning in the year of target submission.
  - Financial metric(s) (e.g., dollar amount of loans, investments and assets under management; debt and equity underwriting volume; insurance underwriting premiums) for all of the FI's Required Activities, Optional Activities, and Out-of-Scope Activities (per Table 1) related to projects and companies (as defined in Table 2) in the (i) coal sector separately and (ii) oil and gas sectors together or separately.
  - Total absolute GHG emissions (scopes 1, 2 and 3 in aggregate or separately), i.e., all relevant GHGs (including methane), attributed to the FI's Required Activities and Optional Activities (per Table 1) related to projects and companies (as defined in Table 2) in the (i) coal sector separately and (ii) oil and gas sectors together or separately.

  FIs may provide the above data points in further granularity (e.g., by upstream, midstream and downstream segments of the value chain). The SBTi recommends that data points be measured on a time-weighted average basis and disclosed along with the calculation methodology used. FIs should also disclose methane emissions attributed to their financial activities in the fossil fuel sector as well as financing for the permanent decommissioning of fossil fuel production activities and capacity separately.
- Halt: FIs shall commit, via a publicly available policy published prior to submission of the FI's science-based target, to the immediate cessation (upon the publication of the policy) of all new financial activities related to the projects and companies below, with the exception of new financial activities dedicated to the permanent decommissioning of production activities and capacity.
  - Projects and companies (as defined in Table 2) involved in new coal mines, extensions/expansions of coal mines or new unabated coal-fired power plants.
  - New long-lead time upstream oil and gas projects and midstream infrastructure dedicated to new long-lead time upstream oil and gas projects.
    - For target validation purposes, five years (from the date of target submission) will be used as the threshold to define long-lead time.
  - Oil and gas companies (as defined in Table 2) involved in the above oil and gas

activities.
        - Alternatively, new financial activities (as defined below for Halt), which the FI provides to companies of any type (including financing with known use of proceeds, underwriting of securities with known use of proceeds, insurance underwriting), that are dedicated to new long-lead time upstream oil and gas activities and midstream infrastructure dedicated to new long-lead time upstream oil and gas activities must be covered under the Halt target. Meanwhile, all other Required Activities, as well as Optional Activities (per Table 1) outside of AIWM (i.e., only discretionary mandates in AIWM are required under these criteria) that are related to oil and gas companies (as defined in Table 2 for Transition) must be covered under the Transition target below.
    - The applicability of abatement for the purpose of the halt of financial activities to new unabated coal-fired power plants is considered to be at least a 90% reduction of scope 1 and 2 emissions from the associated coal assets of the holding company or project. For carbon capture to be considered part of the 90%, it (i) must be utilized for mitigation products that have century-scale (or greater) lifetimes (i.e., geological carbon capture and storage) and (ii) must not support enhanced oil recovery or any other processes that enable continued fossil fuel extraction and production development.

  Specifically, FIs may not provide the following:
    - For the above projects and companies that the FI isn't already involved with:
        - Any Required Activities, Optional Activities, or Out-of-Scope Activities (per Table 1), except for the AIWM asset class where only discretionary mandates may not be provided.
    - For projects and companies that the FI is already involved with:
        - Any new/additional Required Activities, Optional Activities, or Out-of-Scope Activities (per Table 1), except for the AIWM asset class where only discretionary mandates may not be provided.[46]
- Transition: FIs shall establish the following near-term targets at the portfolio level:
    - Absolute targets: FIs shall set target(s) for reducing absolute GHG emissions attributed to all of their Required Activities, as well as Optional Activities (per Table 1) outside of AIWM (i.e., only discretionary mandates in AIWM are required under these criteria), that are related to projects and companies (as defined in Table 2) in the upstream segment of the oil and gas value chain. FIs may set one aggregated target or multiple targets (e.g., one each for upstream oil and upstream gas) as long as the aggregated amount of absolute emissions reductions is, at a minimum, consistent with the cross-sector pathway. The cross-sector absolute reduction method requires absolute emissions reductions at or above a fixed annual rate (currently defined as 4.2% linear annual reduction between the base year and target year plus an adjustment for base years later than 2020), with sufficient forward-looking ambition. The SBTi strongly recommends that FIs set targets that go beyond the minimum ambition required by the cross-sector pathway. FIs may communicate their absolute targets in financial exposure terms, but the SBTi will assess the target against the absolute emissions pathway described above. In addition, the SBTi recommends that FIs set separate target(s) to specifically reduce absolute methane emissions from their fossil fuel portfolios.
      FIs shall also set target(s) for reducing absolute GHG emissions attributed to their Required Activities, as well as Optional Activities (per Table 1) outside of AIWM (i.e., only discretionary mandates in AIWM are required under these criteria) that are related to coal projects and coal companies (as defined in Table 2, such that activities in the power generation sector that shall be covered separately by a Power Generation SDA target according to the requirements outlined in Table 1) in line with the phaseout time frame required further below, if the year of full phaseout is more than five years from the year of target submission.[47]

[46] For example, if an FI already holds 30 shares in a coal company with expansion plans, then the FI may continue to hold the 30 shares but may not buy any more shares in that coal company, and if the FI sells 10 of the 30 shares at a later point, then thereafter the FI may continue to hold 20 shares but may not add to its 20 remaining shares. As another example, if an FI has already provided a $60 loan to a coal company with expansion plans, then the FI may not provide any new loans to that coal company or extend or renew the $60 loan past the original maturity date.

[47] For example, an FI submitting targets in 2024 with a 2028 coal phaseout would not need to set a Transition target while an FI submitting targets in 2024 with a 2022 base year and 2040 phaseout year would need to reduce its coal-related GHG emissions by 5.56% per year [(100%) / (2040 – 2022)] and reach at least a 44.5% [(2030 – 2022) x 5.56%]) reduction by 2030.

The SBTi theory of change holds that FIs are essential for providing capital and engaging companies to transition to a 1.5°C pathway. The SBTi also recognizes that the emissions impact of divestment from fossil fuel assets is not always clear or consistent, as real economy companies, policymakers and other stakeholders will play a vital role in determining fossil fuel demand. An FI using its influence and actively engaging companies to align with a 1.5°C transition is thus considered the "first-best" option to support climate stabilization and should be the basis of progress toward the target(s) set. The SBTi also highly encourages new financing dedicated to the decarbonization and permanent decommissioning of fossil fuel production and capacity, in order to enable the projects' and companies' transitions to become 1.5°C-aligned.

- Time Frame: Fossil Fuel Finance transition targets must cover a minimum of five years and a maximum of 10 years from the date the targets are submitted to the SBTi for an official validation.[48] The same base year shall be used for all Fossil Fuel Finance transition targets, and the SBTi recommends choosing the most recent year as the base year. The SBTi encourages FIs to develop long-term targets in accordance with the SBTi Financial Institutions Net-Zero Standard upon its publication.
- Scope of Borrower and/or Investee Emissions: Targets shall cover projects and companies in the coal sector and upstream segment of the oil and gas value chain (as defined in Table 2 and above). The scope 1, 2 and 3 (including upstream and downstream) emissions attributed to the FIs' Required Activities, as well as Optional Activities (per Table 1) outside of AIWM (i.e., only discretionary mandates in AIWM are required under these criteria), from these projects and companies shall be covered by the targets. Coverage of all relevant GHGs, including methane, is required.

- Phaseout: FIs shall commit, via a publicly available policy published prior to the submission of their science-based target, to phasing out their Required Activities, Optional Activities outside of AIWM, and Out-of-Scope Activities (per Table 1) outside of AIWM (i.e., only discretionary mandates in AIWM are required under these criteria) that are related to coal projects and coal companies (as defined in Table 2) in line with a full phaseout by the end of 2030 for projects and companies operating in OECD (The Organization for Economic Co-operation and Development) countries and by the end of 2040 globally, with the exception of new financial activities dedicated to the permanent decommissioning of production activities and capacity. FIs should encourage the coal projects and companies they support to adopt managed phaseout plans well in advance of phaseout, with facility-by-facility closure dates that include just transition and re-training plans for workers.

5.5 Approaches to setting targets on the rest of the scope 3 categories

For FIs to focus their efforts on their investment and lending activities, the SBTi only recommends but does not require that FIs measure emissions and set targets on scope 3, categories 1-14.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0

FI-R2 – Measuring Emissions and Setting Targets for Scope 3, Categories 1–14: The SBTi recommends but does not require FIs to measure and set target(s) on scope 3, categories 1–14 emissions as defined by GHGP Corporate Value Chain (Scope 3) Accounting and Reporting Standard. When submitting scope 3, categories 1-14 targets for validation, FIs must include a complete emissions inventory following the minimum boundary for each scope 3 category in conformance with the GHGP Scope 3 Standard. Optional targets for these categories must also meet the scope 3 criteria in the latest SBTi criteria for corporates to be approved by the SBTi. For example:

- FIs must not exclude more than 5% of emissions from their total scope 3, categories 1-14,

[48] For example, for targets submitted for an official validation in the first half of 2024, the valid target years are 2028-2033 inclusive. For targets submitted in the second half of 2024, the valid target years are 2029-2034 inclusive.

GHG inventory.[49]
- Near-term emission reduction targets must cover a minimum of five years and a maximum of 10 years from the date the targets are submitted to the SBTi for an official validation.
- FIs must fulfill supplier or customer engagement targets within a maximum of five years from the date the targets are submitted to the SBTi for an official validation.

The SBTi recommends that FIs set targets for scope 3, categories 1-14, separately from scope 1 and 2 targets. Targets combining scopes (e.g., 1 + 2, or 1 + 2 + 3) are permitted if the SBTi can review the ambition of the individual target components and confirm each meets the relevant ambition criteria.

For FIs interested in submitting targets on categories 1–14, they must submit a complete emissions inventory in line with the minimum boundary in line with the GHGP Scope 3 Standard and ensure that these targets meet the scope 3 criteria in the latest SBTi general criteria for corporates for them to be approved and published. FIs may use the SBTi Target-Setting tool to develop these targets.

In terms of applicable methods, the absolute contraction and supplier engagement approaches can be used to set targets on most categories. The absolute contraction method has been introduced in Section 4.3 on scope 1 and 2 target setting. For categories 1–14, FIs may then consider setting absolute targets in line with a well-below 2°C scenario (e.g., 2.5% linear annual reduction), given that scope 3 emissions can be more difficult to reduce as compared to scope 1 and 2 emissions. Requirements for supplier engagement targets are detailed in the SBTi corporate criteria.

Relevant SDA pathways may also be applied to categories such as upstream transportation and distribution (transport), business travel (transport), employee commuting (transport) and upstream leased assets (building services). However, given that the application of SDA requires more input data than absolute contraction, FIs should weigh the amount of effort toward setting SDA targets against the significance of these categories.

FIs may combine targets on multiple scope 3 categories. For example, an FI may set one single upstream supplier engagement target on category 1 (purchased goods and services) and category 4 (upstream transportation and distribution) that engages relevant suppliers covering both categories.

5.6 Fossil fuel transition and renewable energy

In recognition of the complex and societally embedded nature of fossil fuels, the SBTi recommends the following measures that will not be validated but can be included in the brief summary of strategy and actions that the FI will implement to reach its science-based target(s) and supplement the FFF interim criteria.
As with the SBTi's sector-based Pathways to Net-Zero analysis, the IEA Net-Zero scenario provides a minimum ambition threshold (e.g., cutting oil and gas methane by 75% is one of

[49] The SBTi does not recognize emissions perceived to be "negligible" as a rationale for not reporting them. Even if emissions from certain activities or operations are perceived to be negligible, these emissions still must be quantified and reported in the reporting FI's GHG inventory. This is regardless of whether the reporting FI chooses to exclude them or not, as exclusions must also be quantified and reported.

the most impactful measures to reduce GHG emissions to 2030 in line with 1.5°C stabilization). As target-setting methods and practices evolve, the SBTi will provide additional guidance. At this point the recommendation is for FIs to publish the targets to demonstrate emerging practices. For reference, FIs can consult the CA100+ Oil and Gas Company Assessment data.

For FIs' targets on renewable energy relative to fossil fuels, it is recommended that FIs consider increasing their ratio of financial support for renewable energy assets every year at the portfolio level, aiming for a ratio of 10:1 (clean energy supply and end use efficiency to transitioning fossil) by 2030 at the latest, in line with the International Energy Agency Net Zero Roadmap 2023 Update. The 10:1 combines end use and efficiency at 4:1 as well as supply at 6:1 investment ratios. For the fossil fuel denominator, activities should be in line with the FFF interim criteria and the recommendations below.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[50]

FI-R11 – Transition of Fossil Fuel Support: The SBTi recommends the following measures that will not be validated but may be included in the brief summary of strategy and actions the FI will implement to reach its science-based target(s) and supplement the Fossil Fuel Finance Targets method.

- FIs should disclose methane emissions attributed to their financial activities that are related to projects and companies in the fossil fuel sector and set target(s) to specifically reduce methane emissions (in absolute and intensity terms) from their fossil fuel portfolios in line with the latest climate science.
- FIs should commit to publicly disclosing the percentage share of their portfolio companies in the fossil fuel sector that have 1.5°C-aligned transition plans as well as setting a target to increase that ratio.
- FIs should set GHG emissions intensity reduction targets for their Required Activities, as well as Optional Activities (per Table 1) outside of AIWM (i.e., only discretionary mandates in AIWM are required under these criteria), that are related to fossil fuel projects and companies (e.g., attributed emissions per attributed barrel of oil equivalent; tCO_2e/boe).
- FIs should set a time-bound engagement period to enable fossil fuel projects and companies to transition, and phaseout support if engagement efforts are not successful. FIs that fail to phaseout financing to fossil fuel projects and companies that do not have and execute a 1.5°C-aligned transition plan expose themselves to risks of stranded assets and reputational damage.

FI-R12– Renewable to Fossil Fuel Ratio: The SBTi also recommends the following target that will not be validated but may be included in the brief summary of strategy and actions FIs will implement to reach their science-based target(s) and supplement the Fossil Fuel Finance Targets method. FIs should set a target to increase their ratio of financial support for renewable energy (relative to financial support for fossil fuels) and to increase end use efficiency every year at the portfolio level, in line with the latest climate science. The ratio should be calculated at a fixed point in time (e.g., the last day of the FI's fiscal year) to consistently report progress on an annual basis.

[50] Please see this document for the references to tables and figures below.

6. HOW TO COMMUNICATE SCIENCE-BASED TARGETS AND TRACK PROGRESS

Given the importance of transparency to stakeholders on the actions of FIs in reducing GHG emissions, the SBTi provides specific requirements and guidance on how FIs communicate their science-based targets and strategies to achieve their science-based targets. FIs should not make claims about emission reductions attributed to these strategies or related financial products without credible evidence to support these claims.

The SBTi requires FIs to develop target language in the target submission form for FIs that will be used for public communication if/when the targets are approved.

FIs shall formulate target language for the following:

- A scope 1 and 2 target using the target language template in the financial sector target submission form.
- Targets to cover any optional scope 3, categories 1–14 to be approved by the SBTi.
- A headline target for portfolios that sets out how much of their total portfolio is covered (see FI-C18 for the calculation) and relevant exclusions, the purpose of which is to simplify the communication of multiple asset-level targets.
- Target language for asset-level targets using the specific target language templates.

At the time of target submission, FIs shall submit a brief summary of the strategy and actions the FIs will implement to reach their science-based target(s) and why they selected these actions. This summary shall be provided by the FIs with their target submission and will be published, along with the science-based targets, on the SBTi website upon target approval. The summary shall focus on future actions, rather than past achievements. Target language must be agreed upon in order for the target submission to be validated. The target language must be published on the SBTi website within six months of the completion of the validation process or must be revalidated in order to remain approved. FIs must use the same target language in their own communications as on the SBTi website but are welcome to add additional details in their own communications. Disclaimers in the target language published on the SBTi website can include links to only the FI's website or its own publications.

The detailed target language template is provided in Table 5.1 and additional guidance on formulating target language is included in the financial sector target submission form and shall be followed by FIs when setting targets. For scope 3 portfolio targets that only cover CO_2 emissions, however, the target language must refer to CO_2 emissions, rather than GHG emissions. For example, the target language template for a SDA target covering only CO_2 emissions would be: *"[FI name] commits to reduce CO_2 emissions from the [XX] sector within its [asset class] portfolio [XX]% per ton of [metric] by [target year] from a [20xx] base year."*

The SBTi recognizes that there is a lack of clarity about which FI actions could lead to GHG emissions in the real economy. The SBTi's annual disclosure requirement is intended to help identify the most effective actions to realize GHG emissions reductions in the real economy and lead to further progress in this area.

The SBTi welcomes collaboration with other climate initiatives that seek to develop methods or tools that enable the measurement of the impact of climate actions (see also Section 7). We also encourage FIs to engage with relevant service providers to develop such tools and adjust their strategies according to the findings of these analyses.

Given that current methods do not cover all asset classes or sectors on FIs' portfolios and that the target boundary requirement remains flexible on certain financial products, FIs are required to disclose the coverage of their total investment and lending activities by science-based targets in the target language (FI-C18) using an economic or emissions metric that is representative of the magnitude of their main business activities. FIs should indicate the exact date when the target progress was calculated, as investment and lending activities may change over the course of the year and not reflect the situation at the moment of reporting. This disclosure requirement is intended to enhance the transparency and comparability of portfolio targets. Given that this version of the criteria allows banks to submit targets without their asset management divisions, banks shall also be explicit about such exclusions in the target wording. All other FIs must include their asset management businesses in their scope 1, 2 and 3 target boundaries.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[51]
FI-C18 – Disclosure of Scope 3 Portfolio Targets – Headline Target: Separate from the calculation of an FI's Portfolio Target Boundary to confirm that minimum coverage requirements have been met per FI-C15, FIs shall disclose, at the time of target announcement and along with approved targets, the percentage of their total investment and lending activities covered by scope 3 portfolio targets on the SBTi website, in a metric representative of the magnitude of FIs' main business activities, which may involve any combination of lending, own investments and asset management. Examples include total balance sheet assets, total investments, total lending book and total assets under management, as relevant. FIs must also disclose a breakdown of required, optional, and out-of-scope activities as outlined in the headline target language template in Table 3. These disclosure requirements are intended to enhance the transparency and comparability of portfolio targets. FIs will use the formula below to calculate the percentage of activities covered by targets: % coverage = All financing covered by targets / All required, optional, and out-of-scope asset classes Out-of-scope asset classes include those listed as such in Table 1 and other tangible assets that are held, owned, controlled or managed by the FI, such as cash, deposits at central banks, receivables, assets held for sale, and other financial instruments. Fixed assets (i.e., property for own use or to lease out that are covered by scope 1 and 2 or scope 3 categories 1-14 targets, plant and equipment) unless related to the fossil fuel sector, as well as leased assets, prepaid expenses, accrued income, and other intangible assets (e.g., goodwill, current and deferred tax assets) may be excluded from the denominator. For example, while assets administered under advisory and/or execution-only mandates are optional or out of scope for asset managers, they will still need to be included in the denominator even if they are not covered by targets.
FI-C19 – Implementation Reporting: At the time of target submission, the FI shall submit a brief summary of how it intends to meet its scope 3 portfolio targets in conformity with the template provided in the SBTi target submission form for FIs. This disclosure is intended to create transparency. The summary shall focus on future actions, rather than past achievements. The

[51] Please see this document for the references to tables and figures below.

content of the summary will not be used as a basis for validation of targets. At the time of target announcement, the summary shall be made public.[52]

6.1 Tracking and reporting target progress

This section presents recommendations on tracking and reporting progress of portfolio targets set using SDA, Portfolio Coverage and Temperature Rating methods and FFF interim criteria. FIs should take these recommendations into consideration for the annual disclosure of target progress required by the criteria.

6.1.1 Tracking progress against SDA targets

FIs should track and disclose progress against their SDA targets on an annual basis. The tracking metric is emissions per activity unit relevant to the sector (e.g., tCO_2 per MWh, tCO_2 per ton of steel, $kgCO_2$ per m^2), combined with the percentage of portfolio outstanding value in the specific asset class/sector. To measure annual progress, FIs should use the GHG accounting methods developed by the PCAF. These methods enable FIs to calculate the absolute emissions per asset class at a specific point in time. The absolute emissions are then converted to emissions intensity using the physical activity data that are linked to the loans and investments (e.g., the amount of kWh, tons of steel, or m^2 that FIs have financed). The result should be compared with the emissions intensity of the previous year.

6.1.2 Tracking progress against Portfolio Coverage targets

FIs should report the percentage of relevant asset class(es) covered by companies with approved science-based targets on an annual basis, using the same weighting approach chosen for the base year consistently throughout the target period. FIs may further indicate whether they are on track to meet the targeted coverage of companies set out for the five-year target period. If FIs choose to do so, they should provide evidence to support any statement about whether they are on or off track and clearly state any assumption used. An example of such assumptions could be that the same progress achieved in the first year will be achieved in the remaining four years: FI A projects that it is currently on track to meet the five-year target.
In addition to reporting on the percentage of companies with approved science-based targets, FIs may also report the coverage of companies committed to the SBTi or the increase in the number of companies measuring and reporting scope 1, 2 and 3 emissions to show incremental progress of portfolio companies.

6.1.3 Tracking progress against Temperature Rating targets

Each reporting year, the FI should disclose both portfolio temperature ratings (scope 1 + 2 rating and the scope 1 + 2 + 3 rating). In addition, when submitting targets for official validation, and when reporting and tracking progress against targets, FIs must disclose the following information:

[52] FIs will have opportunities to review the summary language before the SBTi publishes it on its website.

- The data provider and tool used (e.g., SBTi tool using data from [provider name], or temperature scores from [provider name]), and a link to public documentation stating the score provider's application of the published temperature rating methodology.
- The published IPCC 1.5°C scenario data used.
- The weighting approach used to generate a portfolio-level temperature rating.
- The percentage of portfolio GHG emissions and/or portfolio value that is covered by public targets and the percentage of portfolio GHG emissions and/or portfolio value that is assessed using default scores in the reporting year.

6.1.4 Tracking progress against Fossil Fuel Finance targets

Each reporting year, the FI shall publicly disclose information at a fixed point in time (e.g., the last day of the FI's fiscal year) to provide a level of transparency that aids stakeholders' understanding of the amount of financial activities provided to fossil fuel projects and companies. The following datapoints shall be disclosed annually, beginning in the year of target submission.[53]

- List and/or revenue threshold used to define coal projects and companies as well as oil and gas projects and companies.
- Financial metric(s) (e.g., dollar amount of loans, investments and assets under management; debt and equity underwriting volume; insurance underwriting premiums) for all of the FI's Required Activities, Optional Activities and Out-of-Scope Activities (per Table 1) related to projects and companies (as defined in Table 2) in the (i) coal sector separately; and (ii) oil and gas sectors together or separately.
- Total absolute GHG emissions (scopes 1, 2 and 3 in aggregate or separately), i.e., all relevant GHGs (including methane), attributed to the FI's Required Activities and Optional Activities (per Table 1) related to projects and companies (as defined in Table 2) in the (i) coal sector separately; and (ii) oil and gas sectors together or separately.
- Confirmation of the cessation of all new financial activities to (i) projects and companies involved in new coal mines, extensions/expansion of coal mines or new unabated coal-fired power plants; (ii) new long-lead time upstream oil and gas projects and midstream infrastructure dedicated to new long-lead time upstream oil and gas projects and (iii) companies involved in (ii) or companies that are provided new financial activities by the FI that are dedicated to (ii).
- Progress on target(s) on absolute emissions attributed to the FI's loans, investments, and assets under management in coal projects and companies as well as upstream oil and gas projects and companies.
- Progress on phaseout of all financial activities to all coal projects and coal companies.
    - New financing dedicated to the permanent decommissioning of fossil fuel production and capacity is highly encouraged to incentivize and enable the projects' and companies' transition to become 1.5°C-aligned and should be disclosed separately.

[53] Please see the Financial Institutions' Near-Term Criteria Version 2.0 for the references to tables and figures below.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0[54]
FI-C20 – Tracking and Reporting Target Progress: After target approval, the SBTi requires annual disclosure of scope 1 and 2 GHG emissions, disclosure of progress against all approved targets in the relevant metric, and disclosure of actions or strategies undertaken during the year to meet scope 3 portfolio targets. If the FI submits optional targets on scope 3, categories 1–14, as described in FI-R2, and these are approved by the SBTi, the FI shall disclose progress toward them as well. FIs should also annually disclose a full GHG emissions inventory for their portfolios, covering all activities for which a GHG accounting method is available at the time of target submission (i.e., all Required Activities and Optional Activities per Table 1).

6.2 Target recalculation and validity

As additional methods and the latest climate science become available, FIs shall continue to follow best practices and ensure that their targets remain relevant. Therefore, per FI-C21 – Mandatory Target Recalculation, FIs must review, and if necessary, recalculate and revalidate their targets, at a minimum, every five years from the date of target approval. FIs with approved targets that require recalculation must follow the most recent applicable criteria for the financial sector at the time of resubmission.

FIs should also recalculate targets, as needed, to reflect significant changes that would compromise relevance and consistency of the existing target. Examples of significant changes that should trigger a recalculation are included in FI-R14 – Triggered Target Recalculation. For example, if FIs set intensity targets and there are significant changes in the projection of the related activity, this should trigger a target recalculation and resubmission of the target to the SBTi.

To institutionalize the practice of target adjustments, FIs should establish a base-year recalculation policy that sets out a qualitative or quantitative significance threshold to trigger a recalculation of targets. Examples of changes that could trigger a target recalculation include updates in climate science, availability of higher quality borrower/investee data, and significant changes to the FI such as a merger or acquisition.

Excerpt from Financial Institutions' Near-Term Criteria Version 2.0
FI-C21 – Mandatory Target Recalculation: To ensure consistency with most recent climate science and best practices, FIs must review targets, and, if necessary, recalculate and submit them for revalidation within five years from the date of target approval. FIs with an approved target that requires recalculation must follow the most recently applicable criteria at the time of resubmission.
FI-C22 – Target Validity: The FI and SBTi must agree upon target language before the SBTi can validate the target submission. FIs with approved targets must publish their target publicly on the SBTi website within six months of the approval date. Targets unannounced after six months must go through the approval process again unless a different publication time frame has been agreed upon in writing with the SBTi. FIs must use the same target language in their own communications as on the SBTi website but are welcome to add additional details in their own communications. Disclaimers in the target language published on the SBTi website may include links to only the FI's website or its own publications.

[54] Please see this document for the references to tables and figures below.

7. HOW TO ACHIEVE SCIENCE-BASED TARGETS

There are numerous actions that FIs can use to achieve their portfolio science-based targets. This section builds on the SBTi's criteria and recommendations for target setting and reporting, and further recommends steps that FIs can take to fully integrate climate change in their organization and services and achieve their targets in a manner that leads to GHG emissions reduction in the real economy. This section is not an exhaustive list and may not fully capture the landscape of actions that FIs can take to achieve their SBTs, which continues to evolve.

7.1 Integration of climate change in governance and decision making

FIs should integrate climate change across their institution. This can include the following:

- **Adoption of climate-related investment principles**. These should recognize that portfolio alignment with the Paris Agreement will contribute to investing in the best interests of FIs' beneficiaries or clients.
- **Establishment of a climate governance structure**. FIs should make portfolio alignment with the Paris Agreement a board priority—including explicit attribution of this responsibility within the board. They should also put governance structures in place that ensure proper support and implementation of the policy—including incentive schemes, commitment of resources, capacity building and involvement of beneficiaries or clients.
- **Integration of climate change in the investment and/or lending policy**. FIs should adopt an investment and/or lending policy that reflects and aligns with their climate-related investment principles. This can include—depending on the type of FIs—investment/lending targets, strategic asset allocation, engagement objectives, selection/screening criteria and incentives for service providers based on climate performance and performance measurement and reporting.
- **Adjustment of strategic asset allocation to harness climate-related opportunities**. FIs should consider climate risks and opportunities in strategic asset allocation (SAA), including increasing their exposure where feasible to alternative asset classes that are more likely to have a direct positive climate impact on the real economy—such as infrastructure (e.g., grids and renewable energy), real estate (highly energy-efficient and resilient buildings) and private equity (renewable and energy efficiency companies).
- **Adoption of additional sector-specific policies**. FIs should extend their investment policy to sectors and technologies that pose particular climate-related risks or offer particular opportunities. These are most notably:
    - Sectors where GHG-intensive companies have a significant potential to offer alternative solutions and thus reduce their emissions—such as power utilities, industrial sectors (steel, cement, chemicals) and automotive.
    - Sectors that are deemed to shrink and ultimately disappear with the energy transition (e.g., coal, oil and gas), but where some companies still have the potential to make a timely shift to other business models. For example, the FFF method provides some interim criteria for FIs to address their fossil fuel-related activities.

- The sector policies should define criteria that allow the FI to identify to what extent the companies in its portfolio are able and willing to align their business model with the Paris Agreement, set out a strategy as to how the FI will urge companies to adopt 1.5°C transition plans through active ownership and identify at which point exposure reduction/divestment is desirable in light of the inability or unwillingness of a company to transition in a timely manner.
- **Development of methods or tools that enable the measurement of the impact of climate actions**. There currently is insufficient clarity about which FI actions lead to GHG emissions in the real economy. FIs should engage with relevant service providers to develop tools that allow the FI to build a better understanding of the impact of their actions on GHG emissions and adjust their strategies according to the findings of these analyses.

7.2 Engaging key stakeholders: Companies, service providers and policymakers

Generating impact in the real economy requires all relevant stakeholders to move at the same time. Hence FIs should leverage the influence they have over companies, policymakers and financial service providers. This will ensure that the rules of the game in which FIs operate are supportive of their own climate actions.
FIs should work collectively with their peer FIs to learn, seek advice, share best practice and, most importantly, increase the impact of engagement activities with portfolio companies and policymakers. They should engage in FI coalitions and participate in and drive coalitions that promote the alignment of portfolios with the Paris Agreement (see Table 1.1 for more details).

7.2.1 Company engagement

FIs should develop an engagement strategy to achieve alignment of their portfolio companies' business models with the Paris Agreement—through the adoption and publication of time-bound 1.5°C transition plans composed of the following elements:

- A commitment to align business models with the Paris Agreement and, more concretely, a time-bound climate science-based target built on forward-looking climate scenario analysis. If FIs set SBT Portfolio Coverage targets (i.e., targets to engage borrowers/investees to set approved science-based targets), all companies in the boundary of these targets shall have approved science-based targets by 2040 in line with the Portfolio Coverage target criterion.
- Capital management plans to end capital expenditure for new high-carbon projects, increase capital expenditure for low- and zero-carbon projects and create a clear timeline for the closure of existing high-carbon assets. This could include cash returns through buybacks or dividends.
- The disclosure of the target and transition plan and alignment with TCFD recommendations. Such information should be published in mainstream financial reports (integrated reporting).
- A commitment to review and ratchet up targets and transition plans in light of the evolving climate science, in particular the development of more detailed 1.5°C scenarios driven by the Paris Agreement.

- A public commitment to support policies that aim to reduce emissions in line with the Paris Agreement, be transparent about lobbying activities and related expenditures and exit third-party organizations (e.g., business and trade associations) that promote policies that pose a risk to the Paris Agreement.

Given the urgency to tackle climate change, FIs should have an escalation process in place for when engagement does not lead to significant results within set time frames (6, 12, 24, 36 months), where a range of options are available to FIs: open letters, filing/supporting shareholder resolutions and voting at annual general meetings (AGMs), ending support to companies' efforts to raise capital (notably through corporate bonds), and ultimately divestment. Figure 7.1 gives a potential timeline for such an escalation process.

Figure 7.1: Escalation process in case of unsuccessful engagement

Note: AGM = Annual general meeting.
Source: WWF (2019).

7.2.2 Policy engagement

Regulations and government policies are key drivers of systemic change. The most climate-aware FIs should engage with policymakers to accelerate the adoption and implementation of climate-friendly policies.
Strengthening long-term investor involvement in the "rules of the game" that govern the financial system is a strategic area of interest: given the high urgency of the climate challenge, FIs should engage with policymakers in favor of the proper implementation of the Paris Agreement—as the best pathway to mitigate their climate-related risks, maximize their positive contribution to climate goals, protect the long-term value of their assets and invest in the best interest of members and beneficiaries.

FIs should engage with policymakers to ask for the following items:

- Climate and energy policies and regulations that drive a timely implementation of the Paris Agreement and its embedded climate targets.
- Adequate climate and wider ESG corporate disclosure policies and regulations to ensure that relevant climate and ESG data become available to investors—in particular by integrating the TCFD recommendations into national legislation, with an emphasis on forward-looking climate scenario analysis.
- Financial policies and regulations that drive better understanding of climate-related risks and opportunities for FIs, through the assessment of climate and wider ESG risks for investors and their mitigation, with the ultimate goal of portfolio alignment with the Paris Agreement.

7.2.3 Service provider engagement

FIs that understand climate-related financial risks and opportunities will find it necessary to address the need to align their investments with the Paris Agreement, together with their service providers. However, there are many reasons why the investment supply chain may not act in accordance with asset owners' interests on climate issues, including commercial conflicts of interests, time horizons and cultural norms. Therefore, asset owners need to closely monitor all their service providers, including their investment consultants, index providers, proxy voting advisors, sell side analysts and credit rating agencies, remuneration consultants and auditors.

In many cases, FIs rely on **investment consultants** to develop their investment strategies, climate strategies, select service providers (e.g., investment managers), etc. Therefore, investment consultants operate at a critical interface in the investment ecosystem, and FIs can push them to drive innovation within the financial community. The following actions are recommended for FIs:

- Ensure that investment consultants address climate-related risks and opportunities, adapting their core services accordingly, as well as demonstrating a robust track record that shows capacity to assess and address climate-related issues.
- Require investment consultants to advise so as to help them develop climate-related strategies (principles, policies, targets, processes and portfolio implementation) that will align investments with the Paris Agreement over time.
- Ask investment consultants to allocate dedicated time for interaction and discussion on long-term risks and opportunities—particularly related to climate change—and to adjust remuneration accordingly.
- Ask investment consultants to assess the climate-related performance of other service providers (notably investment managers) and suggest engagement approaches for accelerating their climate-related efforts.
- Publicly signal their climate-related requirements for investment consultants to urge them to act to avert a potential devaluation of their reputational capital.

Index providers (e.g., MSCI, FTSE, S&P, etc.) provide the investment community with a standard to quantify and understand the performance of markets and asset classes. Market capitalization-weighted indexes are replicated by passive investors and used as allocation guidelines for sector diversification by the majority of investors. Analysis indicates that

indexes usually reflect business-as-usual scenarios, where for instance high-carbon sectors (e.g., oil and gas) are overweighed in terms of achieving the Paris goal, and they lack a good indication of energy technology exposure. The measurement of relative risk is also related to these indexes, further limiting the possibility to allocate investments in line with climate goals, and away from the current unsustainable business-as-usual market (2dii, 2014). FIs should drive demand to index providers to tackle these shortcomings in the design of indexes. This issue is critical for passive investors that rely on indexes to define their default capital market exposures. The following actions are recommended for FIs:

- Require index providers to disclose how their existing products align with the Paris Agreement, using forward-looking climate scenario analysis.
- Require index providers to develop new products that reflect the performance of markets in a 1.5°C transition, to help asset owners benchmark their own investment portfolios against the Paris Agreement.
- Publicly signal their climate-related requirements for index providers to urge them to act to avert a potential devaluation of their reputational capital.

Proxy voting advisors (e.g., ISS, Glass Lewis, Manifest, etc.) consult with FIs to decide how to vote on matters that require shareholder approval at annual general meetings (and extraordinary general meetings) of their portfolio companies. As shareholder resolutions are a crucial tool for engagement with portfolio companies, it is important for FIs to interact with proxy voting advisors, with the objective of improving their climate-related advice. The following actions are recommended for FIs:

1. Ensure that proxy voting advisors address climate-related risks and opportunities and adapt their core services to align with the Paris Agreement.
2. Request their proxy voting advisors so that voting activities are wholly consistent with the climate objectives of the FI and support resolutions that call for the adoption of 1.5°C transition plans.
3. Publicly express their support for climate-related shareholder resolutions at portfolio companies.

7.3 Public disclosure of climate actions

FIs should publicly disclose their climate decisions and activities to increase impact. The SBTi criteria for FIs require that FIs annually disclose the actions or strategies that have been taken during the year to reach their science-based targets after target approval. The section below can help FIs frame their reporting to avenue(s) of their choice for the public disclosure of their climate action (e.g., annual report, stand-alone reports, communication on the website, press releases, social media, etc.).

Depending on the FI, public disclosure of climate actions should cover the adoption of climate-related policies for companies, the integration of the policy in mandates to investment managers and other service providers, a regular assessment of engagement impact, the filling of or support to relevant shareholder resolutions and divestment decisions if engagement is not deemed relevant or does not deliver within set time frames.

By signaling (i.e., making public) key climate-related decisions and activities, FIs will significantly amplify their impact. Given the climate urgency, the signaling effect is critical to raise the awareness of peer FIs, companies, service providers, policymakers and other stakeholders. It emphasizes the importance of the issue and helps to accelerate efforts from the abovementioned stakeholders.

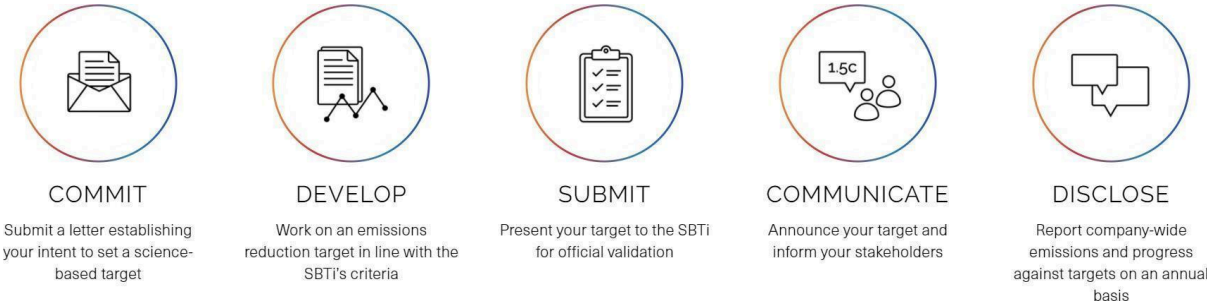
Signaling is particularly critical for a meaningful engagement strategy. FIs should disclose which companies they are engaging with and what their specific demands are and publish at regular intervals an assessment of the engagement impact. This will increase pressure on corporations and drive deeper and faster changes. The Climate Action 100+ initiative is a promising step toward such joint and public shareholder engagement—and an implicit recognition that bilateral engagement behind closed doors will not have enough impact to get high-carbon companies to shift their business model at the pace and scale required by the Paris Agreement.

FIs should also indicate the names of companies from which they have divested or decided not to invest in, following the example of FIs in countries like Denmark and Norway. For very liquid asset classes, such as public equity and corporate bonds, the rapid exchange of assets can quickly cancel out potential impact of divestment on oil and gas producers. Therefore, public signaling is critical for amplification.

8. THE SBTi CALL TO ACTION PROCESS: COMMIT, DEVELOP TARGET, VALIDATE, ANNOUNCE, DISCLOSE

This section outlines the five different steps for FIs to take in the SBTi Call to Action process, from publicly committing to the SBTi to having approved targets announced (See Figure 8.1).[55]

Figure 8.1: The SBTi call-to-action process



Source: SBTi (2020).

Step 1: Commit to set a science-based target

How to commit

FIs that wish to commit to set a science-based target should register online and submit the commitment letter. Signing the commitment letter indicates that your institution will work to set a science-based emissions reduction target aligned with the SBTi's criteria for FIs.

Benefits of committing

Signing the commitment letter indicates the FI will work to set a science-based emissions reduction target aligned with the SBTi's target-setting criteria for FIs. If the FI already set its own targets, the letter confirms the FI's interest in having its existing targets verified against a set of criteria developed by the SBTi or developing new targets that will align with these criteria.

After an FI submits its commitment letter, it will be recognized as "Committed" on the SBTi Target Dashboard, as well as the WMBC and CDP websites. Companies that are engaging in the UN Global Compact will also be recognized on their website. The list of committed companies is updated every week. Companies that have committed will receive a "Communications Welcome Pack" with more information on how to communicate their commitment.

[55] Please see https://sciencebasedtargets.org/step-by-step-process for more details.

Step 2: Develop a target

Starting from January 31, 2023, FIs will have up to 24 months to complete the following steps once they sign the commitment letters:

1. Develop science-based targets aligned with the SBTi criteria for FIs.
2. Submit the targets to the SBTi for an official validation by booking a target validation slot via the SBTi booking system and uploading a completed target submission form.

During this period, the commitment will be listed on the SBTi Target Dashboard as "active." A company's commitment is fulfilled when the company submits a target within the commitment time frame and, after completion of the validation process, has a target that complies with the latest SBTi criteria and guidance and is published on the SBTi website. We encourage FIs to start this process and submit their targets for validation as early as possible. If an FI fails to complete all the above outlined steps by the end of the 24 months, it will be assigned a status of "removed commitment" on the SBTi Target Dashboard, downloadable data, and other channels as appropriate. Companies with a "removed commitment" status will be changed to "target set" upon successful validation of their targets. While companies with a removed commitment are not permitted to commit to the same status again, they are still welcome and strongly encouraged to continue to submit targets for validation.

The SBTi will not grant extensions beyond the 24 months' timeline because FIs can submit targets for validation and be added to the website with the status "targets set" independent of their commitment status. Please refer to the Commitment Compliance Policy for more information. Targets have to be in line with the criteria for FIs for qualifying targets as "science-based." The SBTi has developed a suite of tools and guidance to help FIs understand how to meet these criteria.

Step 3: Submit the targets for a validation

How company information is treated

The SBTi safeguards the confidentiality of all information provided by the FI to assess its targets. This means that information provided will be used in accordance with the target validation service contract that FIs are asked to sign before target assessments commence.[56]

Paid target validation service

The SBTi has implemented a paid service for target validations since 2019. This enables the initiative to provide a faster target validation process and additional feedback to companies. As of February 2022, FIs are also required to use the paid validation service. Find out more about the SBTi target validation service here.

A validation team consisting of a lead reviewer (LR) and an appointed approver (AA) is assigned for each target submission. The LR performs the desk review of the submission,

[56] SBTi no longer accommodates requests for signing of Non-Disclosure Agreements (NDAs) as they can take up to six months to complete. The target validation contract should be sufficient to serve confidentiality purposes.

prepares the deliverables (target validation report and certificate, if approved), organizes a feedback call if necessary and acts as the point of contact between the company and the SBTi throughout the validation process. The AA acts as a peer reviewer on the completed desk review. The LR will be the main point of contact between the company and the SBTi. In cases where the company is re-submitting targets, the same validation team is assigned whenever possible to ensure continuity.

Target submission form for FIs

FIs that wish to submit targets for validation should download the latest Target Submission Form for FIs and fill it out as clearly, completely and accurately as possible. It is highly recommended that FIs consult the submission form guidance available within the document to complete the form, including the guidance on target language and summary of actions to achieve targets, before filling out the form. Additional documents should be attached only if they are directly related to the information requested.[57]

On the SBTi Target Submission Form for FIs, FIs are required to fill out the Portfolio Target Boundary Table with all of their assets, lending and investments (including assets managed by or on behalf of third parties) as of the selected base year. For example, asset managers will need to provide a breakdown of assets administered under advisory and/or execution-only mandates even if targets are not required. According to criteria FI-R5, the base year should be the most recent year for which data is available. Divested assets (since the base year) will need to be listed but can be considered as out of scope. FIs must reference the corresponding year of the information and the metric used for the value column (e.g., invested capital, assets under management, total assets, etc.) as per the example further below. The figures in the table should be in the same currency as the FI's financial reports; if they are in a different currency, figures in the reported currency must also be provided.

FIs must also attach documents and/or provide links to public references (e.g. financial statements) so that the information provided on the Portfolio Target Boundary Table can be reconciled to consolidated balance sheet totals and/or assets under management. Any discrepancies between the Portfolio Target Boundary Table and the supporting documents must be thoroughly described in the submission form.

Table 8.1: Example of portfolio target boundary table in target submission form for FIs

Asset Class	Activities	Value (e.g. $bn)	% total lending and investment	Mandatory	Included (covered by target?)	% Activity covered	Target-Setting Method	Description & Rationale for % coverage / exclusion
Consumer loans	Residential mortgages	2,442	9%	Optional	Yes	50.0%	SDA	Optional activity

[57] FIs should reference the specific page numbers, figures or text that is being referred to in accompanying documents. Missing, unclear or erroneous information will result in the validation process being delayed.

	Motor vehicle loans	0	0%	No	No	0.0%	N/A	Out of scope of SBTi framework
	Other consumer loans	235	1%	No	No	0.0%	N/A	Out of scope of SBTi framework
Project finance	Electricity generation project finance	567	2%	Yes	Yes	100.0%	SDA	
	Fossil fuel project finance	0	0%	Yes	No	0.0%	N/A	We are not involved in this activity
	Real estate project finance	0	0%	Optional	No	0.0%	N/A	We are not involved in this activity
	Other project finance	148	1%	No	No	0.0%	N/A	Out of scope of SBTi framework
Corporate loans	Electricity generation sector	340	1%	Yes	Yes	100.0%	SDA	
	Fossil fuel sector	55	0%	Yes	Yes	100.0%	TR	
	ABC sector	2,340	8%	Yes	Yes	70.0%	SDA	Combined coverage % meets 67% minimum coverage requirement
	JKL sector	459	2%	Yes	Yes	40.0%	SDA	
	XYZ sector	23	0%	Yes	Yes	50.0%	SDA	
	Long-term loans to other sectors	2,452	9%	Yes	Yes	100.0%	PC	
	Short-term loans	302	1%	Optional	No	0.0%	N/A	Optional activity
	SME loans	249	1%	Optional	No	0.0%	N/A	Optional activity
	Government loans	0	0%	No	No	0.0%	N/A	Out of scope of SBTi framework
Listed equity and bonds	Listed equity	3,508	13%	Yes	Yes	100.0%	TR	
	Corporate bonds	2,984	11%	Yes	Yes	100.0%	TR	

	Government bonds	2,359	9%	No	No	0.0%	N/A	Out of scope of SBTi framework
	Asset-backed securities	345	1%	Optional	No	0.0%	N/A	Optional activity
Private equity and debt	PE that meets PE Guidance coverage conditions	580	2%	Yes	Yes	100.0%	PC	
	PE that doesn't meet PE Guidance coverage conditions	202	1%	Optional	No	0.0%	N/A	Optional activity
	Private debt	230	1%	Optional	Yes	100.0%	PC	
	PE secondaries / fund of funds	0	0%	Optional	No	0.0%	N/A	Optional activity
Real estate	Commercial real estate asset loan	340	1%	Yes	Yes	67.0%	SDA	
	Investment in real estate assets	633	2%	Yes	Yes	67.0%	SDA	
Assets managed under discretionary mandates	Listed equity and corporate bonds	4,092	15%	Yes	Yes	100.0%	TR	
	Private debt	194	1%	Optional	Yes	100.0%	PC	
	Government bonds	28	0%	No	No	0.0%	N/A	Out of scope of SBTi framework
Assets administered under advisory mandates	Listed equity and corporate bonds	185	1%	Optional	No	0.0%	N/A	Optional activity
	Private debt	295	1%	Optional	Yes	100.0%	PC	
	Investment via fund of fund	184	1%	Optional	No	0.0%	N/A	Optional activity
	Government bonds	234	1%	No	No	0.0%	N/A	Out of scope of SBTi framework

Assets under execution-only mandates		*837*	*3%*	*No*	*No*	*0.0%*	*N/A*	*Out of scope of SBTi framework*
Assets under custody		*428*	*2%*	*No*	*No*	*0.0%*	*N/A*	*Out of scope of SBTi framework*
Other	*Cash*	*234*	*1%*	*No*	*No*	*0.0%*	*N/A*	*Out of scope of SBTi framework*
	Derivatives	*59*	*0%*	*No*	*No*	*0.0%*	*N/A*	*Out of scope of SBTi framework*
	XYZ	*13*	*0%*	*No*	*No*	*0.0%*	*N/A*	*Out of scope of SBTi framework*
Total		***27,576***	***100%***		*% coverage portfolio target boundary*	***69%***		

Reconciliation			
	Balance sheet total	*27,576*	*Enter #*
	Reconciled?	***0***	*If 0, then yes*

Required	***66.6%***
Optional	***16.8%***
Out of scope	***16.6%***
Total	*100%*

Source: Authors (2024).

It is the FI's responsibility to ensure the integrity of the information provided. Once the form is completed, FIs should send it, together with any supporting documents, through the SBTi booking system. Once targets are submitted to the SBTi, the TVT will assess the targets submitted in accordance with the SBTi FI Near-Term Criteria.

Step 4: Announce the targets

Once targets are approved by the SBTi, the FI will receive an approval email with a validation decision. A target publication date will be chosen and suggested to the FI. If the FI would like to request a different publication date, it can coordinate with the SBTi communication team included in the decision email. FIs must publish their targets on the SBTi website within six months from the approval date or must have their targets revalidated by the SBTi to ensure the targets still meet relevant criteria. A "Welcome Pack" will be sent to the FI, which outlines how the targets can be showcased or communicated, how the SBTi logo may be used and how the SBTi approval may be referenced. FIs must use the same target language in their

own communications as on the SBTi website but are welcome to add additional details in their own communications. Disclaimers in the target language published on the SBTi website can include links to only the FI's website or its own publications. Once timing is agreed upon, the FI will be listed as having a validated target on the SBTi Target Dashboard.

Step 5: Target disclosure

Following approval, FIs shall disclose their scope 1 and 2 GHG emissions, progress against all approved targets in the relevant metric[58] and actions/strategies taken during the year to meet scope 3 portfolio targets on an annual basis. FIs are also strongly recommended to annually disclose a full GHG emissions inventory for their portfolios, covering all activities for which a GHG accounting method is available at the time of target submission. Recommendations for reporting include annual reports, sustainability reports, the FI's website and disclosure through CDP.

[58] See Section 6.1 on guidance to disclose progress against targets.

APPENDICES

This document includes six appendices describing the application of the SDA method for real estate, electricity generation project finance and corporate instruments, the Temperature Rating method, the SBTi tool to apply the Temperature Rating method and acknowledgments.

Appendix A. SDA for real estate

Some of the data and examples found in this appendix are based on a global sectoral decarbonization pathway in line with keeping global warming to well-below 2°C, which was the minimum ambition level required in the Version 1.1 criteria. Although the minimum target ambition level for SDA targets has been increased to 1.5°C in the Version 2.0 criteria, this appendix has been kept for general illustrative purposes. Separately, the minimum target ambition level for real estate portfolios is currently set using global decarbonization pathways, though a new SBTi Buildings Sector Guidance is being developed to use the CRREM-SBTi sectoral decarbonization pathways, which are in line with keeping global warming to 1.5°C.

Prepared by technical partner of the SBTi financial sector project, Guidehouse, Inc.

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March 2021

Table A1: Summary of the SDA for real estate

Category		Framework
Scope	Target audience	The target audience for this target-setting framework are FIs with portfolios of real estate loans and investments.
	Asset class	Real estate loans and investments (including REITs).
	Sectors	Targets are set on portfolio emissions for service and residential buildings. For a target to qualify, it has to be set for a minimum share of the real estate portfolio emissions, as defined in the SBTi FI Near-Term Criteria.
Mechanics	Inputs – data	Annual emissions data can be sourced and estimated from direct disclosure of buildings' energy-related emissions or energy performance, or public database on buildings emissions, energy performance and energy consumption of tenants. When using buildings' and tenants' energy performance data, emissions factors are required to convert energy (i.e., for heat and electricity) use into emissions. The forthcoming Buildings Sector Guidance abides by the "whole building approach," ensuring that a building's complete operational energy consumption from landlord- and tenant-controlled spaces are included within a user's target boundary (irrespective of whether they

		are the landlord, tenant, finance provider or other relevant buildings value chain player).
	Inputs – pathways	The minimum ambition of targets on a real estate portfolio is currently set using global decarbonization pathways, though a new SBTi Buildings Sector Guidance is being developed to use the CRREM-SBTi sectoral decarbonization pathways, which are in line with keeping global warming to 1.5°C. FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.
	Attribution approach	Emissions associated with real estate loans and investments should be attributed proportionally to the FIs based on the ratio between the outstanding amount versus the total property value at time of origination.[a] When CRE is fully financed by an asset owner, 100% of the building's emissions are attributed to the asset owner. When CRE is jointly financed by a group of asset owners, the attribution is based on the share invested by each asset owner.[a]
	Outputs	The output will be an emission intensity target (per gross floor area) at the portfolio level. Example: FI A commits to reduce its real estate portfolio GHG emissions intensity XX% per square meter by 2030 from a 2020 base year.

Note:
[a] PCAF (2020).
Source: Guidehouse (2020).

Scope

This methodology covers science-based targets for the portfolios of FIs consisting of real estate loans and investments as well as residential mortgages (consumer loans). A mortgage is defined as any lending agreement to purchase a building in exchange for a regular repayment at interest, which the lender is entitled to with the condition that the loan becomes void upon the payment of the debt. As mortgages are **mainly applied for the purchase of a residential building**, the scope of the methodology is on residential buildings, defined as buildings for a single-family or multifamily that are used primarily for human dwelling (i.e., apartments and houses) (IEA, 2013). Meanwhile, real estate loans and investments are defined as the allocation of capital to finance the purchase of a property with a commercial purpose, including REIT, etc. **Both residential and service buildings under real estate loans and investments are included in this methodology**. Residential buildings refer to private dwellings such as apartments and houses, whereas service buildings include properties related to trade, finance, retail, public administration, health, food and lodging, education and commercial services (IEA, 2013).

This methodology presents a sector-based approach to set a science-based target for scope 3, category 15 (investment) emissions for FIs. When accounting for the financed emissions of real estate loan and investment or mortgage portfolios, these emissions are based on the

energy-related emissions of the buildings, and the energy consumptions of the tenants (often accounted under scope 3):

- Direct emissions from on-site fuel combustion for space heating, water heating, cooking purposes in the full building.
- Indirect emissions from purchased energy (electricity, steam, heat and cooling) for space heating, water heating, space cooling, lighting, cooking, appliances and miscellaneous equipment. These indirect emissions include energy use by tenants.
- Future application of the whole building approach requires fugitive emissions, from all building types, to be accounted for within companies' in-use operational emissions and as part of their target boundary. Where data is not collected on fugitive emissions, companies must use an estimate and disclose their estimation methodology (see the forthcoming Buildings Sector Guidance for more details).

Embodied emissions refer to the GHG emissions associated with materials and construction processes throughout the whole life cycle of a building. Although embodied emissions have historically lacked global sectoral decarbonization pathways, it is recognized that as new buildings become more energy efficient, these emissions could become a sizable portion of buildings' life-cycle emissions (e.g., emissions from materials and construction could range from 35-51% depending on the building type) (RICS, 2017). With the forthcoming publication of the Buildings Sector Guidance, the SBTi is increasing the emphasis on management and decarbonization of embodied emissions, allowing science-based targets to be set on embodied emissions for a larger number of companies and FIs.

For setting targets on commercial real estate assets and mortgage portfolios, the SBTi requires the SDA.

Mechanics

Data input

The first step of the science-based target-setting process is defining the base-year emissions intensity (kg CO_2/m^2) of the commercial real estate or residential mortgage portfolio for which a target will be set. The PCAF provides GHG accounting methodology for various asset classes, including commercial real estate and residential mortgages. When direct disclosure of buildings' energy-related emissions and tenants' energy-related emissions are not available, emissions should be calculated based on (average) asset level and average tenants' energy use and emission factors (PCAF, 2020). In principle, setting science-based targets for real estate portfolios requires the following data points:

- Data to estimate buildings' direct energy-related emissions (i.e., energy performance certificates or labeling, or average/estimated building energy consumption linked to on-site fuel combustion).
- Data to estimate buildings' indirect energy-related emissions (i.e., energy performance certificates or labeling, or average/estimated energy consumption linked to purchased electricity, steam, heat and cooling, including the energy consumption of the tenants).
- Outstanding loan or investment amount of properties.

- Property values at the time of investment.
- Building type (i.e., residential or service).
- Floor area[59] of current properties.
- Portfolio growth rate in target year (optional).

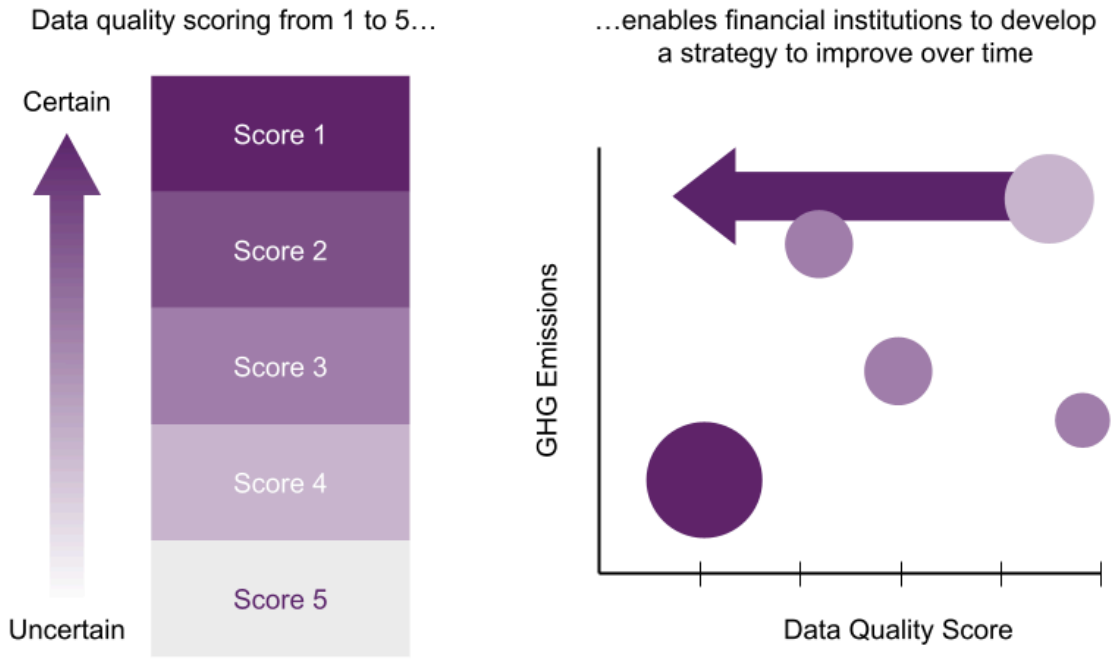
When there is no disclosure of building's energy-related emissions by, for instance, the tenant or property manager, there are two approaches to estimate these emissions for establishing the baseline:

1. **Based on buildings' energy performance (asset-level data).** Annual energy consumption of buildings and tenants can be sourced from energy bills collected from tenants when FIs have implemented such data collection systems. Alternatively, annual energy consumption can be estimated based on energy performance certificates or labeling, a mandatory disclosure that is in place in some countries. Floor area data can be found as part of the legal document and property registration of the real estate.
2. **Public database on average buildings' energy performance.** There are also some sources available to estimate the energy consumption in the case of limited data availability. Average building energy efficiency in the region is available in publicly available databases such as (i) the Global Services Real Estate Sustainability Benchmark (GRESB) (global service buildings, but subscription is required), (ii) EU Buildings Database (service and residential buildings in Europe), (iii) EIA Residential Energy Consumption Survey (residential buildings in the United States) and (iv) EIA Commercial Buildings Energy Consumption Survey data but does not reflect performance specific to the portfolios nor improvement over time.

Measuring financed emissions of the commercial real estate or mortgage portfolio to set the baseline should rely on asset-level data as much as possible, filling in any data gaps with regional proxies. While data availability varies across regions, FIs can assess the specificity and accuracy of available data using a data hierarchy (see, for example, Figure A1) and explore ways to improve data quality over time. For example, one may focus on moving from sector average data to building-specific energy-use data by refining the due diligence or loan application process in countries with the most real estate exposure. Any significant changes to the portfolio emissions should result in recalculation of the target baseline as defined in the SBTi FI Near-Term Criteria.

[59] Floor area here refers to the total building area (gross floor area) as defined in IEA's Energy Technology Perspectives 2017 (IEA, 2017). FIs could possibly apply a different definition of floor area as long as it is consistent with the scenarios used to derive the decarbonization pathway(s).

Figure A1: Generic data quality scorecard for portfolio emissions[60]



Sources: PCAF (2019b, 2019c, 2020).

To translate the emission intensity targets into an absolute target, FIs have to project the annual percentage of the activity growth of their portfolio (Compound Annual Growth Rate [CAGR]) toward the target year (i.e., preferably measured in m^2, kWh, ton of products). FIs can project this in three ways:

1. By using the activity growth projection in the climate scenario (default growth projection). For instance, for residential buildings, this is 2.16% annually in m^2 gross floor area from 2020 toward 2030, and for service buildings this is 2.15% annually in m^2 gross floor area from 2020 toward 2030 (see Table A2 and Table A3).
2. By using the growth of their portfolio over the past 5-10 years.
3. By using the growth projections of the specific business departments and extrapolating this toward the target years (if this growth projection is too short term).

Decarbonization pathway

By applying the SDA, the final emission targets (expressed in emissions intensity per m^2 or in absolute emissions for the real estate or mortgage portfolio) have to be consistent with keeping global warming to 1.5°C.

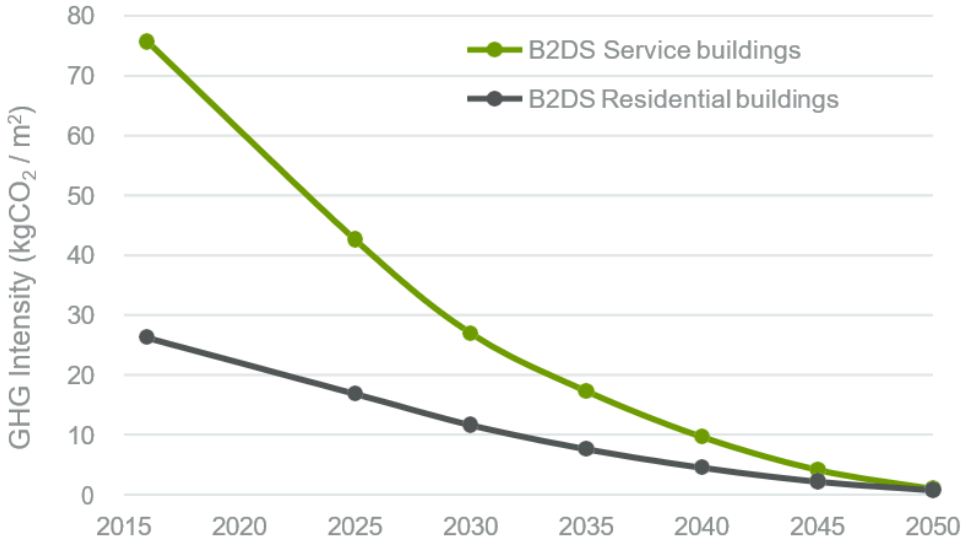
The IEA models the building sector into subsectors (residential and services buildings) based on sectoral growth and technology development trajectory. Figure A2 illustrates the Beyond 2°C Scenario (B2DS) emissions intensity pathways for residential and service buildings. The emissions trajectory of a commercial real estate or mortgage portfolio shall continuously

[60] For a commercial real estate specific score card, refer to the PCAF's Global GHG Accounting and Reporting Standard (PCAF, 2020)

decline from the base year toward the target level, even if the emissions are below the pathway benchmark. The calculation method for the portfolio emission intensity pathway is explained further in the instructions for implementation later in this Appendix. Note that IEA only provides the data of ETP pathways in a five-year interval; thus, FIs may derive the pathway data through interpolation if the target year falls in between these five-year intervals. Also see Table A2 and Table A3 for the data of the global ETP B2DS pathways.

In addition, building emissions often vary across regions due to differences in emissions trajectory, climatic zone, existing building performance and stock, urban planning and development, etc. Therefore, FIs may use regional emission pathways to assess their targets. Targets modeled using regional emission pathways will be assessed against global pathways until the forthcoming Buildings Sector Guidance is published.

Figure A2: Global decarbonization pathway for buildings



Note: B2DS = Beyond 2°C Scenario.
Source: IEA (2017).

Attribution approach

This methodology attributes emissions associated with commercial real estate loan and investments proportionally based on the ratio between the outstanding loan or investment amount versus the total property value at the time of loan or investment origination. When the commercial real estate investment is fully financed by an asset owner, 100% of the building's emissions are attributed to the asset owner. When the investment is jointly financed by a group of asset owners, the attribution is based on the share invested by each asset owner.

Meanwhile, this methodology proposes to attribute the building's annual emissions to the mortgage provider using a loan-to-value approach. Thus, the attribution is equal to the ratio of the outstanding amount at the time of GHG accounting to the property value at loan

origination. Using a fixed property value at loan origination avoids changes in attributed emissions performances due to fluctuating property values.

These approaches are consistent with the GHG accounting method for real estate and mortgages developed by the PCAF (2019b, 2019c, 2020). To align with the IEA decarbonization pathway for the building sector, this methodology requires using the same attribution to the gross floor area of the buildings in the real estate or mortgage portfolio in order to derive the emissions intensity metric (e.g., tCO_2/m^2).

Outputs

The output will be an emissions intensity target (per m^2 floor area) at the commercial real estate or mortgage portfolio level, split between residential and service buildings if relevant to FIs. FIs can decide to translate this emissions intensity target into an absolute target by taking into account the growth projection in m^2 floor area of their real estate portfolio toward the target year.

The target language template is: *[FI name] commits to reduce its real estate [investment / loan] portfolio GHG emissions [XX]% per square meter by [target year] from a [20xx] base year.*

Separately, FIs that meet certain conditions laid out in FI-C17.1 may set an emissions intensity maintenance target up to 2030 for an investment/lending portfolio of real estate assets. This maintenance target aims to accommodate FIs that have already achieved, at a portfolio level, the emissions intensity required to align with the 2030 sector intensity level in a 1.5°C pathway. It is meant to encourage FIs to maintain the enabling role they play in decarbonizing the real estate sector toward net-zero by only financing 1.5°C-aligned real estate assets. Nevertheless, the SBTi strongly encourages these FIs to further reduce their portfolio's emissions intensity. Additional follow-on targets must be aligned with the upcoming SBTi FINZ Standard to ensure that all post-2030 targets are compatible with net-zero pathways. Please see Table 5.1 for target language examples.

The target language template is: *[FI name] commits to maintain the GHG emissions intensity of its real estate investment/loan portfolio at or below [the base-year emissions intensity] $kgCO_2e/m2$ from [base year] through 2030 and finance only 1.5°C-aligned real estate assets.*

Instructions for implementation

Calculating the base year absolute emissions

The first step is to calculate the annual GHG emissions of the commercial real estate or mortgage portfolio in the base year. Specifically, this involves the following steps:

1. Collecting or estimating the annual energy consumption of buildings (including the energy consumption of the tenants) for which the FI seeks to set a target, if relevant, split between residential and service buildings in the portfolio.

2. Calculating the base year scope 1 and 2 emissions and scope 3 tenant's energy-related emissions per building using fuel- and energy-specific emissions factors, such as those provided by the IEA or national energy agencies.
3. Attributing the annual scope 1 and 2 and scope 3 tenant's energy-related emissions per building based on the ratio between the outstanding amount versus the total property value at time of origination.
4. Summing up all scope 1 and 2 and scope 3 tenant's energy-related emissions per building to derive the total annual absolute emissions of buildings in the real estate portfolio.

Base year absolute emissions should be assessed at a fixed point in time in line with the financial reporting cycle.

Calculating the base year emissions intensity

Translating the emissions in the base year into an emissions intensity at portfolio level involves the following steps:

1. Collecting the gross floor area of buildings (in m^2) for which the FI seeks to set a target, which, if relevant, is split between residential and service buildings in the portfolio.
2. Attributing the gross floor area per building (in m^2) based on the ratio between the outstanding amount versus the total property value at time of origination.
3. Summing up the attributed gross floor area per building to derive total gross floor area at portfolio level.
4. Dividing the total annual absolute emissions at portfolio level by the total gross floor area at portfolio level.

Defining the science-based target

Science-based targets on real estate investments and mortgages shall be set at the real estate portfolio level, in alignment with the relevant decarbonization pathway. Based on the SDA approach, the current emissions intensity of a real estate portfolio shall converge to the same level as the sectoral decarbonization pathway by 2050. FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.

The emission intensity target is defined as a decrease in emissions per floor area (tCO_2/m^2). The minimum level of emission intensity decrease is derived from the relevant sectoral decarbonization pathway. A Buildings Target-Setting tool (see Table 5.3) will be available for modeling SDA real estate targets. The tool presents two options for projecting target year output in square meter:

- Fixed market share, which assumes that the portfolio grows at the same rate as the sector. This option is suitable for FIs who have difficulties projecting their portfolio growth.

- Target year output. This option enables FIs to input their own projected output in the target year in square meters.

Specifically, the following formula is used to calculate the emission intensity target for a commercial real estate or mortgage portfolio when (1) the FI selected the "Fixed market share" option or (2) the FI selects the "Target year output" option **and** the projected growth of the real estate portfolio (measured in growth of floor area) toward the target year is **lower or equal** to the sectoral growth as predicted by the IEA:

$$Intensity\ target_{real\ estate} = PI_{b,i} - SI_{2050,i} \times \frac{SI_{t,i} - SI_{2050,i}}{\left(SI_{b,i} - SI_{2050,i}\right)} + SI_{2050,i}$$

Where:

- SI and PI are the sectoral and portfolio emissions per floor area.
- i is the subsector for buildings (i.e. residential or service).
- b is the base year.
- t is the target year.

For portfolios growing at a rate lower than the sector growth as predicted by the IEA, the market share factor included in the original SDA formula published in *Nature Climate Change* (Krabbe et al., 2015) is removed to prevent results that would lead to increase in emissions intensity in the accompanying target-setting tool.

When the FI selects the "Target year output" option **and** projects a growth (measured in growth of floor area) that's higher than the sectoral growth, the following formula applies. This formula is the same as the original SDA formula published in *Nature Climate Change* (Krabbe et al., 2015):

$$Portfolio\ intensity\ target_{real\ estate} = PI_{b,i} - SI_{2050,i} \times \frac{SI_{t,i} - SI_{2050,i}}{\left(SI_{b,i} - SI_{2050,i}\right)} \times \frac{PA_{b,i}/SA_{b,i}}{(PA_{t,i}/SA_{t,i})} + SI_{2050,i}$$

Where:

- SI and PI are the sectoral and portfolio emissions per floor area.
- SA and PA are the sectoral and portfolio total floor area.
- i is the subsector for buildings (i.e. residential or service).
- b is the base year.
- t is the target year.

Portfolios growing at a rate higher than the sector rate are subject to a stricter intensity reduction pathway to discount the growth in market share.

This approach allows FIs to converge their emissions intensity for the real estate portfolio to the sectoral pathway in 2050, taking into account its base-year performance relative to sector intensity in 2050, and the decarbonization level of the sector in the target year. Box A1 shows an example calculation of an intensity target.

Box A1: Example on setting an intensity target for a real estate portfolio

Assume an FI has a global commercial real estate portfolio of various service buildings. Based on energy consumption, building certificates or other data, the emissions of these buildings are assessed. Taking the attribution factor per building into account, the emission intensity of the portfolio is 117 $kgCO_2/m^2$ for the total floor area of 2.4 million m^2 in 2017. The projected annual portfolio growth rate toward 2030 is 2% (CAGR), which is lower than the sectoral growth rate.

Based on the IEA ETP B2DS, the global decarbonization pathway for service buildings has the following approximate emissions:

a. 71 $kgCO_2/m^2$ at 47,404 million m^2, in 2017
b. 27 $kgCO_2/m^2$ at 62,760 million m^2 2030
c. 1 $kgCO_2/m^2$ at 81,039 million m^2 2050

To set an intensity target for 2030 converging to the 2050 sector level:

$$Intensity\ target\ =\ PI_{b,i}\ -\ SI_{2050,i} \times \frac{SI_{t,i} - SI_{2050,i}}{\left(SI_{b,i} - SI_{2050,i}\right)} +\ SI_{2050,i}$$

$$Intensity\ target\ = (117\ -\ 1) \times \frac{27-1}{(71-1)} + 1$$

$$Intensity\ target\ =\ 44\ kgCO_2/m^2$$

Since this portfolio started with an emission intensity higher than the sector level in 2017, this approach allows the portfolio to stay at an intensity higher than the sectoral pathway to reduce its emissions at a faster pace, converging to the sectoral level by 2050.

Taking the annual growth projections of 2% toward 2030, the commercial real estate portfolio will correspond to a total floor area of 3.1 million m^2 in 2030. The emissions intensity targets can be translated into an absolute emissions target of 136.6 kton CO_2 in 2030.

Note: CAGR = Compound Annual Growth Rate.
Source: Guidehouse (2020).

IEA ETP 2017 B2DS pathways – real estate

The following tables provide the global emissions intensities and the global gross floor area pathways based on the IEA ETP 2017 data.

Table A2: Emissions intensity

($kgCO_2/m^2$)

Region	Subsector	2016[a]	2025	2030	2035	2040	2045	2050
WORLD	Service Buildings	75.64	42.56	26.97	17.33	9.71	4.21	1.00
WORLD	Residential Building	26.30	16.92	11.71	7.69	4.60	2.26	0.81

[a] *The 2016 data points are estimated based on the 2014 and 2025 data points provided by IEA, assuming linear interpolation between the years.*

Source: IEA (2017).

Table A3: Gross floor area

(Million, m^2)

Region	Subsector	2016[a]	2025	2030	2035	2040	2045	2050
WORLD	Service Buildings	46,292	56,296	62,760	66,901	71,316	76,022	81,039
WORLD	Residential Building	189,288	230,454	257,077	275,529	295,306	316,502	339,220

[a] The 2016 data points are estimated based on the 2014 and 2025 data points provided by IEA, assuming linear interpolation between the years.

Source: IEA (2017).

Appendix B. SDA electricity generation project finance

Some of the data and examples found in this appendix are based on a global sectoral decarbonization pathway in line with keeping global warming to well-below 2°C, which was the minimum ambition level required in Version 1.1 criteria. Although the minimum target ambition level for SDA targets has been increased to 1.5°C in the Version 2.0 criteria, this appendix has been kept for general illustrative purposes.

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November 2020

Table B1: Summary of the SDA for electricity generation project finance

Category		Framework
Scope	Target audience	The target audience for this target-setting framework are FIs with project finance portfolios in the power sector.
	Asset class	Project finance for electricity generation.
	Sectors	Targets are set on portfolio emissions for project finance for the power sector. For a target to qualify, it has to be set for a minimum share of the financed emissions from the portfolio of electricity generation project finance, as defined in the SBTi FI Near-Term Criteria.
Mechanics	Inputs – data	Annual emissions data can be sourced and estimated from direct disclosure of projects' GHG emissions or fuel use, or public database on average emissions factors for power generation.
	Inputs – pathways	Science-based targets are derived from a global sectoral decarbonization pathway in line with keeping global warming to 1.5°C.

		FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.
	Attribution approach	The FI accounts for a portion of the annual emissions of the financed project determined by the ratio between the institution's outstanding amount (numerator) and the total equity and debt of the financed project (denominator).[a]
	Outputs	The output will be an emission intensity target (gCO_2/kWh) at the portfolio level. Example: FI A commits to reduce its electricity generation project finance portfolio GHG emissions XX% per kWh by 2030 from a 2020 base year.

Note:
[a] PCAF (2020).
Source: Guidehouse (2020).

Scope

This methodology covers science-based targets for the financial portfolios of FIs consisting of project finance for electricity generation. Project finance is defined as equity or loan (including mezzanine debt) with known use of proceeds that are designated for a clearly defined activity or set of activities, that is, the construction and operations of a project to generate electricity.

The scope of the methodology covers projects contributing to electricity generation from fuels such as oil, coal, natural gas, nuclear, biomass and waste, hydro, geothermal, wind, solar photovoltaics (PV) and concentrate solar power (CSP), ocean, hydrogen and other (IEA, 2017). Treatment of investments leading to negative emissions from the power sector, such as bioenergy with carbon capture and storage (BECCS) and carbon capture and storage (CCS), are currently out of scope. This topic will be revisited once the GHGP removal guidance is developed and as part of the SBTi's net-zero target discussion.

Project finance for other types of projects (other than in the fossil fuel and real estate sector) are currently out of scope in this methodology and will be considered in the future.

This methodology details how to align emissions of the underlying projects in the power sector with a zero-carbon transformation pathway toward 1.5°C. It applies the decarbonization pathway of power generation to the portfolio of underlying projects and is applicable to pathways from any transition scenarios available in the market.[61]

The emissions subject to target setting are scope 1 and 2 emissions from the underlying projects:

- Scope 1: Direct emissions from on-site fuel combustion for electricity generation.
- Scope 2: Indirect emissions from project's own use of purchased steam, heat and electricity for electricity generation, if any.

[61] For example, the Energy Technology Perspectives (ETP) and World Energy Outlook (WEO) by the International Energy Agency (IEA), International Renewable Energy Agency (IRENA) Remap, Greenpeace Advanced Energy [R]evolution, etc. (TCFD, 2017).

Note that Scope 3 emissions (such as embodied carbon in materials and emissions from waste) are not included in this methodology due to high data uncertainty. When robust approaches and data to measure scope 3 emissions of these projects are well developed, the target setting for electricity generation portfolios could expand its coverage to include scope 3 emissions.

Published WB2C alignment methodologies for project finance are currently spread across research on different project types. Some existing work focuses on the necessary capacity for certain technologies and the required amount of investment per sectors for the alignment. For setting targets on an electricity generation project finance portfolio, the SBTi endorses the SDA. The SDA was developed by CDP, WRI, and WWF, in partnership with their technical partner, Guidehouse. In the SDA, emissions reduction targets are assessed based on sectoral emissions reduction pathways, using the absolute emissions and activity data projection from IEA ETP. In the SDA, a decarbonization pathway for the power sector is included (IEA, 2017). In June 2020, the SBTi, with technical support from Guidehouse, published a quick start guide for electric utilities to set 1.5°C-aligned science-based targets using the SDA (SBTi, 2020).

Mechanics

Data input

The first step of the science-based target-setting process is defining the baseline emissions of the portfolio of electricity generation projects for which a target will be set. PCAF's Global GHG Accounting and Reporting Standard provides GHG accounting methods for various asset classes, including project finance. According to the Standard, projects' emissions should be calculated based on asset-level energy use and emission factors. These emissions are attributed to the FI by the ratio between the institution's outstanding amount (numerator) and the total equity and debt of the financed project (denominator) (PCAF, 2020).

In principle, setting science-based targets for electricity generation project finance portfolios requires the following data points:

- Scope 1 emissions from electricity generation projects.
- Scope 2 emissions from electricity generation projects.
- Outstanding loan or investment per project.
- Total project size per project (equity, debt and mezzanine).
- (Estimated) annual electricity production per project (kWh).
- (Estimated) future electricity production of portfolio (kWh) or portfolio growth target (percentage) toward the target year (optional).

There are two approaches to sourcing data to measure emissions:

1. Disclosure of projects' energy use or GHG emissions. Fuel type, annual electricity generation (e.g., MWh), annual GHG emissions, installed capacity (e.g., MW) or operating hours of electricity generation projects are often included in project

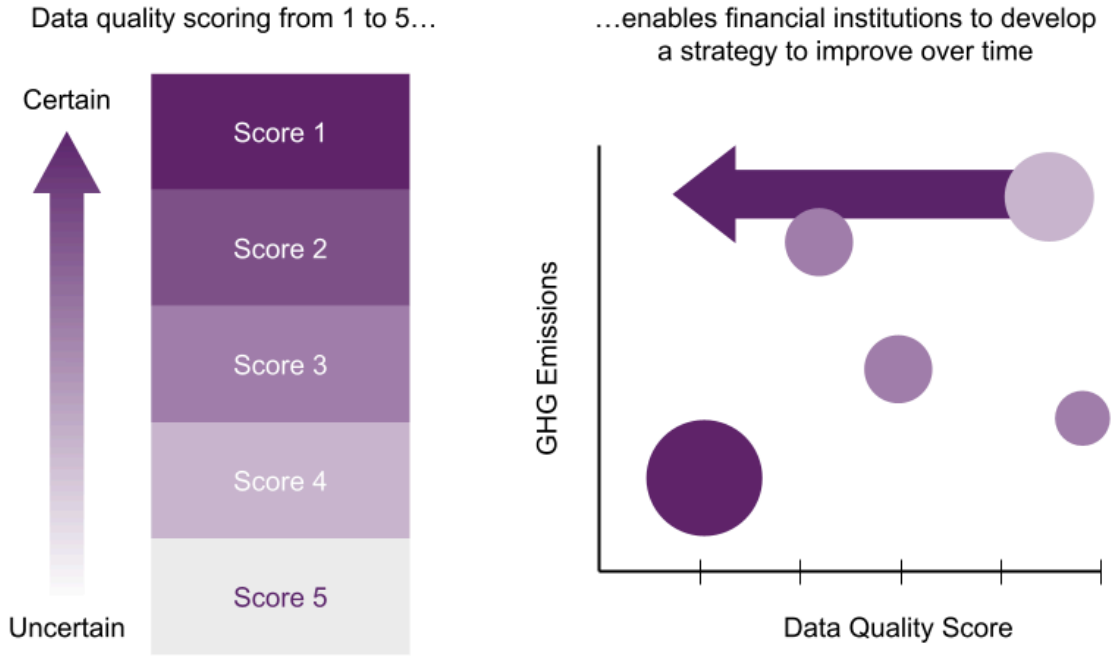
descriptions. Actual annual fuel use and emission data of each project are most accurate and effective to reflect any improvement over time.

2. Public database on average emissions factors for power generation. Sources such as IEA, national energy agencies or utilities often provide average emission factors for electricity generation by regions or fuel type. FIs could use these proxies to estimate the emissions for power generation projects if they have the annual output (e.g., MWh) of projects by fuel type or region. Using regional averages requires fewer resources on collecting data but does not reflect performance specific to the portfolios nor improvement over time.

Science-based target analysis for electricity generation projects should rely on asset-level data as much as possible and fill in any data gaps with regional proxies.

While data availability varies across regions, FIs could assess the specificity and accuracy of the available data using a data hierarchy (e.g., Figure C1 explores ways to improve data quality over time). For example, one may focus on moving from sector average data to region- or project-specific energy use data by refining the due diligence or loan application process in countries with the most project finance exposure. Any significant changes to the portfolio emissions should result in recalculation of target baseline as defined in the SBTi FI Near-Term Criteria.

Figure B1: Generic data quality scorecard for portfolio emissions[62]



Sources: PCAF (2019b, 2019c, 2020).

To translate the emissions intensity targets into an absolute target, FIs have to project the

[62] For a project finance specific score card, refer to the PCAF's Global GHG Accounting and Reporting Standard (PCAF, 2020)

annual percentage of the activity growth of their portfolio (Compound Annual Growth Rate [CAGR]) toward the target year (i.e., preferably measured in m^2, kWh, ton of products). FIs can project this in three ways:

1. By using the activity growth projection in the climate scenario (default growth projection). For instance, for electricity generation projects, this is 1.69% in kWh from 2020 toward 2030 (see Table B2).
2. By using the growth of their portfolio over the past 5-10 years.
3. By using the growth projections of the specific business departments and extrapolating this toward the target years, if this growth projection is too short term.

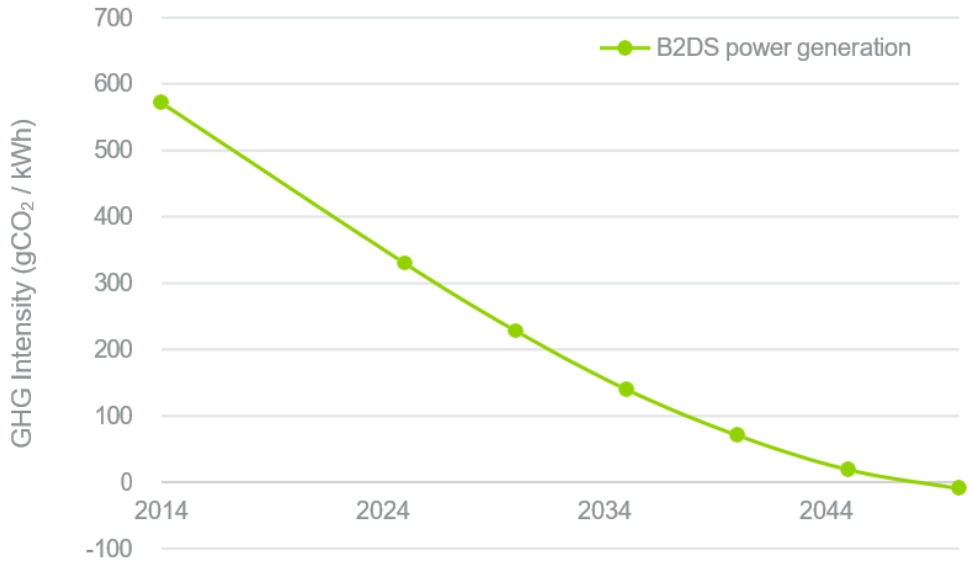
Decarbonization pathway

By applying the SDA, the final emission targets, expressed in emissions intensity (gCO_2 /kWh), have to be consistent with keeping global warming to 1.5°C.

The SDA for the power sector details how to align emissions of investments in electricity generation projects with a decarbonization pathway toward 1.5°C. The IEA models the power sector based on sectoral growth and technology development trajectories. Figure B2 illustrates the emissions intensity pathways for the power sector in the B2DS.

The emissions intensity trajectory of a project portfolio in the power sector shall continuously decline from the base year toward the target level, even if the emissions are below the pathway benchmark. This calculation method will be explained further in the instructions for implementation. Note that IEA only provides pathways in a five-year interval: FIs may derive the pathway data through interpolation if the target year falls in between these five-year intervals. See Table B2 for the data on the global B2DS pathway.

Figure B2: Global decarbonization emission pathway for the power sector



Source: IEA (2017).

Attribution approach

Attribution of projects' emissions to a financial portfolio is based on the ratio of outstanding loan or investment over the total project size on an annual basis (e.g., 2018 project emissions x 2018 year-end outstanding loan/project's total size [equity + debt]) (PCAF, 2019b, 2019c, 2020). This approach is consistent with the GHG accounting method for project finance developed by the PCAF (2020). To align with a decarbonization pathway, this methodology requires using the total electricity output (e.g., kWh) to derive the emissions intensity of electricity generation projects (i.e., gCO_2/kWh).

Outputs

The output will be an emissions intensity target (in gCO_2/kWh) at the portfolio level of all electricity generation projects. FIs can decide to translate this emissions intensity target per kWh into an absolute target by taking the growth projection in kWh of FIs' electricity generation project portfolio toward the target year into account.

The target language template is: *[FI name] commits to reduce its electricity generation project finance portfolio GHG emissions [XX]% per MWh by [target year] from a [20xx] base year.*

FIs that already finance only renewable electricity projects in the base year may set targets to continue doing so. Please consult the RE100 Technical Criteria and the Scope 2 Quality Criteria in the GHGP Scope 2 Guidance for options for actively sourcing renewable electricity.

The target language template is: *[FI name] commits to continue providing electricity generation project finance for only renewable electricity through 2030.*

Separately, FIs that meet certain conditions laid out in FI-C17.1 may set an emissions intensity maintenance target up to 2030 for an electricity generation project finance portfolio. This maintenance target aims to accommodate FIs that have already achieved, at a portfolio level, the emissions intensity required to align with the 2030 sector intensity level in a 1.5°C pathway. It is meant to encourage FIs to maintain the enabling role they play in decarbonizing the power sector toward net-zero by only financing 1.5°C-aligned electricity generation such as the development and operation of renewable and zero-emission electricity generation projects. Nevertheless, the SBTi strongly encourages these FIs to further reduce their portfolio's emissions intensity and set a target to continue only financing renewable electricity projects. Additional follow-on targets must be aligned with the upcoming SBTi FINZ Standard to ensure that all post-2030 targets are compatible with net-zero pathways.

The target language template is: *[FI name] commits to maintain the GHG emissions intensity of its electricity generation project finance portfolio at or below [the base-year emissions intensity] gCO_2e/kWh from [base year] through 2030 and finance only 1.5°C-aligned electricity generation projects.*

Instructions for implementation

To assess the science-based targets for electricity generation project finance, FIs can use the SDA in the general Target-Setting tool that is available on the SBTi website. The quick start guide for electric utilities to set 1.5°C-aligned science-based targets using the SDA (SBTi, 2020) is also a valuable resource.

As input into this tool, base year financed emissions and base year output should be calculated following these instructions:

Calculating the base year financed emissions

The first step is to calculate the annual financed GHG emissions of the portfolio of electricity generation projects in the base year. Specifically, this involves the following steps:

1. Collecting or estimating the fuel and energy use of each electricity generation project in the portfolio for which the FI seeks to set a target.
2. Calculating the base year scope 1 and 2 emissions per project using fuel- and energy-specific emissions factors, such as those provided by the IEA or national energy agencies.
3. Attributing the annual scope 1 and 2 emissions per project based on the ratio between the institution's outstanding amount (numerator) and the total equity and debt of the financed project (denominator). The result is financed emissions of the FI's project finance portfolio.
4. Summing up all scope 1 and 2 financed emissions per project to derive the total annual scope 1 and 2 financed emissions at portfolio level.

Base-year financed emissions of all electricity generation project finance in the portfolio should be assessed at a fixed point in time in line with the financial reporting cycle.

Calculating the base year output

Next to emissions, base year output should also be provided as input in the Target Setting Tool. Calculating the base year output should involve the following steps:

1. Collecting or estimating the annual electricity generated (in kWh) of the portfolio of electricity generation projects for which the FI seeks to set a target.
2. Attributing the annual electricity generated (in kWh) based on the ratio between the outstanding amount versus the total project size (equity + debt).
3. Summing up the attributed annual electricity generated (in kWh) per project to derive total annual electricity generated (in kWh) at the portfolio level.

Defining the science-based target

Science-based targets shall be set at the electricity generation project portfolio level, in alignment with the decarbonization pathway for power generation. Based on the SDA approach, the base year emissions intensity of an electricity generation project finance

portfolio shall converge to the same level as the power decarbonization pathway by 2050.

FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.

The emission intensity target is defined as a decrease in emissions per electricity production (gCO_2/kWh). The minimum level of emission intensity decrease is derived from the global decarbonization pathway for the power sector.

The following formula is used to calculate the emission intensity target for an electricity generation project finance portfolio when the projected growth of the project finance portfolio (measured in kWh) toward the target year is lower or equal to the sectoral growth as predicted by the IEA (Table B2).[63]

$$Portfolio\ intensity\ target_{power\ generation} = PI_b - SI_{2050} \times \frac{SI_t - SI_{2050}}{(SI_b - SI_{2050})} + SI_{2050}$$

Where:

- SI and PI are the sectoral and portfolio emissions per kWh.
- b is the base year.
- t is the target year.

When the projected growth of the project finance portfolio (measured in kWh) toward the target year is higher than the sectoral growth, the following formula applies:

$$Portfolio\ intensity\ target_{power\ generation} = PI_b - SI_{2050} \times \frac{SI_t - SI_{2050}}{(SI_b - SI_{2050})} \times \frac{(PA_b/SA_b)}{(PA_t/SA_t)} + SI_{2050}$$

Where:

- SI and PI are the sectoral and portfolio emissions per kWh.
- SA and PA are the sectoral and portfolio total kWh.
- b is the base year.
- t is the target year.

This approach allows FIs to converge their emissions intensity for their electricity generation project portfolio to the sectoral pathway in 2050, taking into account its base year performance relative to sector intensity in 2050, and the decarbonization level of the sector in the target year.[64]

[63] After the publication of the SDA in *Nature Climate Change*, the SBTi simplified the formula by removing the correction factor for changes in market share to prevent a potential increase of emissions intensity when growth is projected lower as sectoral growth. This adjustment is documented in Box 4 in the Foundations of science-based target setting paper.

[64] See the SDA methodology paper for further details (SBTi, 2015).

Box B1: Example on setting an intensity target for an electricity generation project finance portfolio

Assume an FI has a project finance portfolio of various electricity generation projects.

Based on electricity output and fuel type, the emissions of these projects are assessed. The emission intensity of the portfolio is 600 gCO_2/kWh for the total electricity production of 15 TWh in 2017. The annual projected portfolio growth rate for 2030 is 1% (CAGR), which is lower than the sectoral growth rate.

Based on the IEA ETP B2DS, the global decarbonization pathway for power generation has approximately:

- 497 gCO_2/kWh at 25,062 TWh in 2017
- 229 gCO_2/kWh at 30,959 TWh in 2030
- -8 gCO_2/kWh at 44,321 TWh in 2050

To set an intensity target for 2030 converging to the 2050 sectoral emissions level:

$$Intensity\ target\ = (PI_b - SI_{2050}) \times \frac{(SI_t - SI_{2050})}{(SI_b - SI_{2050})} + SI_{2050}$$

$$Intensity\ target\ = (600 - [-8]) \times \frac{(229-[-8])}{(497-[-8])} + [-8]$$

$$Intensity\ target\ = 227\ gCO_2/kWh$$

Since this portfolio started with an emission intensity higher than the sector level in 2017, this approach allows the portfolio to stay at an intensity higher than the sectoral pathway to reduce its emissions at a faster pace, converging to the sectoral level by 2050.

Note: CAGR = Compound Annual Growth Rate.
Source: Guidehouse (2020).

Global pathways – project finance

Here are the global emissions intensities pathways based on the IEA ETP 2017 and SBTi 1.5°C power pathway data:

Table B2: Global electricity production and emission intensity

Power Generation	2014	2025	2030	2035	2040	2045	2050
Production (TWh)	23,819	28,377	30,959	33,825	37,015	40,481	44,321
IEA ETP 2017 Emission intensity (gCO_2/kWh)	572.02	330.18	228.79	140.69	71.91	20.35	-8.02
SBTi 1.5°C Emission intensity (gCO_2/kWh)	464.12	246.87	100	54.50	18.39	8.78	0.51

Source: IEA (2017), SBTi 1.5°C power pathway.

Appendix C. SDA for corporate instruments

Some of the data and examples found in this appendix are based on a global sectoral

decarbonization pathway in line with keeping global warming to well-below 2°C, which was the minimum ambition level required in Version 1.1 criteria. Although the minimum target ambition level for SDA targets has been increased to 1.5°C, where available, in the Version 2.0 criteria, this appendix has been kept for general illustrative purposes.

Prepared by technical partner of the SBTi financial sector project, Guidehouse, Inc.

Giel Linthorst
Angélica Afanador
March 2021

Table C1: Summary of the SDA for corporate debt and equity

Category		Framework
Scope	Target audience	The target audience for this target-setting framework are FIs with portfolios of financial assets issued by companies.
	Asset class	Corporate loans and equity and fixed-income investments.
	Sectors	Targets are set at individual sector level within the portfolio, for which specific SDA are available (e.g., electricity, iron and steel, cement, aluminum, pulp and paper, transport, buildings, aviation, FLAG and maritime shipping).
Mechanics	Inputs – Company data	The SDA requires physical activity and emissions data per sector. Activity and GHG emissions data can be sourced from direct emission disclosures by issuers/clients and/or business intelligence databases (e.g., asset-level data). Total emissions and activity data are required for the Aviation, FLAG and Maritime shipping SDA tools. If activity data is not available or FIs use a different emissions intensity unit, they will not be able to set a SDA target and should use the Portfolio Coverage or Temperature Rating method instead.
	Inputs – scenarios	Global decarbonization pathways of the sectors for which targets will be set are the basis of the SDA. FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.
	Attribution approach	As a basic attribution principle, the FI accounts for a portion of the annual emissions of the financed company determined by the ratio between the institution's outstanding amount (numerator) and the value of the financed company (denominator) as follows[a]: • For listed companies the attribution is the ratio of outstanding amount versus the Enterprise Value Including Cash (EVIC[65]). • For private companies the attribution is the ratio of outstanding amount versus the total balance sheet (i.e., equity + debt). For corporate loans, FIs may select the loan outstanding amount,

[65] EVIC is defined as: The sum of the market capitalization of ordinary shares at fiscal year-end, the market capitalization of preferred shares at fiscal year-end and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values.

		loan commitment amount, or exposure at default as the numerator of the attribution factor used to calculate financed emissions. FIs shall only make the choice once (i.e., it cannot switch between using the loan outstanding and loan commitment amount) during the target period.
	Outputs	The output will be an emission intensity target at the portfolio level. Example: FI A commits to reduce CO_2e emissions from the steel sector within its listed equity portfolio XX% per ton of steel by 2030 from a 2020 base year.

Note:
[a] PCAF (2020).
Source: Guidehouse (2020).

Scope

This methodology covers science-based targets for the financial portfolios consisting of corporate loans and equity and fixed-income investments. The methodology presents a sector-based approach to set a science-based target for the scope 3, category 15 (investments) emissions for FIs. When accounting for the emissions of a portfolio of corporate loans and equity and fixed-income investments, these emissions are based on the scope 1 and 2 emissions of the assets in each sector covered.

- Scope 1: Direct emissions from sources (i.e., on-site fuel combustion) owned or controlled by the company (i.e., investee or borrower).
- Scope 2: Indirect emissions from purchased energy (electricity, steam, heat and cooling) by the company (i.e., investee or borrower).
- Scope 3, where relevant: FIs shall refer to the relevant SBTi sector-specific guidance for inclusion of portfolio companies' scope 3 emissions in targets. For instance, the scope 3 "use of sold products" emissions of auto manufacturers shall be included in FIs' targets.[66]

Sector targets are set at individual sector level within the portfolio, for which specific SDAs are available. It is expected that there will be portions of the portfolio that are not covered by the SDA.

Mechanics

Data input

To assess the SBTs for a portfolio of corporate instruments, FIs can use the SDA in the relevant SBTi Target-Setting tool available on the SBTi website.

As input into these tools, base year emissions and base year activity/output should be calculated following these instructions:

[66] The Global GHG Accounting and Reporting Standard for the financial industry provides methods for measuring emissions associated with these asset classes. It includes scope 1 and 2 emissions for all sectors and the phase-in of scope 3 emissions for business loans and listed equity and corporate bonds, in line with the recommendation for the EU Benchmark by the EU Technical Expert Group (TEG) on sustainable finance sector list. In practice this means a gradual phase-in of scope 3 emissions of borrowers and investees over five years. Starting with the most carbon-intensive sectors (oil, gas and mining) from 2021.

The first step of the process is defining the base year emissions of the portfolio for which a target will be set. PCAF's Global GHG Accounting and Reporting Standard details the emissions accounting methods for various asset classes, including listed equity and corporate bonds as well as business loans and unlisted equity (PCAF, 2020).

In principle, setting a science-based target for these asset classes requires the following data points:

- Company's disclosed annual scope 1 and 2 emissions, and scope 3 emissions where relevant (e.g., company sustainability report or verified third-party data providers); alternatively, company physical activity data that serves to estimate scope 1 and 2 emissions, and scope 3 emissions where relevant, in the base year.
- Annual activity or output data per company in the base year (e.g., MWh, building gross floor area, ton-km transported, passenger-km traveled, ton of product, etc.).
- Outstanding amount (equity and/or debt) per company.
- EVIC or balance sheet total per company.
- Portfolio growth rate per sector in target year.

When direct disclosure of scope 1 and 2 emissions (and scope 3 emissions where relevant) is not available, emissions can be calculated via two approaches (PCAF, 2020):

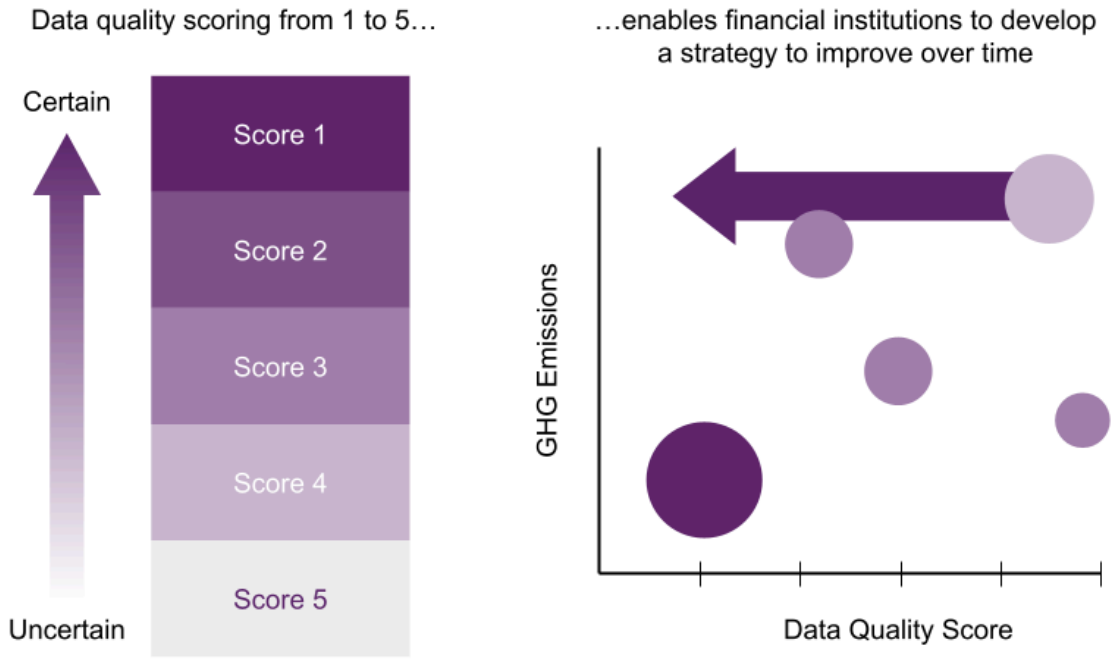
- **Approach 1: Physical activity-based emissions**: Primary physical activity data of the investee or borrower (e.g., MWh of natural gas consumed or ton of steel produced) are converted to emissions, using verified emission factors expressed per physical activity (e.g., tCO_2e/MWh or tCO_2e/t of steel), issued or approved by a credible independent body.
- **Approach 2: Economic activity-based emissions**: Economic activity data of the investee or borrower (e.g., EUR of turnover or EUR of asset) are converted to emissions, using official statistical data and/or acknowledged environmentally extended input-output (EEIO) tables providing region-/sector-specific average emission factors expressed per economic activity (e.g., tCO_2e/EUR of revenue or tCO_2e/EUR of asset).[67]

It is important to note, that from a data quality perspective, approach 2 is preferred when emissions disclosure is not available to the FI.

While data availability varies across regions, FIs can assess the specificity and accuracy of the available data using a data hierarchy (e.g., Figure C1) and explore ways to improve data quality over time.

[67] Sampling tests based on actual data on company level, which is extrapolated to portfolio level, can help test the accuracy of calculations based on this data from statistics and/or EEIO tables. This may also be used to refine the data for specific sectors or regions, if the reporting FI has a strong presence in and specific knowledge of the respective sector and/or region. National agencies and regional data providers or statistical offices in individual regions may assist reporting FIs and investee companies in various regions in finding regional and more relevant financial and/or emissions data information.

Figure C1: Generic data quality scorecard for portfolio emissions[68]



Sources: PCAF (2019b, 2019c, 2020).

Decarbonization pathway

By applying the SDA, the final emissions targets expressed in emissions intensity (e.g., CO_2 per kWh, ton of product, etc.) shall be consistent with keeping global warming to 1.5°C at minimum. When a 1.5°C pathway for a sector is not available, a WB2C pathway may be used instead.

The SDA uses the B2DS scenarios developed by the IEA (2017), which are compatible with the Representative Concentration Pathway (RCP) 2.6 scenario from IPCC Fifth Assessment Report (AR5).[69] The SDA assumes global convergence of key sectors' emissions intensity by 2050. For example, the emissions intensity of steel production in China, the United States and Brazil is assumed to reach the same level in 2050, regardless of its current diversity.[70] Regional pathways have not been incorporated into the SDA method in most cases.

Currently, the SDA provides sector-specific pathways for the following homogenous and energy-intensive sectors[71]:

- Power generation.
- Iron and steel.

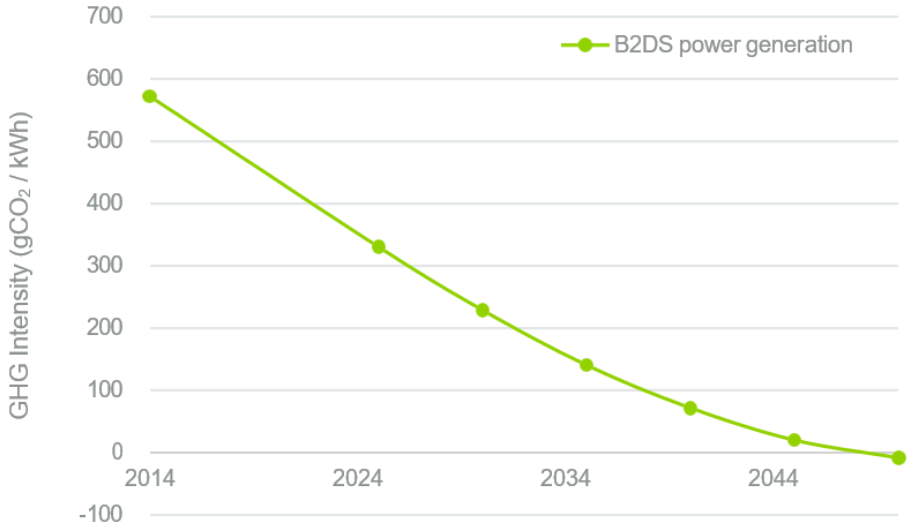
[68] For corporate debt and equity specific score cards, refer to the PCAF's Global GHG Accounting and Reporting Standard (PCAF, 2020).
[69] The B2DS scenarios are emissions scenarios modeled by IEA. Based on this scenario data, sectoral emissions intensity pathways are derived.
[70] For specific values and background, see Krabbe et al. (2015).
[71] The SDA sectors are drawn from the International Energy Agency (IEA). An appendix of the SDA user guidance maps the IEA sectors against common industrial classification systems: https://sciencebasedtargets.org/resources/legacy/2015/05/Sectoral-Decarbonization-Approach-Report.pdf.

- Cement.
- Aluminum.
- Buildings.
- Passenger and freight transport.
- Pulp and Paper.
- Aviation.
- FLAG.
- Maritime shipping.

The IEA models these sectors based on sectoral growth and technology development trajectories. The emissions and sector activity growth projections from the B2DS will serve as the basis to derive the relevant targets for each sector under the selected asset class unless a SBTi 1.5°C pathway is available. Figure C2 illustrates the emission intensity pathways for the power sector in the B2DS.

In this example, the emissions intensity trajectory of the power utilities in the portfolio shall continuously decline from the base year toward the target level, even if the emissions are below the pathway benchmark. Note that IEA only provides pathways in a five-year interval; FIs may derive the pathway data through interpolation if the target year falls in between these five-year intervals.

Figure C2: Global decarbonization emission pathway for the power sector



Source: IEA (2017).

Attribution approach

Setting the emissions baseline requires the allocation of companies' (i.e., investees or borrowers) emissions and activity data to the FIs. In line with GHGP and the PCAF, emissions should be allocated to FIs based on their proportional share of investment in the

investee.[72]

For listed companies, the attribution is calculated by the ratio of outstanding investment versus the EVIC.

- **Outstanding investment (numerator):** The actual outstanding investment (if listed equity or bonds) or loan amount (if corporate loan).
- **Company value (denominator):** The EVIC of the respective company. In case elements of the enterprise value are not available, for example, due to data issues, the total balance sheet value expressed as the sum of total company equity and debt is used.

For private companies, the attribution is the ratio of outstanding investment or outstanding loan versus the total balance sheet (equity + debt):

1. **Outstanding investment (numerator):** The actual outstanding investment (if private equity) or loan amount (if corporate loan).
2. **Company value (denominator):** The total balance sheet value expressed as the sum of total company equity and debt.

The Global GHG Accounting and Reporting Standard for the financial industry (PCAF, 2020) aligns the definition of EVIC with the definition provided by the following:

- The Technical Expert Group on sustainable finance set up by the European Commission (EU TEG) in its "Handbook of Climate Transition Benchmarks, Paris-aligned Benchmark and Benchmarks' ESG Disclosure" (December 2019) (Hoepner et al., 2019).
- The (draft) "Supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks," which has defined that the EVIC should be used to determine the GHG intensities for the benchmarks.

For corporate loans, FIs may select the loan outstanding amount, loan commitment amount or exposure at default as the numerator of the attribution factor used to calculate financed emissions. FIs shall only make the choice once (i.e., it cannot switch between using the loan outstanding and loan commitment amount) during the target period.

After applying the attribution factor to both absolute emissions, the same attribution factor should be applied to calculate the total activity or output of the portfolio companies in a specific sector. These total activity or output data are needed as input into the SBTi tools to calculate the emissions intensity in the base year (i.e., the ratio of absolute emissions to activity data, for example, ton CO_2e/kWh, ton CO_2e/ton of steel, etc.).

[72] This differs from a portfolio weight approach that works by applying the portfolio weight of each investment to the emissions intensity of the underlying company. For example, if 10% of the total equity portfolio in assets under management (AUM) is invested in Company A, the emissions intensity of the portfolio is calculated by applying the 10% to the emissions intensity of Company A, etc., and summing up all allocated emission intensities of the companies in the portfolio. This approach is often used for ESG benchmarking of funds. However, this approach deviates from accounting principles in the GHGP and the PCAF.

Method output

The output will be a percentage reduction in emissions intensity relative to a specific activity or production output of the companies in the portfolio (e.g., ton CO_2e per MWh, per ton of steel, etc.). FIs may use any 1.5°C-aligned climate scenarios as long as their physical intensity targets are equally or more ambitious than the minimum target ambition required by the relevant SBTi tool.

Sample target outputs could be, as follows:

- FI A commits to reduce CO_2e emissions from the power sector within its corporate loan portfolio XX% per kWh by 2025 from a 2019 base year.
- FI B commits to reduce CO_2e emissions from the steel sector within its listed equity portfolio XX% per ton of steel by 2025 from a 2019 base year.

Appendix D. Temperature Rating method

This method is an open-source framework to enable the translation of corporate GHG emissions reduction targets into temperature scores at a target, company and a portfolio level. The method can be used to generate temperature scores for individual targets to translate target ambition to a common intuitive metric.

The method provides a protocol to enable the aggregation of target-level scores to generate a temperature rating for a company based on the ambition of its GHG emissions reduction targets. Finally, the method defines a series of weighting options that can enable FIs and others to produce portfolio-level temperature ratings.

Currently the SBTi only recognizes the temperature rating methodology co-developed by WWF and CDP for target submissions as it has been created in collaboration with the SBTi, is fully open source, is fully transparent in methodology and output and has undergone a public consultation process. As such, only temperature scores calculated based on this methodology are currently recognized by the SBTi for target submissions. FIs may use the SBTi open-source tool or other third-party temperature scores produced according to this methodology. Stakeholders are advised to check the "Financial Institutions Tool" section on the SBTi Financial Sector webpage for the most recent methodology documentation. The methodology:

- Enables assessment of corporate emissions reduction targets.
- Enables comparison of relative ambition of corporate emissions reduction targets.
- Provides a framework for building engagement strategies.
- Helps with strategic security selection and allocation decisions.

The first step of the process is to convert individual targets of various formats into temperature scores. This is achieved by generating simple regression models for estimated warming in 2100 from climate scenarios with short-, medium-, and long-term trends in metrics like absolute emissions or emissions intensities. In addition to defining methods for disclosed targets, this step outlines the methodology used to define a default score to be

applied to all companies that do not disclose any emissions reduction targets publicly.

Since many companies have multiple climate targets, covering different scopes and time frames, a protocol is then used to aggregate all target data into scores at a company level. This protocol defines the minimum quality criteria for determining the acceptability of a target to be scored and the steps required to identify and aggregate multiple targets to produce an overall company score.

The final step is used to weight company scores when assessing an index or portfolio of companies, such as in the context of financial portfolios.

Seven potential options for aggregating individual company temperature scores at the index/portfolio are currently available. These include the following:

- Option 1: Total assets emissions weighted temperature score (AOTS).
- Option 2: Revenue-owned emissions weighted temperature score (ROTS).
- Option 3: EV + Cash emissions weighted temperature score (ECOTS).
- Option 4: Enterprise-owned emissions weighted temperature score (EOTS).
- Option 5: Market-owned emissions weighted temperature score (MOTS).
- Option 6: Total emissions weighted temperature score (TETS).
- Option 7: Weighted average temperature score (WATS).

The SBTi encourages FIs to use this hierarchy when deciding which aggregation method to use. While we understand that data limitations may prevent using certain aggregation methods, FIs should engage with companies to improve data availability to allow the use of more robust aggregation methods.

Table D1 provides a description and formula for calculating the portfolio temperature scores using each of these options. When using these portfolio weighting options for the Portfolio Coverage (PC) method, the outcome from the Temperature Rating method (i.e., TS) can simply be replaced with the outcome of the PC assessment (i.e., 1 if the company has an SBTi-validated target or 0 if the company does not have an SBTi-validated target, since the PC method is binary).

Table D1: Portfolio weighting options

Option	Method	Temperature Score Formula (where TS=Company Temperature Score)
Total assets emissions weighted temperature score (AOTS)	Temperature scores are allocated based on a total assets ownership approach.	$\sum_{n}^{i}\left(\left(\frac{\frac{Investment\ value_i}{Company\ total\ assets} \times Company\ emissions_i}{Total\ assets\ owned\ emissions}\right) \times TS_i\right)$

Revenue-owned emissions weighted temperature score (ROTS)	Temperature scores are allocated based on the share of revenue.	$$\sum_{n}^{i}\left(\left(\frac{\frac{Investment\ value_i}{Company\ revenue}\times Company\ emissions_i}{Total\ revenue\ owned\ emissions}\right)\times TS_i\right)$$
Enterprise value + cash emissions weighted temperature score (ECOTS)	Temperature scores are allocated based on an enterprise value (EV) plus cash and equivalents ownership approach.	$$\sum_{n}^{i}\left(\left(\frac{\frac{Investment\ value_i}{Company\ enterprise\ value+cash}\times Company\ emissions_i}{Total\ enterprise\ value+cash\ owned\ emissions}\right)\times TS_i\right.$$
Enterprise-Owned emissions weighted temperature score (EOTS)	Temperature scores are allocated based on an enterprise ownership approach.	$$\sum_{n}^{i}\left(\left(\frac{\frac{Investment\ value_i}{Company\ enterprise\ value}\times Company\ emissions_i}{Portfolio\ market\ value\ owned\ emissions}\right)\times TS_i\right)$$
Market-owned emissions weighted temperature score (MOTS)	Temperature scores are allocated based on an equity ownership approach.	$$\sum_{n}^{i}\left(\left(\frac{\frac{Investment\ value_i}{Company\ market\ cap}\times Company\ emissions_i}{Portfolio\ market\ value\ owned\ emissions}\right)\times TS_i\right)$$
Total emissions weighted temperature score (TETS)	Temperature scores are allocated on historical emission weights using total company GHG emissions.	$$\sum_{n}^{i}\left(\frac{Company\ emissions_i}{Portfolio\ emissions}\times TS_i\right)$$
Weighted average	Temperature scores are allocated based on	

Temperature score (WATS)	portfolio weights. *For instance, if a company is allocated 10% of the overall invested value, it is weighted at 10%.*	

Sources: CDP Worldwide and WWF International (2020).

Appendix E. The SBTi finance temperature rating and portfolio coverage tool

Please refer to the "Financial Institutions Tool" section on the SBTi Financial Sector webpage for information.

A video of how to use the SBTi Temperature Scoring tool for FI target submissions is also available.

Appendix F. Acknowledgments

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REFERENCES AND RESOURCES

2dii (2 Degrees Investing Initiative). (2014). *Paris Agreement Capital Transition Assessment.* https://www.transitionmonitor.com/.

Amundi Asset Management. (2020). *CDP Pioneers New Temperature Rating of Companies for Investors.* https://int.media.amundi.com/assets/pr-7-july-cdp-temperature-ratings-pdf-7016-b6afb.html?lang=en.

Aden, N. (2019). *Japan is Leading on Business Climate Engagement. Will Ambitious Policies Follow?* World Resources Institute. https://www.wri.org/blog/2019/06/japan-leading-business-climate-engagement-will-ambitious-policies-follow.

BAFU (Bundesamt für Umwelt). (2016). *Lifecycle Inventory Data in the Building Sector*. https://www.kbob.admin.ch/kbob/de/home/themen-leistungen/nachhaltiges-bauen/oekobilanzdaten_baubereich.html.

Bank J. Safra Sarasin, Ltd. (2020). *Asset Management Climate Pledge.* https://www.netzeroassetmanagers.org/signatories/j-safra-sarasin-sustainable-asset-management/.

CDP Worldwide & WWF International. (2020). *Temperature Rating Methodology: A Temperature Rating Method for Targets, Corporates, and Portfolios-Beta Version.* CDP Worldwide and WWF International. https://sciencebasedtargets.org/resources/legacy/2020/09/Temperature-Rating-Methodology-V1.pdf.

Commission Delegated Regulation (EU). (2020). European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R0866.

CRREM (Carbon Risk Real Estate Monitor). (2020). *Global Pathways.* https://www.crrem.org/pathways/.

Cummis, C., Patel, S., Weber, C., Thomae, J., Dupre, S., & Fischer, R. (2018). *Exploring Metrics to Measure the Climate Progress of Banks.* World Resources Institute. https://www.wri.org/publication/exploring-metrics-to-measure-the-climate-progress-of-banks.

The Economist. (n.d.) *How Much Can Financiers Do about Climate Change?* https://www.economist.com/briefing/2020/06/20/how-much-can-financiers-do-about-climate-change.

Hoepner, A.G.F., Masoni, P., Kramer, B., Slevin, D., Hoerter, S., Humphreys, S., Viñes Fiestas, H. et al. (2019). *Handbook of Climate Transition Benchmarks. Paris-Aligned Benchmark and Benchmarks' ESG Disclosure*. Brussels: European Commission. https://finance.ec.europa.eu/system/files/2019-12/192020-sustainable-finance-teg-benchmarks-handbook_en_0.pdf.

IEA (International Energy Agency). (2013). *Transition to Sustainable Buildings: Strategies and Opportunities to 2050.* Paris: IEA.

IEA. (2016). *World Energy Investment 2016.* Paris: IEA.

IEA. (2017). *Energy Technology Perspectives 2017*. Paris: IEA.

Jakob, M., Steckel, J. C., Jotzo, F., Sovacool, B. K., Cornelsen, L., Chandra, R., Edenhofer, O., et al. (2020). The Future of Coal in a Carbon-Constrained Climate. *Nature Climate Change, 10*(8): 704–707. https://doi.org/10.1038/s41558-020-0866-1.

KLP Goes Coal Free. (2020). KLP [English]. https://www.klp.no/en/press-room/klp-goes-coal-free.

Kölbel, J. F., Heeb, F., Paetzold, F., & Busch, T. (2019). *Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact.* SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, July 20. https://papers.ssrn.com/abstract=3289544.

Krabbe, O., Linthorst, G., Blok, K., Crijns-Graus, W., van Vuuren, D. P., Höhne, N., Faria, P., Aden, N., & Alberto Pineda, A. C. (2015). Aligning Corporate Greenhouse-Gas Emissions Targets with Climate Goals. *Nature Climate Change, 5*(12): 1057–1060. https://www.nature.com/articles/nclimate2770.

IPCC (Intergovernmental Panel on Climate Change). 2018. *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty.* Edited by V. Masson-Delmotte, P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, et. al.

NATIXIS. (2018). *ESR Sector Policy Applicable to Oil & Gas Industry.* https://natixis.groupebpce.com/wp-content/uploads/2022/11/220929_revised_esr_sector_policy_oil_gas_august.pdf.

Partington, R. (2019). Bank of England Boss Says Global Finance Is Funding 4C Temperature Rise. *The Guardian.* https://www.theguardian.com/business/2019/oct/15/bank-of-england-boss-warns-global-finance-it-is-funding-climate-crisis?CMP=share_btn_link.

PCAF (Partnership for Carbon Accounting Financials). (2019a). *Shaping the Climate Action Journey for Financial Institutions.* https://carbonaccountingfinancials.com/files/downloads/Overview-Initiatives-Shaping-Climate-Action-Journey-for-FIs.pdf.

PCAF. (Partnership for Carbon Accounting Financials). (2019b). *Accounting GHG Emissions and Taking Action: Harmonised Approach for the Financial Sector in the Netherlands.* https://carbonaccountingfinancials.com/files/downloads/1911-pcaf-report-nl.pdf?6253ce57ac.

PCAF. (Partnership for Carbon Accounting Financials). (2019c). *Harmonizing and Implementing a Carbon Accounting Approach for the Financial Sector in North*

America. https://carbonaccountingfinancials.com/files/2019-10/20191028-pcaf-report-2019.pdf.

PCAF (Partnership for Carbon Accounting Financials). (2020). *The Global GHG Accounting and Reporting Standard for the Financial Industry.* [First Edition.] https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf.

Raynaud, J., Voisin, S., Tankov, P., Hilke, A., & Pauthier, A. (2020). *The Alignment Cookbook - A Technical Review of Methodologies Assessing a Portfolio's Alignment with Low-Carbon Trajectories or Temperature Goal.* Institut Louis Bachelier. https://www.institutlouisbachelier.org/wp-content/uploads/2021/03/the-alignment-cookbook-a-technical-review-of-methodologies-assessing-a-portfolios-alignment-with-low-carbon-trajectories-or-temperature-goal.pdf.

RICS (Royal Institution of Chartered Surveyors). (2017). *Whole Life Carbon Assessment for the Built Environment*. https://www.rics.org/globalassets/rics-website/media/upholding-professional-standards/sector-standards/building-surveying/whole-life-carbon-assessment-for-the-built-environment-1st-edition-rics.pdf.

Robeco Institutional Asset Management B.V. (2020). *Exclusion Policy Robeco: Robeco Institutional Asset Management*. https://www.robeco.com/docm/docu-exclusion-policy-and-list.pdf.

Rocky Mountain Institute, Carbon Tracker Initiative, Sierra Club. (2020). *How to Retire Early: Making Accelerated Coal Phaseout Feasible and Just.* Basalt, CO: Rocky Mountain Institute.

SAST (Safra Sarasin Investment Foundation). (2019). *Sustainable Real Estate Switzerland, Sustainability Report.* https://www.jsafrasarasin.com/content/jsafrasarasin/language-masters/en/expertise/sustainable-investments.html.

SBTi (Science Based Targets initiative). (2015). *Sectoral Decarbonization Approach (SDA): A Method for Setting Corporate Emission Reduction Targets in Line with Climate Science.* https://sciencebasedtargets.org/wp-content/uploads/2015/05/Sectoral-Decarbonization-Approach-Report.pdf.

SBTi. (2020). *Power Sector | Science Based Targets.* https://sciencebasedtargets.org/sectors/power.

Science Based Target initiative. (2024a). *Financial Institutions' Near-Term Criteria.* https://sciencebasedtargets.org/resources/files/Financial-Institutions-Near-Term-Criteria.pdf.

Science Based Targets initiative. (2024b). *Procedure for Validation of SBTi Targets.* https://sciencebasedtargets.org/resources/files/Procedure-for-validation-of-SBTi-targets.pdf.

Science Based Target initiative. (2024c). *SBTi Corporate Near-Term Criteria (Version 5.2).*

https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf.

Science Based Target initiative. (2024d). *SBTi Criteria Assessment Indicators*. https://sciencebasedtargets.org/resources/files/SBTi-Criteria-Assessment-Indicators.pdf.

Science Based Target initiative. (2024e). *SBTi Criteria Assessment Indicators for FINT V2*. https://sciencebasedtargets.org/resources/files/Financial-Institutions-Criteria-Assessment-Indicators.pdf.

Swiss Parliament. (2020). *Total Revision of the Swiss CO_2-Law after 2020.* https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20170071.

TCFD (Task Force on Climate-related Financial Disclosures). (2017). *Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures.* https://www.fsb-tcfd.org/publications/final-recommendations-report/.

UNFCCC (United Nations Framework Convention on Climate Change). (2015). *Paris Agreement. Article 2.1(c).* https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement.

WRI (World Resources Institute) and WBCSD (World Business Council for Sustainable Development). (2004). *The Greenhouse Gas Protocol. A Corporate Accounting and Reporting Standard (2nd ed.).* Washington, DC: WRI and WBCSD.

WRI and WBCSD. (2011). *The Greenhouse Gas Protocol. Corporate Value Chain (Scope 3) Accounting and Reporting Standard*. Washington, DC: WRI and WBCSD. http://www.ghgprotocol.org/corporate-value-chain-scope-3-accounting-and-reportingstandard.

WRI and WBCSD. (2013). *Technical Guidance for Calculating Scope 3 Emissions. Version 1.0.* Washington, DC: WRI and WBCSD. http://www.ghgprotocol.org/sites/default/files/ghgp/standards/Scope3_Calculation_Guidance_0.pdf.

WRI and WBCSD. qw(2015). *The Greenhouse Gas Protocol. Scope 2 Guidance*. Washington, DC: WRI and WBCSD. http://www.ghgprotocol.org/scope_2_guidance.

WWF (World Wildlife Fund). (2019). *Asset Owner Guide to Oil and Gas Producers*. Brussels: WWF.

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION