Sustainable Markets Initiative

A PRACTITIONER'S GUIDE FOR BANKS

Considerations for banks in setting a net zero strategy

Sustainable Markets Initiative - Financial Services Taskforce

October 2021

AUTHORS, CONTRIBUTORS & THANKS

ABOUT THE FINANCIAL SERVICES TASKFORCE

The Sustainable Markets Initiative (SMI) was formed at the invitation of His Royal Highness the Prince of Wales, at the World Economic Forum (WEF) Annual Meeting 2020, with the goal of creating a coalition of parties who share his view that progress towards a sustainable future must be accelerated. The Financial Services Taskforce (FSTF) is a sub-group of the SMI formed of a group of CEO-level executives from a number of the world's largest banks. It brings together financial services leaders to develop and enable solutions which aim to help accelerate the transition to sustainable markets and support the rapid decarbonisation required across the real economy.

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2° Investing Initiative

Ceres

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Net-Zero Banking Alliance

Partnership for Carbon Accounting Financials

Science Based Targets initiative

Task Force on Climate-Related Financial Disclosures

We Mean Business Coalition

World Resources Institute

World Wide Fund for Nature

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Sustainable Markets Initiative

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FOREWORD

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The global transition to net zero carbon emissions will require nothing less than a new commercial and industrial revolution. Huge changes have to be made to every sector of the economy – power generation, manufacturing, transport, housing and agriculture, to name just a few. The transition will involve every layer of society, from national governments and large businesses right down to the individual citizen.

We need to complete this transition by 2050 at the very latest if we are to avoid severe climate change. As set out in Intergovernmental Panel on Climate Change (IPCC) reports, unless we keep global average temperature rise to well below 2°C, preferably below 1.5°C, the world may face unpredictable and severe damage to natural habitats, economic growth, and social cohesion. We can't afford to leave it to the last minute, either. The scale of the challenge is such that rapid action is needed now to transition the global economy to lower-carbon energy sources, while also doing more to protect and restore carbon sinks around the world.

Such transition will require significant investment – many trillions of dollars of new sustainable funding in the coming decades. That's where banks have an important role to play. Beyond being responsible for emissions related to their own operational footprint, banks can act as climate partners to individuals, corporations and governments, providing and channelling the finance needed to invest in sustainable business models.

Many banks have made net zero commitments in recent years, acknowledging that they have a role to play in the climate transition. What is needed now is clarity for banks on how to build their net zero strategies, demonstrating that banks have a robust approach and enabling external stakeholders to keep track of progress. Net zero commitments may not be credible unless there is common ground on what the term means for banks in practice, and how to get there.

That is the purpose of this Practitioner's Guide. We, the Financial Services Taskforce (FSTF), a sub-group of the Sustainable Markets Initiative (SMI), have published this forward-looking guide based on our emerging experiences in order to help banks move from their net zero commitments to implementation. It is designed for a wide audience, from executives to those actually building the nuts and bolts of a bank's net zero strategy. We have built on the good work of many other initiatives and, through this, we hope to accelerate implementation of net zero ambitions across the global banking industry. The guide will be an evolving document, with future versions incorporating the latest emerging guidance.

Climate change is a challenge but also an opportunity for the clients and communities we exist to serve. We have the chance to help protect vital ecosystems, and to build a greener, more sustainable, and more robust global economy. We recognise our potential to bring about positive change and look forward to playing our part on the journey to net zero.

INTRODUCTION

Banks will face opportunities and challenges in aligning their portfolios with pathways to net zero. Due to the diverse nature of their business, different teams in different geographies will have the opportunity to solve unique problems and support a variety of client needs. Each bank's journey will depend on the sectors it finances, as these sectors will reduce emissions at different speeds and to varying degrees, given technology constraints. Guidance for banks on building a net zero strategy is developing rapidly, with an increasing need for specificity and convergence in methodology. This guide assembles FSTF member experience and the recommendations made in the guide provide suggestions for approaches banks can take over time as methodology, data and climate science continue to evolve. It is the result of discussions between the banks in the FSTF and builds upon the Net-Zero Banking Alliance (NZBA) Commitment Statement, an initiative co-launched by the FSTF.

This guide:

- Focuses on client emissions related to bank financing and investment, as opposed to banks' own operational emissions, reflecting the magnitude of these financed emissions and the powerful role that banks can play in supporting clients to transition
- Presents an overview of potential trade-offs involved when developing and implementing a net zero strategy for a bank and highlights areas where common ground is emerging
- Offers candid insight into the decision-making processes of some of the largest global banks and captures areas for potential convergence across the industry
- Provides non-binding forward-looking recommendations on key choices banks will face in looking to develop robust, methodologically sound strategies with positive climate impact, based on the varied experiences and knowledge of the FSTF banks
- Highlights areas where the banking industry needs support from policymakers, industry groups, or other stakeholders

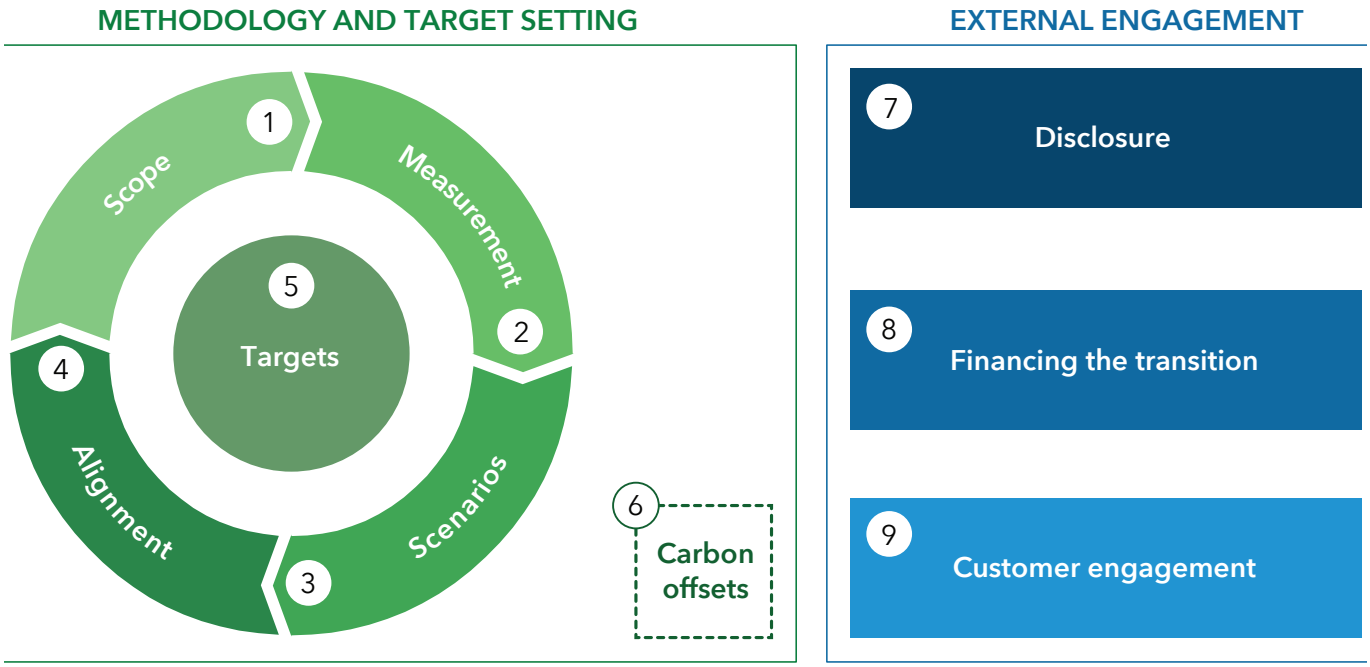
This guide is not:

- A standard. Climate science is a fast-moving space and many of the banks in the FSTF are still developing and revising their net zero strategies. This guide provides a window into current bank thinking, which will evolve as the industry moves toward net zero alignment. An updated edition is expected in coming years to reflect this evolution
- A definition of best practice, recognising that many banks are exploring new, innovative and impactful approaches in this nascent space
- Focused on the wider climate risk topic, for instance the manifestation of physical risk or credit implications of an accelerated transition, but rather focuses on net zero alignment
- Concentrated on insurance or asset management activities that banks may undertake; for guidance for the asset management industry, please see the Net-Zero Asset Owner Alliance
- A comprehensive list of all sustainability approaches banks are taking. There are other tools not covered in this guide that are employed by banks, such as sector-specific restrictions or environmental and social reviews with clients, to help minimise the harmful environmental impacts of their activities
- A comprehensive list of enabling factors helpful for bank net zero strategies. For example, broader governance and oversight are important to the successful implementation of net zero strategies, but this guide does not conduct a deep dive on these aspects at this time. For more information on these topics, please see the International Investors Group on Climate Change's Aligning the Banking Sector with the Goals of the Paris Agreement

The first section of the guide describes the context banks operate in, connecting science with client engagement and financing.

The guide is then structured into two parts: 'Methodology and Target Setting' and 'External Engagement'. The first part, consisting of six sections, addresses key choices banks will face when measuring, tracking and setting targets for emissions. The second part, consisting of three sections, explores how banks can engage with clients and policymakers to deliver financing to help accelerate the transition to a low carbon economy, and disclose progress transparently for stakeholders. The structure of the document is outlined in Figure 1 below.

Figure 1. Structure of this guide



UNDERLYING PRINCIPLES

The actions and choices laid out in this guide are underpinned by the following key principles from the FSTF banks:

1. We are committed to **supporting our clients** in their net zero transition journeys

2. We commit to help **achieve the greenhouse gas (GHG) reductions required to meet the Paris targets** in both our bank operations and financing activities

3. We will look to **ground our actions in scientific pathways and the best available economic and technological knowledge** of what it will take for the real economy to transition to net zero

4. Where there are multiple, credible scientific pathways or multiple standards, we **will aim for convergence where it aids comparability and use our judgements**, and will clearly disclose the rationale for those judgements

5. We will seek to **disclose with transparency**, allowing stakeholders to understand and compare the impact of our activities

6. We recognise that this is a rapidly evolving space and that **we may need to revisit our choices in time**; however, **this will not prevent us from acting now**

EXECUTIVE SUMMARY

There is a clear scientific consensus on climate change: the world must achieve net zero GHG emissions soon to keep the global temperature rise to below 1.5°C and minimise irreversible environmental damage.[1] To achieve net zero, all sectors of the real economy will need to follow science-based transition pathways to reduce their GHG emissions. This will require significant investment. As providers and facilitators of financing, banks have an opportunity to play a pivotal role in supporting the transition, which will need to be enabled by supportive policy conditions.

In order for banks to develop a robust approach for measuring and setting targets for emissions within their portfolios, they need the best available economic and technological knowledge of what it will take for the real economy to transition to net zero. These net zero strategies must then translate into material progress towards closing the transition finance gap, and active collaboration with clients and policymakers to enable a net zero real economy. To ensure the credibility of their strategies to align these emissions to net zero pathways, they will need to disclose progress to all stakeholders.

The guide is summarised on the following two pages, highlighting the context, key messages and recommendations for each section.

1. The IPCC's Special Report on Global Warming of 1.5°C finds that "limiting warming to 1.5°C implies reaching net zero CO_2 emissions globally around 2050." (2018) The IPCC's Sixth Assessment Report (2021) maintains this finding

METHODOLOGY AND TARGET SETTING

1. DEFINING THE SCOPE OF EMISSIONS

The first step in constructing a net zero strategy is to define the scope of client-generated emissions resulting from financing activities

- Many banks are assessing emissions associated with their on-balance sheet financing because this provides a good starting point for them to monitor their activities in order to finance a net zero economy
- There is not an industry consensus on the inclusion of capital markets financing within scope. Some believe including capital markets is important where the activity is material (this view is supported by NZBA, subject to the development of methodology), while others believe it leads to emissions double counting and is removed from directly funding emissions

THE FSTF RECOMMENDS

- Banks disclose emissions metrics related to capital markets financing, where material, noting that they may develop their own methodologies or wait for industry methodology to emerge
- Banks shape the development of industry standards to enable consistent reporting of financed (on-balance sheet) and facilitated (off-balance sheet) emissions

2. MEASURING THE BASELINE

The emissions baseline provides a point-in-time snapshot of in-scope emissions, thus establishing a reference point for target setting

- The Partnership for Carbon Accounting Financials (PCAF) is emerging as a leading standard for measuring an emissions baseline
- Key technicalities for emissions measurement continue to be debated, for example the use of committed or outstanding loan values in the baseline calculation
- In addition, lack of consistent, granular emissions data from the real economy makes emissions measurement challenging

THE FSTF RECOMMENDS

- Banks either follow PCAF or a comparable methodology
- If a comparable methodology is used, banks publicly disclose the methodology and assumptions employed
- Banks collaborate across a range of stakeholders to champion emissions data disclosures across the economy

3. SELECTING FUTURE EMISSIONS SCENARIOS

Net zero outcome emissions scenarios are projections of different possible futures that can be used for setting portfolio targets and providing a benchmark to monitor progress

- A credible net zero strategy ideally uses scenarios that meet minimum, industry-agreed criteria such as those issued by NZBA and the Science Based Targets Initiative (SBTi). These include credible sources, no- or low-overshoot and conservative reliance on negative emissions technologies
- Current limitations include the availability of disaggregated net zero scenarios with a high ambition level (1.5°C or net zero by 2050) that can be operationalised into a sector and geography decision-useful toolkit

THE FSTF RECOMMENDS

- Banks choose science-aligned net zero scenarios that limit warming to 1.5°C with no- or low-overshoot and are appropriate for their sector and geography mix. If a 1.5°C scenario is not selected, banks should disclose the rationale
- Banks support the further development of publicly available, credible 1.5°C scenarios with no- or low-overshoot that contain required sector and geography disaggregation. They should review their targets as these become available

4. MEASURING PORTFOLIO ALIGNMENT

Portfolio alignment assesses the status of financed emissions versus a net zero emissions scenario pathway

- Toolkits that identify how banks' financed emissions portfolios are performing versus net zero sector emissions pathways are varied and iterating fast
- Most commonly, banks compare current and forecast portfolio emissions metrics to the expected trajectory from a scenario. Some banks calculate implied temperature rise metrics

THE FSTF RECOMMENDS

- Banks use or develop methods and tools that are suitable to their specific circumstances in order to deliver meaningful outcomes
- Banks provide rationales for their chosen methods and tools, and transparent information about the metrics, methodologies, assumptions and data sources used in them

5. SETTING TARGETS TO REDUCE FINANCED EMISSIONS

Targets communicate a bank's ambition and provide a measure against which progress can be assessed

- There is emerging industry consensus that banks should: prioritise carbon-intensive sectors, set long-term and interim targets aligned to credible scenarios, use absolute emissions or emissions intensity metrics, publish action plans
- The choice of absolute emissions and/or emissions intensity targets for fossil fuels is a point of debate

THE FSTF RECOMMENDS

- Banks closely evaluate the use of both absolute emissions and emissions intensity targets for the fossil fuels sector as data, methodology, science and client business model transitions evolve
- Whether setting absolute emissions or emissions intensity targets, banks should set targets that are consistent with the absolute emissions reductions implied by science-based pathways

6. HOW AND WHERE TO USE CARBON OFFSETS

Offsetting is the act of financing emissions reductions outside an organisation's own baseline or removals from the atmosphere to compensate for or neutralise emissions the organisation has not yet reduced. Credits are transferable units of emissions reduction or removal generated from verified carbon projects

- The industry is aligned on a few high-level principles (e.g. that entities should first prioritise their own emissions reductions and credits should be of high quality)
- Compensation and neutralisation contribute to society's net zero transition; some debates remain on how banks can recognise client offsets and credits and whether banks should be able to use credits to offset their financed emissions

THE FSTF RECOMMENDS

- Banks help to catalyse and accelerate carbon markets, such that finance flows to valid emissions reduction and removals opportunities
- Supporting efforts of bodies such as the SBTi, Voluntary Carbon Markets Integrity Initiative (VCMI), and the Taskforce on Scaling Voluntary Carbon Markets (TSVCM) to assess potential roles for offsets or develop principles for their use and recognition
- Separate accounting of offsets from financed emissions to provide transparency
- When measuring financed emissions, banks should not account for credits they have bought. They may choose to buy credits to accelerate the global net zero transition, but these should be disclosed separately

EXTERNAL ENGAGEMENT

7. DISCLOSING PROGRESS

The public disclosure of information about a bank's net zero strategy and progress is a new and evolving process within the banking industry. Banks recognise that disclosures increase credibility of and accountability for their net zero strategies, but there is not currently a standardised approach

- Banks must decide between disclosing in stand-alone reports and their annual reports with associated regulatory and assurance requirements
- They must also determine how they can make disclosures as credible as possible, given inconsistent data about client emissions

THE FSTF RECOMMENDS

- Banks follow Taskforce on Climate-Related Financial Disclosures (TCFD) recommendations as they increasingly include net zero reporting in annual reports
- Banks work with standard setting bodies to determine which disclosures will go in the annual report versus supplementary documents or websites

8. FINANCING THE TRANSITION

As providers and arrangers of capital for the real economy, banks play a crucial role in financing the transition to net zero

- The transition is expected to require annual investment of up to about $7 trillion versus current levels of approximately $600 billion[2]
- Banks must balance the need to finance emerging technologies to support the transition against the increased capital necessary for these potentially riskier investments
- The development of some products supporting climate mitigation (e.g. transition bonds) will depend on clear definitions

INITIAL CONSIDERATIONS

- Expand sustainable financing products to accelerate the growth of climate finance
- Partner with public and private capital providers to develop innovative financing structures, such as blended finance
- Encourage governments to support the transition through policies, subsidies and incentives
- Support the development of standardised definitions of 'transition' and 'sustainable' to enable further investment

9. CUSTOMER ENGAGEMENT

Engaging with customers to understand their strategies and support their transitions is essential to enabling change in the real economy

- Bank roles can include raising awareness, supporting decarbonisation strategy development, sharing best practices and developing financing solutions
- There is no 'one-size fits all' engagement approach (e.g. smaller businesses may be less aware of opportunities as they have fewer internal sustainability resources)
- The transition must balance emissions reduction and social and ecological goals

INITIAL CONSIDERATIONS

- Build strategy to adapt engagement based on customer size, sector, geography and transition maturity
- Design processes to balance accelerating the transition with supporting local economies and ecosystems to help ensure a 'just transition'

2. OECD, 'Financing Climate Futures: Rethinking Infrastructure' (2018); CPI, 'Updated View on the Global Landscape of Climate Finance' (2019)

CONNECTING SCIENCE, CLIENTS AND FINANCE

THE TIPPING POINT

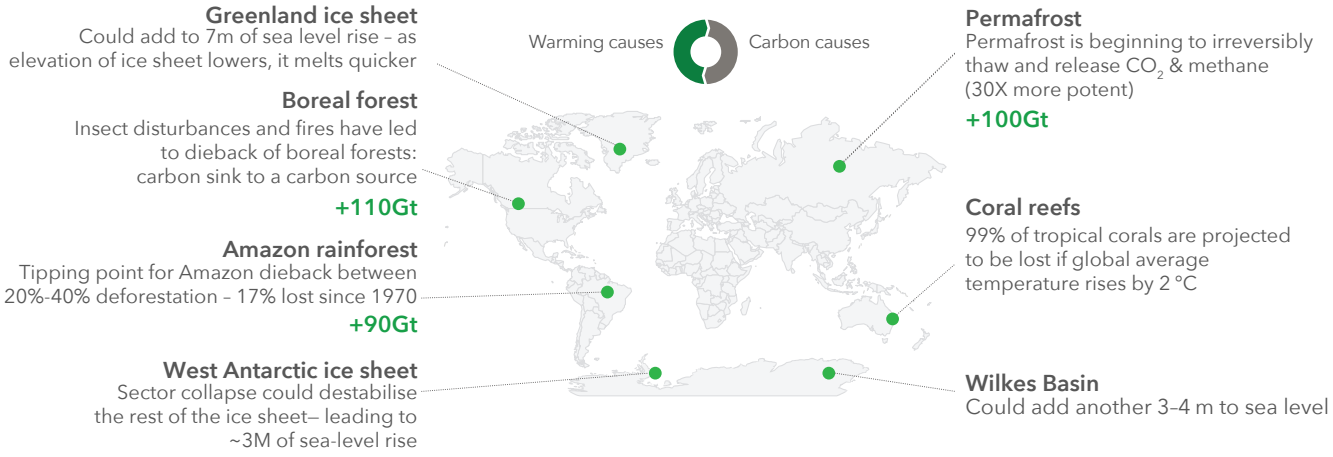
A clear scientific consensus has emerged on addressing climate change: deep reductions in carbon dioxide and other greenhouse gas emissions are needed in the coming decades to keep global temperature increases to well below 2°C, preferably below 1.5°C, compared to preindustrial levels.[3] If this limit is breached, the world will encounter further irreversible environmental damage that will threaten natural habitats, global economic growth, and societal cohesion. Worse still, it may trigger 'tipping points' that release further greenhouse gases, putting in motion an unstoppable cycle of ever-rising emissions.[4] This is the conclusion reached by the 196 nations that signed the Paris Agreement in 2015. Since then, more and more private sector entities have also thrown their weight behind achieving this goal. Going forward, governments and public and private organisations have a responsibility to ensure that their commitments translate into tangible change across the real economy.

Keeping the planet's atmosphere below the Agreement's target temperature means a 50% reduction in global carbon emissions each decade. After first reducing emissions in line with science, we must ensure that any remaining emissions of greenhouse gases caused by human activity are balanced by removals — net zero — by 2050 or sooner.[5] Meeting this goal will require an historic effort by all parts of society in a short period.

Figure 2. Tipping points – stages where irreversible damage occurs to the environment – will start to occur above 1.5°C relative to pre-industrial times, according to forecasts.

*Evidence of tipping points is already being observed – some tipping points are a positive feedback loop, resulting in an additional >300Gt CO_2**

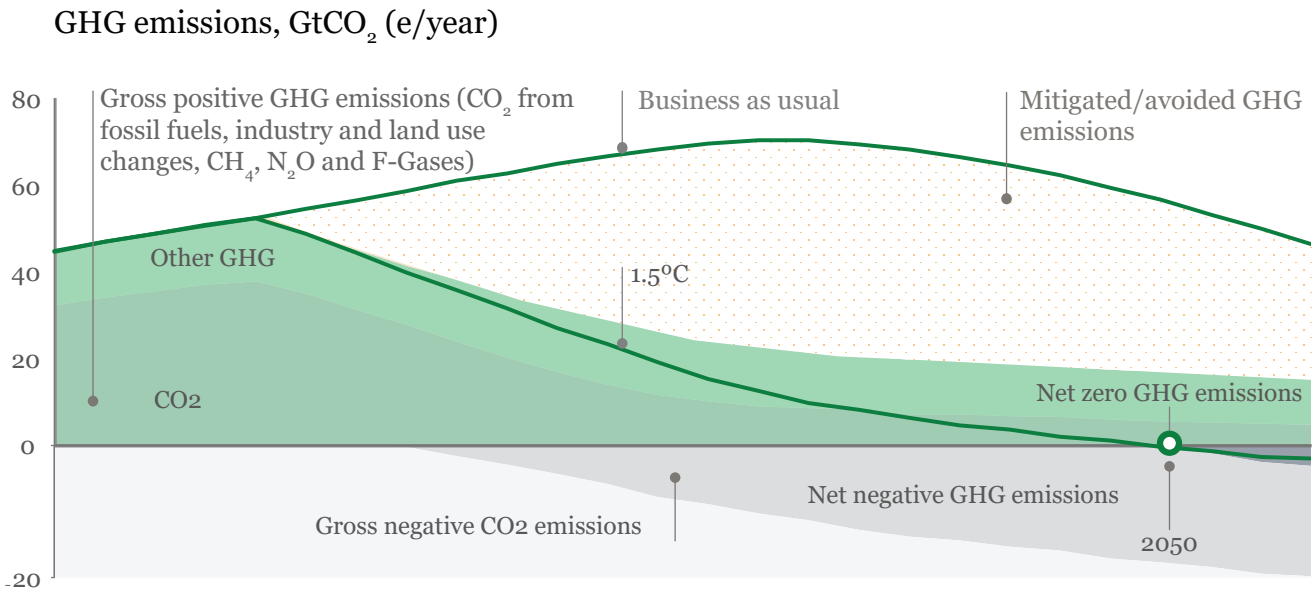
Not exhaustive



*Release of additional CO_2 likely to be incremental rather than all at once.
Source: Nature, Climate tipping points – too risky to bet against, 27 Nov 2019

3. IPCC's Special Report on Global Warming of 1.5°C (2018); IPCC's Sixth Assessment Report (2021)
4. Nature, 'Climate tipping points — too risky to bet against'
5. IPCC Sixth Assessment Report 2021

Figure 3. Net zero emissions[6]



Source: UNEP Mercator Research Institute on Global Commons and Climate Change (MCC), IPCC

FINANCING TRANSITION PATHWAYS

Although emissions reductions must ultimately be delivered in the real economy, transition will require collaboration between a wide range of groups, including the financial services industry, policymakers, governments and regulators.

Climate science has outlined transition pathways for many sectors. For instance, transition in the automotive sector is underpinned by a shift to electric vehicles, and in power generation by a shift from coal and gas to wind, solar and other renewable energy sources. Pathways are increasingly being defined in sectors where emissions are high and hard to reduce, such as shipping or steel.[7] These will need to be supported by new technologies such as clean hydrogen, carbon capture and storage, and sustainable bioenergy, many of which are not yet competitive or scalable.

It is important that banks actively support their clients to deliver global net zero. It isn't good enough for banks to simply reallocate capital away from today's high emitters. That would risk those emissions being financed elsewhere, and potentially

BOX 1: WHAT ARE FINANCED EMISSIONS?

The GHG Protocol defines three scopes of emissions, which are referred to in this report:

- Scope 1: Direct emissions (e.g. from company facilities and vehicles)
- Scope 2: Indirect emissions from the use of purchased energy or electricity
- Scope 3: Indirect emissions that occur in a company's value chain (e.g. from business travel, use of sold products, distribution, investments)

Within their Scope 3 emissions, banks service the ongoing capital needs of individuals and companies and provide new capital for specific projects. In both cases, banks are considered to have financed a portion of the GHG emissions produced by individuals, companies or projects. These emissions are commonly referred to as financed emissions. They are largely covered under Category 15 of the GHG Protocol.

6. CO_2 = carbon dioxide; other greenhouse gases: CH_4 = methane; N_2O = nitrous oxide, F-gases = fluorinated gases
7. ETC Mission Possible: Reaching Net-Zero Carbon Emissions from Harder-to-Abate Sectors by Mid-Century

bring about a transition that is not orderly or fair. However, banks will increasingly need to direct capital towards low-carbon activities. Reducing banks' own operational emissions is important, but focusing on their financed emissions, which are typically significantly greater, has the potential to contribute to much greater climate impact.[8] This will require financing of both existing clients who are shifting their activities and new players with low-carbon business models. It needs to be recognised, however, that banks and financial markets alone cannot drive the transition to net zero. Policymakers, governments and regulators will need to enable the more rapid development of necessary technologies to accelerate the transition to net zero.

NET ZERO ALIGNMENT

Net zero alignment is not a straightforward task for banks. Banks need to build a bridge between the methods scientists and governments use to assess the climate change crisis at a macro level, and the typical, day-to-day processes that banks use to provide services to clients and manage risks.

Climate science, for example, calculates a global carbon budget, which is in turn translated into national policies and split by geography and emissions type. In contrast, banks manage a complex portfolio of clients whose operations span geographies and sectors and produce different types of emissions. There is also a lack of consistent, granular and accurate emissions data from the real economy on which to base decision making at this stage.

Given the urgency for all actors to respond to climate change, banks need to do what they can to develop approaches that are as robust as possible with the available data and methodologies. This will allow them to measure and set targets for emissions within their portfolio, aligned with scientific pathways. It will form the basis for ongoing engagement and action to support clients in their transition. As data availability and tools improve and all actors develop a better understanding of the needs and issues, banks and other actors in the wider ecosystem will be able to evolve and improve their approach.

Given the developing nature of the net zero topic, transparency is paramount. It is important that banks use disclosure to inform external stakeholders of progress, plans and achievability of their net zero commitments. This will cement the organisation's ambition level and help ensure credibility of the strategy.

WORKING WITH CLIENTS TOWARDS NET ZERO

Banks' net zero strategies should then translate into active engagement with clients and a robust understanding of clients' transition plans, allowing banks to effectively align their portfolios to scientific pathways. Getting this wrong in the near term could lead to the opposing extremes of funding projects that lock in a dangerous level of emissions for decades to come and of allocating capital to nascent technologies that are not yet financially viable. In some cases, this financing will require financial innovation to match the profile of the required investment with investor appetites.

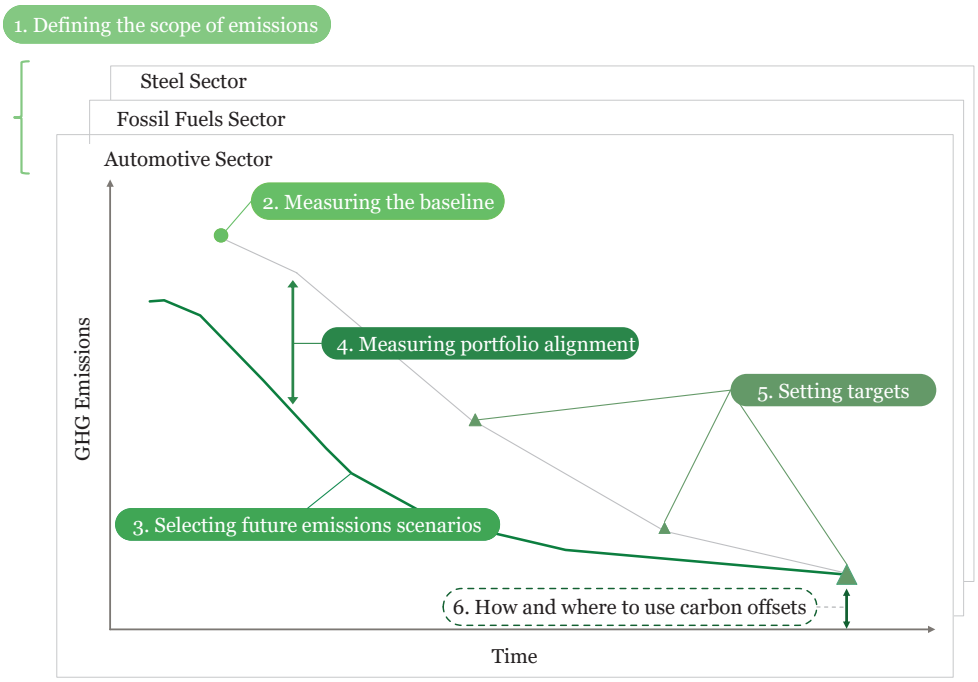
Financing the transition is, however, the start of the journey. Banks are just beginning to explore other ways to support their clients, from helping them to understand their individual climate impact to sharing best practice on emerging solutions within sectors. For example, banks can leverage their relationships with small and medium-sized enterprises that have less experience with net zero to provide advice on ways to lower operational emissions. While this area is very much in its nascent phase, its ongoing evolution will be critical to the overall net zero goal.

8. The CDP estimates bank financed emissions are around 700 times larger than their operational emissions

METHODOLOGY AND TARGET SETTING

Part I

Sections in Part I



1 **Defining the scope of emissions**
- The areas of the bank's business and the resulting client-generated emissions that will be included in net zero efforts

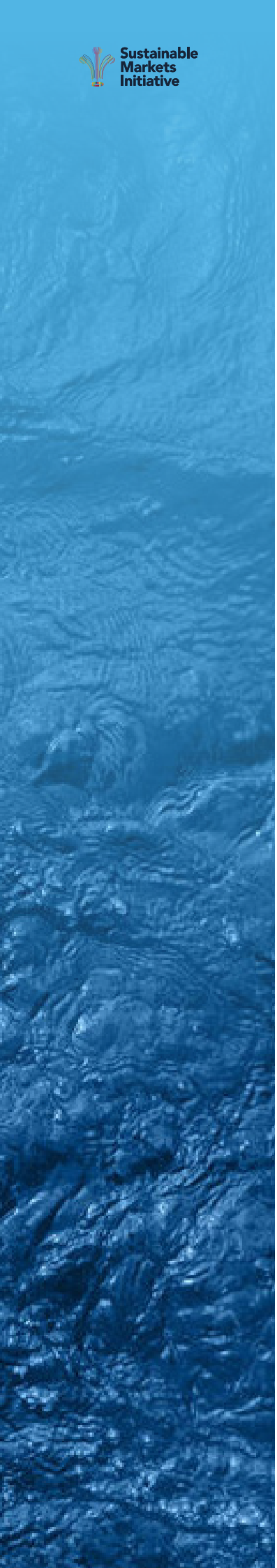
2 **Measuring the baseline**
- The calculation methodology used to capture snapshots of the total in-scope emissions within a bank's portfolio over time

3 **Selecting future emissions scenarios**
- Benchmark emissions pathways to align in-scope emissions to over time

4 **Measuring portfolio alignment**
- The process to measure how in-scope emissions compare to the benchmark

5 **Setting targets**
- End state and interim targets to define a bank's ambition and route

6 **How and where to use carbon offsets**
- Tradable units allowing one party to claim another's emissions reductions, the role of which needs to be defined in measurement and target setting



1. DEFINING THE SCOPE OF EMISSIONS

Key Messages

State of play

The first step in constructing a net zero strategy is to define the scope of client-generated emissions resulting from financing activities

Common ground

Many banks are assessing emissions associated with their on-balance sheet financing because this provides a good starting point for them to monitor their activities in order to finance a net zero economy

Discussion points

There is not an industry consensus on the inclusion of capital markets financing within scope

Some believe including capital markets is important where the activity is material (this view is supported by NZBA, subject to the development of methodology), while others believe it leads to emissions double counting and is removed from directly funding emissions

The FSTF recommends

As part of a robust, transparent approach, banks disclose emissions metrics related to capital markets financing where material, noting that they may develop their own methodology or wait for industry methodology to develop

Banks shape the development of industry standards to enable consistent reporting of financed (on-balance sheet) and facilitated (off-balance sheet) emissions

STATE OF PLAY

The first step in constructing a net zero strategy is to define the scope of client-generated emissions resulting from financing activities.

Scope is the foundation upon which any net zero strategy must be built. A sound definition of scope allows the bank to focus on and set targets for the activities that have the highest impact on real world emissions.

Communicating scope is also crucial. A consistent approach to defining scope across the banking industry will help enable external stakeholders, such as investors, regulators and the public, to better understand and compare efforts to align portfolios to net zero.

COMMON GROUND

Many banks are assessing emissions associated with their on-balance sheet financing because this provides a good starting point for them to monitor their activities in order to finance a net zero economy.

Ultimately, net zero strategies will address emissions across banks' portfolios. Banks have made a start by including activities and sectors where the absolute amount of emissions financed, the intensity of emissions financed, or the amount of monetary financing provided is significant. This is aligned to NZBA and the United Nations Environment Programme Finance Initiative's Guidelines for Climate Target Setting for Banks (UNEP FI Guidelines).[9]

IN-SCOPE SECTORS

UNEP FI Guidelines[10] encourage banks to expand the sectors they include in scope for target setting over time, leading to the inclusion of all, or a substantial majority of, carbon-intensive sectors within 36 months of signing, where data and methodology allow.[11]

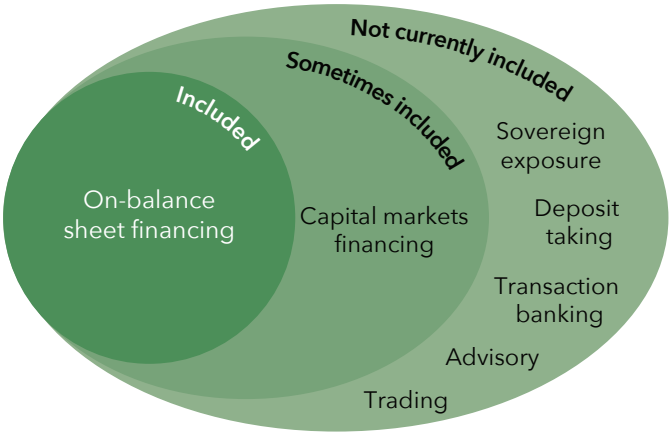
IN-SCOPE ACTIVITIES

Where the FSTF banks have disclosed the range of client services included in their own scopes, they have so far generally focused on activities related to financing, including direct on-balance sheet financing[12] and facilitation of financing, such as through capital markets.[13] On-balance sheet financing should be included in scope because the activity is material to the bank's revenues and has a significant link to real-world emissions. UNEP FI Guidelines and the NZBA Commitment Statement support the inclusion of on-balance sheet financing.

Other activities such as deposit taking, transaction banking, trading (including of products that derive their value from underlying equity or debt, such as options) advisory and sovereign exposure are not typically included in scope. This is due to the difficulty of attributing real-world emissions to these activities and the lack of a standard methodology. Over time, some of these activities will likely be included in scope as industry thinking and methodologies evolve.

Opinions vary on whether, and how, to include emissions related to capital markets business and other facilitated financing activities. The considerations are explored in the following section.

Figure 4. Current state of activities included in scope



9. UNEP FI, 'Guidelines for Climate Target Setting Banks'
10. Ibid.
11. UNEP FI Guidelines suggest the following list of carbon intensive sectors: agriculture; aluminium; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport
12. Where banks provide loans to clients and hold the loans on their balance sheets
13. Where banks arrange financing for their clients through equity capital markets, debt capital markets and syndicated loans, but do not hold the financing on their own balance sheets

DISCUSSION POINTS

There is not an industry consensus on the inclusion of capital markets financing within scope. Some believe including capital markets is important where the activity is material (this view is supported by NZBA, subject to the development of methodology), while others believe it leads to emissions double counting and is removed from directly funding emissions.

While many banks are exploring whether and how to include emissions related to capital markets financing in scope, initial approaches differ. Some banks have not included them because there is currently no standard methodology for the measurement or attribution of these emissions and including them may lead to double counting. (See Box 2). Double counting in this case occurs when the bank facilitating the transaction and the ultimate investors in capital markets instruments both count the same emissions. However, some banks have included capital markets financing in scope because they consider that this reflects the breadth of support provided to their clients, particularly if the activity is material to the bank's overall activity. This enables them to have more influence on real economy emissions, helping to tackle climate change. They also consider that the double counting of emissions does not detract from the overall goal of net zero alignment. Inclusion is supported by NZBA, subject to the development of industry methodology over time.

An example of a bank that has included capital markets is Barclays. This section includes a case study outlining their rationale and considerations for doing so.

Developing a methodology for including emissions from capital markets activities is challenging. One complexity is that a capital markets transaction occurs at a single point in time but results in financing for a longer period (i.e. a set duration for many debt products and an indefinite period for equity), with potential implications for the calculation of the related emissions. A second complexity is that banks may wish to weigh capital markets activities differently from lending activities to take into account the different roles of banks in each activity and to minimise double counting between originating banks and investors. A working group has been set up by PCAF to seek alignment on a standard capital markets methodology.

THE FSTF RECOMMENDS...

- As part of a robust, transparent approach, banks disclose emissions metrics related to capital markets financing, where material, noting that they may develop their own methodologies or wait for industry methodology to emerge.
- Banks shape the development of industry standards to enable consistent reporting of financed (on-balance sheet) and facilitated (off-balance sheet) emissions.

CASE STUDY: BARCLAYS' INCLUSION OF CAPITAL MARKETS ACTIVITY IN ITS FINANCED EMISSIONS REDUCTION

As part of its ambition is to be a net zero bank by 2050, Barclays is aligning all of its financing with the goals of the Paris Agreement. It is doing so not just across lending, but for its capital markets activity as well. As one of the world's largest banks, with a significant capital markets franchise, Barclays took this decision in order to better reflect the breadth of its client support through its investment bank. It was the first bank to implement such an approach.

To support Barclays' portfolio alignment work, the bank built BlueTrack™, a methodology for measuring financed emissions and tracking them at a portfolio level against the goals of the Paris Agreement. BlueTrack™ also helps to embed climate impact in all Barclays' financing decisions.

In order to cover capital markets activity as well as lending, it was necessary for the BlueTrack™ methodology to build on and extend existing industry approaches. During its development, Barclays had to make a number of additional decisions to allow it to begin to measure, track and set targets for emissions associated with capital markets finance.

Key decision	Approach	Rationale
Time period of capital markets transactions included	Transactions arranged for a client over the previous 12 months	Aligns to the period during which fees are generated for the activity
Attribution between facilitating banks	Based on league table credit	Based on established industry ranking approach; reduces double counting between facilitating banks
Attribution between facilitating banks and ultimate investors	33% of emissions to Barclays	Reflects banks' more limited role relative to role of investors
Separate or combined reporting	Emissions combined in single metric across corporate lending and capital market activities	Able to set clear, single target across activities

Barclays expects to continue to refine BlueTrack™ over time. The bank is actively working with other capital markets financiers across the industry to align approaches to emission reduction where possible. Barclays has made its methodology for BlueTrack™ public and this is available on the bank's website.

BOX 2: DOUBLE COUNTING

Double counting occurs where multiple entities count the same emissions in their emissions calculations, or the same emissions reductions toward their targets. While it should be avoided where possible, it may be unavoidable in some cases and need not prevent organisations from evaluating or addressing emissions within their boundaries.

Between multiple companies: Companies within the same value chain might each count the same emissions in their GHG inventories. For example, an engine manufacturer's Scope 3 emissions would include the Scope 1 emissions of an airline when it flies passengers in a plane using the engine. If a bank finances both clients, it may therefore count the same emissions more than once.

Between multiple financing providers of the same entity or activity: Multiple finance providers of the same entity or activity will each count a portion of that entity or activity's emissions in their GHG inventories. Without a consistent method to attribute the emissions between financing providers, some of the same emissions may be counted by multiple providers.

Between facilitating banks and investors in capital markets transactions: Multiple parties involved in the financing of an entity or project may count the same emissions. For example, both the bank facilitating a capital markets issuance for a company as well as the investor ultimately holding the capital markets instruments may choose to count the company's emissions associated with that particular transaction.

2. MEASURING THE BASELINE

Key Messages

State of play

The emissions baseline provides a point-in-time snapshot of in-scope emissions, thus establishing a reference point for target setting

Common ground

The Partnership for Carbon Accounting Financials (PCAF) is emerging as a leading standard for measuring an emissions baseline

Discussion points

Key technicalities for emissions measurement continue to be debated, for example, the use of committed or outstanding loan values in the baseline calculation

In addition, lack of consistent, granular emissions data from the real economy makes emissions measurement challenging

The FSTF recommends

Banks either follow PCAF or a comparable methodology

If a comparable methodology is used, banks publicly disclose the methodology and assumptions employed

Banks collaborate across a range of stakeholders to champion emissions data disclosures across the economy

STATE OF PLAY

The emissions baseline provides a point-in-time snapshot of in-scope emissions, thus establishing a reference point for target setting.

Baselining allows banks to set targets, and measure and disclose progress for both themselves and their clients. Emissions baselines can be calculated using absolute emissions or other metrics, such as emissions intensity[14] (see Section 5 - Targets for an explanation and comparison of metrics). Banks should calculate a baseline using consistent and coherent methodologies in order to provide transparency to investors, regulators and other external parties. A baseline should, along with chosen scenarios and targets, allow a bank to effectively steer the emissions of its portfolio towards net zero. See Figure 5 for a generalised example of how a bank might calculate its portfolio emissions baseline.

COMMON GROUND

PCAF is emerging as a leading standard for measuring an emissions baseline.

PCAF provides a methodology to establish an absolute emissions baseline and is widely adopted across the industry. PCAF adopts a 'bottom-up' approach, gathering detailed emissions data at a client level and attributing those emissions to financing provided by banks. When client data is not available, PCAF allows and gives guidance on the use of estimates and proxies. As a bottom-up methodology, PCAF provides a basis for banks to engage clients and ensure that they understand the impact of their own emissions.

PCAF has commitments from more than 100 banks and around 50 other financial institutions, and is endorsed by the GHG Protocol.[15] As a peer-led initiative, PCAF will continue to evolve and adapt its methodology to the needs of the finance industry.

Banks face several considerations when establishing an emissions baseline. PCAF's guidance addresses many of these, including:

- **Baseline metrics.** PCAF's baseline methodology uses absolute emissions, but it also recognises that alternative metrics (e.g. intensity metrics) can guide banks' decisions about targets, scenarios and steering. These metrics are also useful in comparing emissions performance across portfolios.
- **Prioritisation of sectors and scopes of emissions.** PCAF requires reporting of Scope 1 and 2 emissions across all sectors. Scope 3 emissions are then included over a four-year period, beginning with oil & gas and mining in 2021, followed by other high-emitting sectors. This is in accordance with guidance provided by the European Commission Technical Expert Group on Sustainable Finance (EU TEG).
- **Attribution of emissions between financing providers.** The PCAF methodology attributes emissions based on the proportion of the bank's outstanding financing to an entity or activity, relative to the entity or activity's total equity plus debt. For public companies, it uses enterprise value including cash, or EVIC.[16] When applied consistently, this avoids double counting of the same emissions by multiple financing providers.
- **Data quality.** PCAF provides a data scoring methodology[17] that helps to address data quality and availability challenges. For example: clients do not always report consistent, granular emissions and verification of disclosures can vary considerably across jurisdictions and sectors. See Box 3 for additional details on data challenges.

In addition to the above considerations, banks need to select a year to measure their baseline in which both emissions and financial data are available.

14. The amount of emissions released per unit of another variable such as physical output (e.g. energy production or vehicle kilometres driven) or a monetary unit (e.g. loan and investment volume) - IPCC Special Report: Global Warming of 1.5 ºC Glossary
15. PCAF, 'Financial Institutions taking action'
16. Enterprise value including cash = the market value of equity + book value of debt + cash
17. PCAF grades data according to quality from 1-5 and offers guidance for how that data could be used to estimate financed emissions. The data types that PCAF grades range from verified client reported data to economic activity-based emissions estimates (e.g. asset turnover ratios). In the short-term PCAF allows banks to use estimates at the most granular level available but encourages replacing them with client level data at the earliest opportunity. Where necessary banks may choose to use third-party databases

Figure 5. Illustrative calculation of absolute financed emissions

Clients	Sector	Absolute emissions $MtCO_2e$ A	Attribution factor % B	Bank's financed emissions $MtCO_2e$ A*B	Bank's financed emissions at sector level $MtCO_2e$ Sum (A*B)	Bank's financed emissions at portfolio level $MtCO_2e/y$ Sum (A*B)
Firm 1	Oil & gas	25	10%	2.5	3 $MtCO_2e$ for the O&G sector	**Current footprint** 11 $MtCO_2$ across oil & gas, power, automotive and aviation
Firm 2	Oil & gas	10	5%	0.5		
Firm 3	Power	20	5%	1.0	6 $MtCO_2e$ for the power sector	
Firm 4	Power	20	10%	2.0		
Firm 5	Power	15	20%	3.0		
Firm 6	Automotive	4	10%	0.4	0.5 $MtCO_2e$ for the automotive sector	
Firm 7	Automotive	2	5%	0.1		
Firm 8	Aviation	4	15%	0.6	1.5 $MtCO_2e$ for the aviation sector	
Firm 9	Aviation	2	20%	0.4		
Firm 10	Aviation	10	5%	0.5		

Note: For target setting, banks are setting targets based on absolute emissions and or emissions intensity. These targets are often set a sector level. See Section 5 – Targets for a discussion of target setting.

DISCUSSION POINTS

Key technicalities for emissions measurement continue to be debated, for example, the use of committed or outstanding loan values in the baseline calculation. In addition, lack of consistent, granular emissions data from the real economy makes emissions measurement challenging.

PCAF provides helpful guidance to drive consistency. However, there remain some outstanding challenges. As a result, some banks, including some in the FSTF, have chosen to diverge for the reasons outlined in Figure 6.

Figure 6. Outstanding challenges

Choice	PCAF Approach	Considerations
Include undrawn facility amounts OR include outstanding and undrawn exposure/ exposure at default	Only include outstanding amounts in calculation of bank's financing	Undrawn exposure is often a large part of a bank's client financing offer; including undrawn exposure allows banks to account for emissions that would only occur with the backstop of an unutilised portion of a financing facility. However, this approach diverges from financial reporting, which is based on outstanding facility amounts and is difficult to attribute across multiple lenders
Use book value of equity OR use the market capitalisation	Emissions attributed between financing providers based on proportion of EVIC	Changes in share price can lead to changes in the attribution of emissions, even if the emissions don't change; using book value results in a less volatile metric. However, using book value of equity reduces alignment with financial reporting, particularly for assets held over long periods of time
Calculate baseline using absolute emissions OR using weighted average of clients' emissions intensity	Absolute emissions baseline calculated using PCAF's attribution method	Avoids complex attribution process and associated assumptions and estimations; intensity metrics are useful for banks when steering a portfolio. However, in total portfolio calculations, they can result in less capital intensive, high-emissions industries being under-weighted and vice versa, leading to divergences with absolute emissions baseline reporting

THE FSTF RECOMMENDS...

- Banks either follow PCAF or a comparable methodology.
- If a comparable methodology is used, banks publicly disclose the methodology and assumptions employed.
- Banks collaborate across a range of stakeholders and policymakers to champion emissions data disclosures across the economy.

CASE STUDY: BANK OF AMERICA PARTICIPATES IN PCAF DEVELOPMENT

Bank of America is one of several FSTF banks that have committed to implementing the PCAF standard for carbon accounting, known as the Global GHG Accounting and Reporting Standard for the Financial Industry. Joining PCAF came at a time when Bank of America was evaluating a financed emissions methodology and was considering three options: 1) develop its own methodology; 2) advocate/work to develop a methodology in conjunction with other U.S. peers; or 3) join PCAF.

Bank of America had previously engaged in other industry efforts to measure financed emissions, including the Portfolio Carbon Initiative Exploring Metrics to Measure the Climate Progress of Banks. While this work highlighted certain asset classes as reasonably in scope for consideration when measuring climate progress, the calculation of financed emissions left several questions unresolved, such as how to allocate emissions and account for them at the investee level and how to approach the lack of consistency of accounting across scope 1, 2, and 3 emissions of investees and borrowers.

When PCAF launched its global initiative to develop a GHG accounting and reporting standard for financial institutions with the support of World Resources Institute (WRI), UNEP FI and 2° Investing Initiative (2DII) in 2019, Bank of America engaged with PCAF to learn more about the partnership and its methodology.

Bank of America ultimately decided to join PCAF for several reasons:

- The PCAF approach works from the bottom up, allowing financial institutions to analyze emissions at the client level, compared to top-down approaches that assess at the sector/portfolio level
- The PCAF standard is the only financed emissions standard supported by the GHG Protocol
- Standardization across the industry facilitates comparability and transparency for external stakeholders
- Supporting a standardized approach minimises the risk of a proprietary methodology being superseded by future industry convergence or regulatory requirements
- PCAF is industry-led and developed, so joining PCAF provided an opportunity to contribute to the development of the standard to ensure it was feasible and meaningful for large banks

With regard to the methodology itself, the PCAF standard is designed to align with the financial accounting system to support consistency with existing external financial reporting, financial sector practice and regulation. However, this approach is not without its challenges. By aligning carbon accounting with balance sheet accounting the methodology allocates emissions based on the relative notional value held by an institution and does not distinguish between capital providers, who may have different levels of control, risk and reward (i.e. debt versus equity owners). As a consequence, the attribution of emissions to a financial institution may overstate its influence on a client or investee's decision making. For instance, debt holders, simply by virtue of larger notional balances, bear a greater share of the emissions attribution compared to equity holders who through voting rights and other control mechanisms, are better able to influence the strategic direction of a company. Additionally, while PCAF addresses the challenge of data inconsistency by including in the methodology a data quality score to drive ongoing transparency, a lack of available client emissions data requires estimation that could be inconsistent across banks depending upon their internal processes. PCAF provides a database with emission factors across industries that banks can use in their estimations; however, banks are also free to conduct their own custom estimations or use factors from a source other than PCAF.

These types of challenges might be true of any standard, and it is important that the industry work in concert to address them. To strive to live up to its promise to become an industry standard, Bank of America continues to engage other PCAF members in order to address these and other challenges, amend and refine the methodology, and drive adoption of best practices in its implementation.

Since Bank of America joined PCAF in July 2020, other banks and asset managers have continued to sign on to the effort, which now includes 149 institutions from across the globe. Bank of America is encouraged by PCAF's ability to bring these institutions into the fold and incorporate their expertise, experience and/or interest in crafting or modifying future iterations of the Standard. In this way, PCAF is connecting banks and other financial institutions across the globe to drive a harmonized approach to carbon accounting.

BOX 3: DATA QUALITY, LIMITATIONS AND CHALLENGES

Client-reported data, where real economy participants report their actual emissions by sector and geography, is deemed the best quality of data.

However, despite recent adoption of mandatory disclosure requirements by some jurisdictions, client reporting is not mandatory in most jurisdictions. Across the real economy there is a lack of verified emissions data, particularly around Scope 3 emissions. For some customers and sectors, and in some geographies, carbon emissions reporting is uncommon and not seen as an immediate priority. For example, smaller, private companies do not typically have high quality disclosures verified by third parties.

Even when clients do report, banks face a number of challenges. The poor quality and availability of clients' historical and current emissions data, or sub-sector data, is currently a significant problem. Proxies and estimations are often required (e.g. using Energy Performance Certificate ratings as a proxy metric for residential mortgage-related emissions in the UK). The absence of widely available, accurate climate-related information at the sub-sector level makes it difficult to estimate metrics used for baselining financed emissions, as well as setting targets.

In order to address these challenges, banks and policymakers need to facilitate improvements in the quality of data being reported from the real economy:

Data provided at a country and sector-specific level

Client emissions data is most useful to banks if it is equivalent in granularity to country and sector level benchmarks. Ideally, companies operating across multiple sectors or geographies would disaggregate this data.

Quality Scope 3 data made readily available

Without accurate Scope 3 data, investors cannot judge the emissions impact of their portfolios, particularly those involving carbon-intensive sectors. Scope 3 financed emissions data should always be disclosed separately from Scopes 1 and 2.

Improve data quality around emissions reductions targets

By encouraging more companies to set clear targets using standardised methodologies, banks can help create better forward-looking metrics.

Data covering all assets to allow better aggregation at the portfolio level

To enable comparison across portfolios with diverse asset mixes, data must be available for all asset classes. This should include consumer level data from utilities and similar stakeholders (e.g. home energy usage versus Energy Performance Certificates estimates).

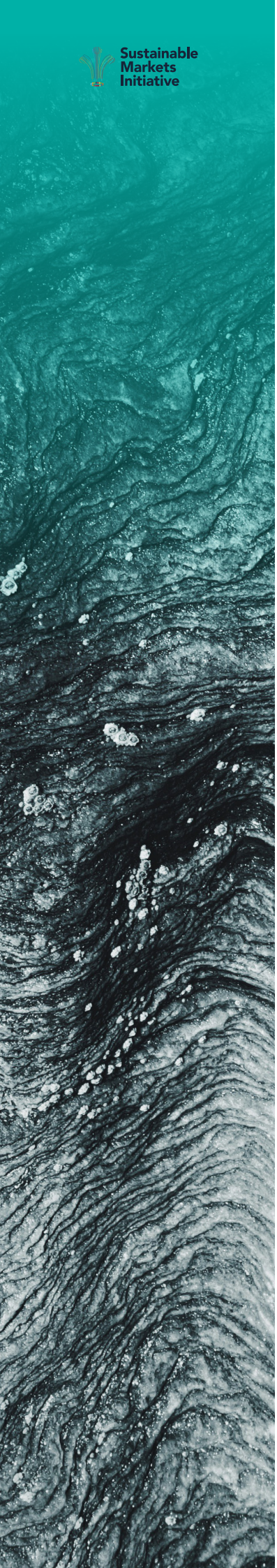
Data must be comparable and contextualised with qualitative information

If data is shared selectively, or out of context, it can be misleading. For example, averages can compromise the objectivity of information by masking outliers or poorly performing segments. By contextualising information with ranges and qualitative information, banks can give clearer meaning and balance to their disclosures.

Carbon credits disclosed separately

Clients should disclose any carbon credits used separately from their emissions inventories for transparency and accuracy.

Policymakers will have a key role to play in improving data quality and availability. Furthermore, policymakers will need to address disclosed data, which will be vital in improving the reliability of assessments made.



3. SELECTING FUTURE EMISSIONS SCENARIOS

Key Messages

State of play

Net zero outcome emissions scenarios are projections of different possible futures that can be used for setting portfolio targets and providing a benchmark to monitor progress

Common ground

A credible net zero strategy ideally uses scenarios that meet minimum, industry-agreed criteria such as those issued by NZBA and SBTi. These include credible sources, no- or low-overshoot and conservative reliance on negative emissions technologies

Discussion points

Current limitations include the availability of disaggregated net zero scenarios with a high ambition level (1.5°C or net zero by 2050) that can be operationalised into a sector and geography decision-useful toolkit

The FSTF recommends

Banks choose science-aligned net-zero scenarios that limit warming to 1.5°C with no- or low-overshoot and are appropriate for their sector and geography mix. If a 1.5°C scenario is not selected, banks should disclose the rationale

Banks support the further development of publicly available, credible, 1.5°C scenarios with no- or low-overshoot, that contain required sector and geography disaggregation. They should review their targets as these become available

STATE OF PLAY

Net zero outcome emissions scenarios are projections of different possible futures that can be used for setting portfolio targets and providing a benchmark to monitor progress.

The pathways outlined in emissions scenarios are the result of models that analyse societal, economic, political, and technological trends and show how human activity affects the planet's climate. These pathways guide the actions policymakers and both public and private institutions can take in the coming decades to fulfil global temperature goals and achieve net zero. These scenarios help banks set decarbonisation targets for portfolios, industries, and even specific client companies, as outlined in Box 4.

As banks look to set decarbonisation targets for their sector portfolios or individual clients, they are selecting scenarios from a number of providers to use as benchmarks – often the International Agency's (IEA) Sustainable Development Scenario (SDS) and Beyond 2°C Scenario (B2DS), or in some cases, geography-specific scenarios such as the UK Climate Change Committee's Balanced Net Zero Pathway.

BOX 4: TYPES OF SCENARIOS AND ASSESSMENTS

Banks use scenarios for several purposes and it is important to distinguish between them.

As the focus on climate risk has increased over the past decade through initiatives like the TCFD, banks have conducted "scenario analysis" to explore risks from a broad range of potential future climate outcomes. This has also been driven by current or future prudential stress tests including in the UK, Europe, Australia, Brazil, Canada, Hong Kong and Singapore. The Network for Greening the Financial System (NGFS) has created a reference framework of scenarios reflecting different climate outcomes and pathways for these purposes.

More recently, as banks have looked at "portfolio alignment" to a net zero or temperature outcome, they have used a sub-set of available scenarios as benchmarks. These benchmarks reflect desirable pathways to their chosen outcome.

COMMON GROUND

A credible net zero strategy ideally uses scenarios that meet minimum, industry-agreed criteria such as those issued by NZBA and SBTi.

The industry has started to define characteristics that scenarios used for portfolio alignment should have. In line with the NZBA Commitment Statement, selected scenarios should be:

- **Rooted in thorough scientific, economic and technological modelling** to ensure that they represent realistic pathways to net zero.
- **'No-overshoot' or 'low-overshoot',** meaning that in practice, the scenario should not overshoot temperature targets or should do so only for a short interval. This encourages early action and reduces the risk of irreversible environmental damage.[18]
- **Not dependent or conservatively dependent on negative emissions technologies** and nature-based solutions to remove CO_2 from the atmosphere. At present, some nature-based solutions are suitable for large-scale use, but they are not permanent and may be hindered by land supply limits.[19] Newer, unproven technologies may not be deployable at scale by the time they're required.
- **Designed so there are no negative socio-political consequences** and they do not undermine global sustainability outcomes (e.g. the UN Sustainable Development Goals).

In addition, scenarios that include all greenhouse gases are helpful to capture broader climate impact, particularly in sectors where non-CO_2 emissions are significant, such as methane emissions in agriculture or oil and gas. Frequently updated scenarios are better able to capture the latest scientific, technological and economic developments. (See Credit Suisse case study covering some practical implications of updates.)

18. For an illustration of no- or low-overshoot, please see model pathways P1 and P2 in the IPCC's Special Report on Global Warming of 1.5°C
19. See for instance UN PRI, 'An investor guide to negative emission technologies and the importance of land use' (2020)

DISCUSSION POINTS

Current limitations include the availability of disaggregated net zero scenarios with a high ambition level (1.5°C or net zero by 2050) that can be operationalised into a sector and geography decision-useful toolkit.

Banks face a choice between a range of possible scenarios meeting the minimum criteria. The common trade-offs that banks face concern:

- **Temperature ambition.** Selecting a scenario aligned to temperature targets – whether well under 2°C or 1.5°C– helps ensure that a bank's actions and capital allocation match its declared goal.[20]
- **Disaggregation by geography or sector.** Scenarios that are disaggregated by geography and sector offer greater detail on net zero pathways that clients might take. This allows banks to construct appropriate benchmarks to support client transitions. Without this disaggregation, banks risk setting targets based on unreasonable or insufficient expectations around the pace of client transitions.

Banks face limited scenarios aligned with a 1.5°C outcome and they may lack the sectoral and geographic disaggregation required or be based on a set of assumptions on policy and technology that are still uncertain. Work to address this challenge is under way, including the recent IEA Net Zero Emissions by 2050 Scenario (NZE2050) detailed in Box 5 and the Network for Greening the FinancialSystem's Net Zero 2050 Scenario. Yet some banks may have to compromise by making trade-offs between temperature ambition and disaggregation, for instance, where they have exposure to a particular region and there are not yet available sectoral pathways specific to that region with a 1.5°C ambition level.

A further question is whether to use a single scenario as a benchmark or a combination of multiple scenarios. The argument for a single scenario has been made based on practicality, ease of interpretation and the transparency of assumptions. However, some industry participants consider that a multiple-scenario approach provides a more robust and stable benchmark, given it has less sensitivity to the specific assumptions of an individual scenario.[21]

THE FSTF RECOMMENDS...

- Banks choose science-aligned net zero scenarios that limit warming to 1.5°C with no- or low-overshoot and are appropriate for their sector and geography mix. If a 1.5°C scenario is not selected, banks should disclose the rationale.
- Banks support the further development of publicly available, credible 1.5°C scenarios with no- or low-overshoot that contain required sector and geography disaggregation. They should review their targets as these become available.

BOX 5: THE IEA'S NZE2050 SCENARIO

The IEA's NZE2050 scenario was released in May 2021. Its release represented a highly notable addition to the body of 1.5°C scenarios available from a well-recognised scenario provider. It is considered particularly impactful because it lays out detailed assumptions across a number of sectors that could lead to a 1.5°C outcome. It describes a pathway to reach net zero by 2050 but does not yet include regional disaggregation.

The scenario is underpinned by a number of key changes:

- No new oil and natural gas fields beyond those already approved for development
- Coal demand falls by 90% by 2050, while natural gas demand falls by over 50%
- Solar and wind moves from 10% of electricity generation today to the majority by 2030, and 70% by 2050
- 50% of heating demand is met by heat pumps by 2045
- Plastic collection rates for recycling increase from 15% in 2020 to 55% in 2050
- 7.6 Gt CO_2e is captured and stored in 2050

20. In pathways limiting global warming to 1.5°C with no or limited overshoot as well as in pathways with a higher overshoot, CO_2 emissions are reduced to net zero globally around 2050. (IPCC SR1.5°C)
21. For a fuller description of the arguments see the Portfolio Aligment Team's (PAT) "Measuring Portfolio Alignment: Technical Supplement" and SBTi's response

CASE STUDY: BNP PARIBAS SELECTS A SCENARIO

Faced with selecting a scenario for its power generation portfolio, BNP Paribas prioritised:

- Credibility and acceptance
- Temperature target
- Level of detail
- Frequency of scenario updates
- Geographic disaggregation

The bank considered two potential scenarios from the IEA: the Sustainable Development Scenario (SDS) and the Beyond 2°C (B2DS) Scenario. It also reviewed the IEA's NZE2050, but the full version had not been published when the bank was selecting a scenario so it could not be fully analysed.

The two scenarios analysed are compared below:

	IEA Sustainable Development Scenario	**IEA Beyond 2°C Scenario**
Temperature	1.65°C or below with a 50% likelihood, net zero in 2070	1.75°C or below with a 50% likelihood, net zero in 2060
Level of detail	Power capacity and generation in each technology detailed for 2025, 2030 and 2040	Power capacity and generation in each technology detailed in 10-year intervals from 2020-2060
Frequency of updates	Annual	Last in 2017
Geographic granularity	21 world regions as well as stages of development, including OECD region	12 regions: World, OECD, Non-OECD, ASEAN, Brazil, China, EU, India, Mexico, Russia, South Africa, US

BNP Paribas selected the IEA SDS, but it faced trade-offs in doing so.

BNP Paribas chose the IEA SDS for several reasons. Like the B2DS, it limits warming to 2°C or below in alignment with the Paris Agreement. It also offers a power technologies roadmap for OECD countries, making it geographically suited to the BNP Paribas portfolio. Additionally, it is updated every year.

However, BNP Paribas recognised certain trade-offs when selecting the SDS. The SDS reaches net zero by 2070, rather than 2050, and only limits the global temperature rise to 1.65°C with a 50% probability rather than 1.5°C in line with the IPCC's 2018 Special Report on Global Warming.

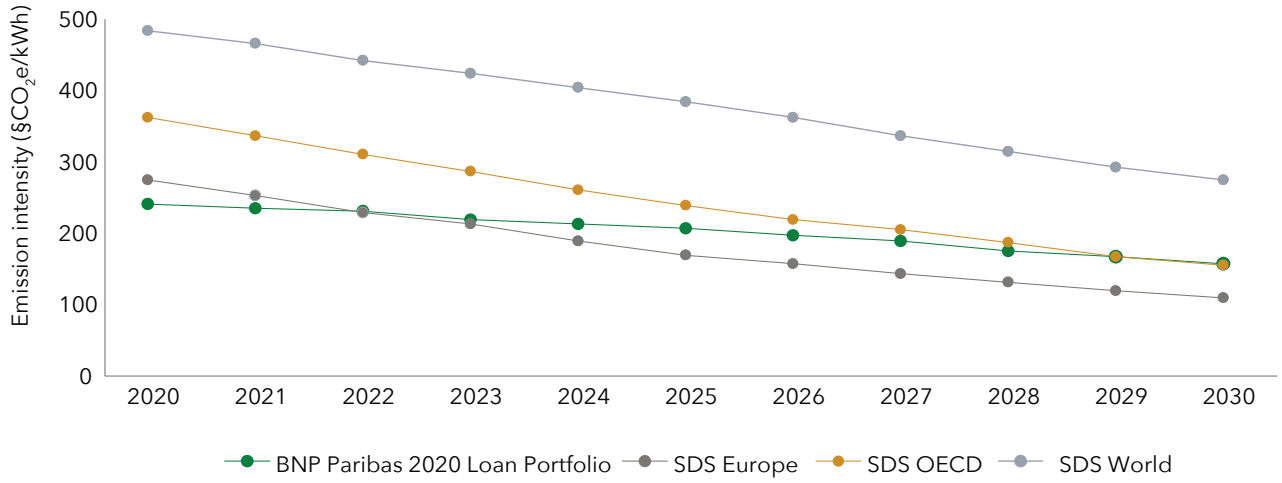
The NZE2050 holds the temperature rise to below 1.5°C without overshoot with a 50% probability and would have been a good option for BNP Paribas to consider in more detail, had it been published. However, at this stage it provides global – not regional – aggregated figures for power technologies.

BNP Paribas ultimately determined that the IEA SDS OECD sub-set was the best choice. The choice of this benchmark mitigated the trade-off with temperature ambition as BNP Paribas applied the scenario to its entire power generation portfolio, including its exposure in developing countries. Since these countries are expected to transition to clean energy later than OECD countries, using an OECD benchmark for the entire portfolio implies a more ambitious decarbonisation profile for these developing

countries (and lower temperature outcome). Moreover, the NZE2050 scenario global power sector target is less ambitious than the SDS OECD target for 2030 (8% of coal capacity share in the NZE2050 versus 5% in the SDS for the OECD region in 2030).

BNP Paribas's power portfolio is already in alignment with the IEA SDS, with an emissions intensity lower in 2020 than the scenario benchmark. According to the trajectory of its power portfolio, it will converge with the scenario in 2030. BNP Paribas will continue to reassess its scenario choice as new scenarios emerge over the coming years.

It should be noted that unfortunately IEA scenarios only cover the energy sectors and their end-uses (the latter are much less detailed). Other climate-relevant sectors – agriculture, for example – are not covered.



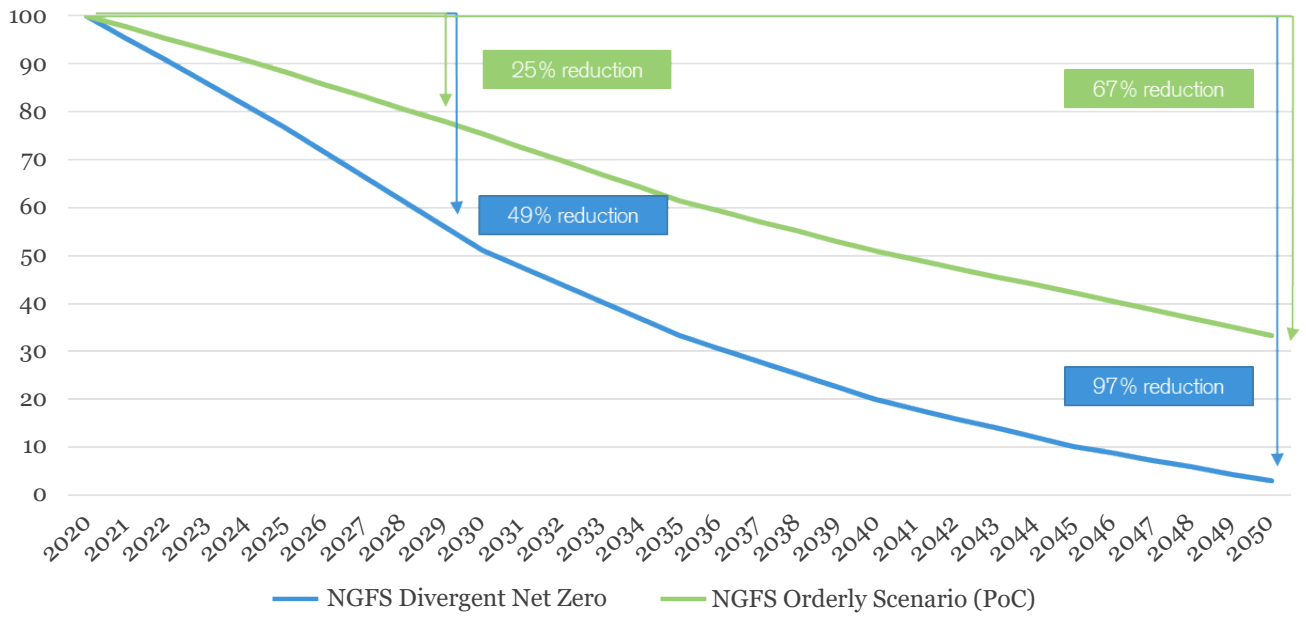
CASE STUDY: CREDIT SUISSE UPS AMBITIONS BY RECALIBRATING FROM A 'BELOW 2°C' SCENARIO TO A 1.5°C SCENARIO

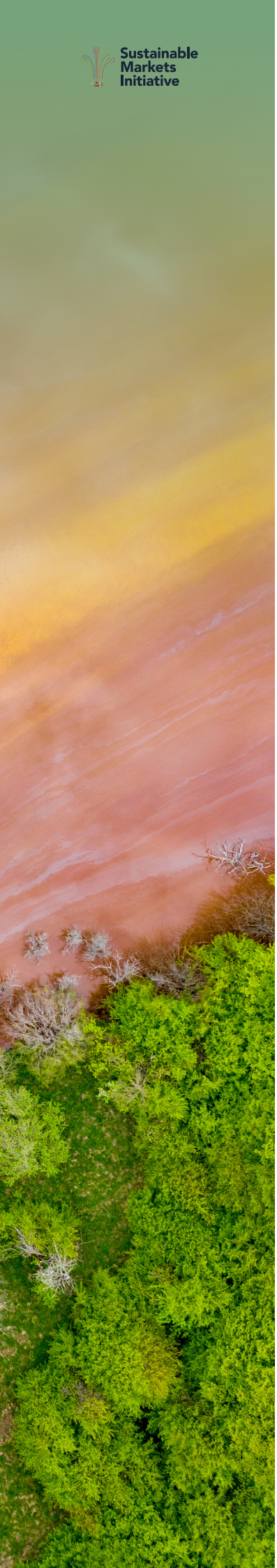
In December 2020, Credit Suisse announced its ambition to achieve net zero emissions from its financing by 2050 in order to align its financing with the Paris Agreement objective of limiting global warming to 1.5°C. To support this goal, the bank also announced its intention to develop Science Based Targets in line with SBTi within the following 24 months. As a next step, Credit Suisse performed a Proof of Concept analysis for the oil, gas and coal sectors in Q1 of 2021. However, there were no sufficiently detailed scenarios specifying a 1.5°C trajectory, in line with the bank's stated objective. As a result, Credit Suisse decided to use the NGFS Orderly scenario, which aims for a below 2°C trajectory. Based on absolute emissions, including Scope 3, Credit Suisse calculated that the pathway required a reduction of emissions in these sectors of 25% by 2030 and 67% by 2050.

In Q2 2021, two detailed 1.5°C scenarios were published: the NGFS Net Zero and NGFS Divergent Net Zero scenarios. Accordingly, in Q3 2021, Credit Suisse performed a recalibration of its emissions trajectory, using the details from these scenarios as a reference. This resulted in a significant change, as the pathway now required a reduction of emissions in these sectors of 49% by 2030 and 97% by 2050. (See diagram below.) This example illustrates how much of a difference 0.5°C and different assumptions on achievable levels of carbon capture and storage and carbon removals make in portfolio alignment. In addition, it underscores the importance of detailed 1.5°C scenarios.

Emissions trajectory for oil & gas, coal sectors

(re-based to 100 $MtCO_2e$), illustrative





4. MEASURING PORTFOLIO ALIGNMENT

Key Messages

State of play

Portfolio alignment assesses the status of financed emissions versus a net zero emissions scenario pathway

Common ground

Toolkits that identify how banks' financed emissions portfolios are performing versus net zero sector emissions pathways are varied and iterating fast

Discussion points

Most commonly, banks compare current and forecast client emissions metrics to the expected trajectory from a scenario. Some banks calculate implied temperature rise metrics

The FSTF recommends

Banks use or develop methods and tools that are suitable to their specific circumstances in order to deliver meaningful outcomes

Banks provide rationales for their chosen methods and tools, and transparent information about the metrics, methodologies, assumptions and data sources used in them

STATE OF PLAY

Portfolio alignment assesses the status of financed emissions versus a net zero emissions scenario pathway.

There are several potential use cases for portfolio alignment metrics. This section focuses on how banks can use portfolio alignment to measure how in-scope emissions are progressing in relation to their net zero ambition and for setting targets. Knowing how (mis-)aligned a portfolio is enables banks to take actions designed to achieve net zero convergence. This allows banks to deliver investment for transition where it is most needed and avoid decisions that make the achievement of targets less likely.

COMMON GROUND

Toolkits that identify how banks' financed emissions portfolios are performing versus net zero sector emissions pathways are varied and iterating fast.

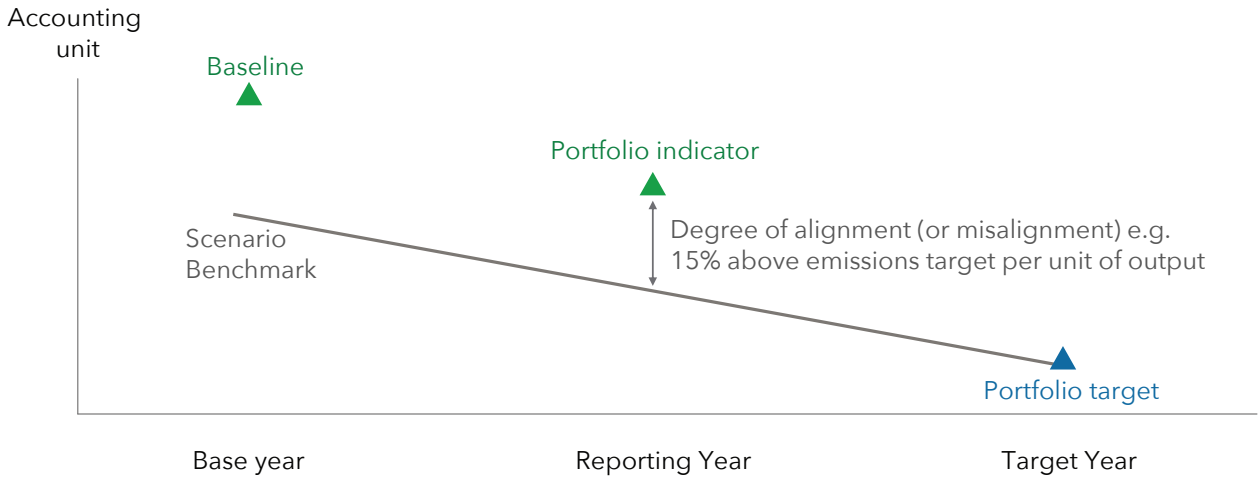
Tools and methodologies are organised into three groups: (i) proportion of a portfolio with net zero targets, (ii) divergence of a portfolio from a benchmark or scenario, and (iii) temperature alignment. Regardless of which type of methodology they use, banks should be transparent about measurement and progress. This enables external stakeholders to assess progress more effectively. These three groups are broken down into more detail next. Additional detail can be found in the Portfolio Alignment Team's Technical Report on Measuring Portfolio Alignment.

Proportion of a portfolio with net zero targets - At the simplest level, a bank can assess what percentage of clients are committed to net zero targets. The SBTi Portfolio Coverage Approach is one example. Client targets and emissions reduction plans must be credible and independently verified. This approach is straightforward and requires little data, but in itself gives little granularity on actual client emissions, reduction trajectories, and progress.

Divergence of a portfolio from a benchmark or scenario - Most banks choose more sophisticated methods to measure the divergence of a portfolio from a given benchmark or scenario that implies a net zero outcome. The SBTi's Sectoral Decarbonisation Approach (SDA) and Paris Agreement Capital Transition Assessment (PACTA) are two examples. These methods calculate a trajectory that must be followed to align portfolio emissions, emissions intensity or other climate performance metrics with net zero over time. This path is set by the starting point of the bank's client or portfolio and when the bank plans to align its portfolio to the selected scenario (2050 for many banks).

To make these assessments, banks need a baseline and a forecast of likely future climate performance to compare against the scenario. (See Section 2 - Measuring the baseline.) Approaches typically express alignment as a percentage of emissions target (e.g. 15% above emissions target per unit of output for intensity metrics, or 2% below

Figure 7. Illustration of degree of alignment



emissions target for absolute emissions metrics). These methods can use either client-reported data or estimated data, but different metrics require different data sets. See Figure 7 for an example of measuring alignment.

Temperature alignment - This methodology involves calculating temperature scores for a company or portfolio using forecasts of deviations from different climate scenarios. Temperature scores have the advantage of being easily communicated because they can be directly related to temperature rise ambition.

Temperature scores are complex to construct and rely more heavily on assumptions than other methods, making them sensitive to data quality. Thus, while many banks consider that tools such as temperature alignment may be useful, they need further development to reach their potential.

DISCUSSION POINTS

Most commonly, banks compare current and forecast portfolio emissions metrics to the expected trajectory from a scenario. Some banks calculate implied temperature rise metrics.

Most banks choose to use a divergence methodology. In doing so, they must choose between existing industry tools or a bespoke version. Methodology choice sometimes determines scenario choice and vice versa. For example, the SBTi recommends preferred scenarios for use with its SDA. Therefore, choices around methodologies, scenarios and other tools should be made simultaneously to ensure compatibility.

Existing industry tools - Typically, the use of industry tools requires fewer internal resources. It also spurs partnerships and co-development efforts with the broader net zero community, helping banks tailor tools to specific business goals. Ultimately, convergence on approaches as methodology and tools develop can lead to increased comparability across banks. When selecting a tool, banks should compare options across many criteria, including flexibility, reliance on underlying assumptions, scope of coverage, and sectoral or geographic disaggregation. The two most frequently used approaches are outlined in Figure 8. These include PACTA and the SDA, which is the most common of the SBTi's methodologies and uses physical intensity metrics.

Bespoke tools - Bespoke tools typically rely on elements of industry tools with additions and variations. This might include unique approaches for certain sectors in which a bank has strong business or reflect specific metrics that a bank uses to garner greater insight into client actions. Barclays and JPMorgan Chase, among others, have created their own tools to better measure and assess their own specific business situations. JPMorgan Chase's Carbon Compass^{SM}, outlined in the case study below, is one example.

THE FSTF RECOMMENDS...

- Banks use or develop methods and tools that are suitable to their specific circumstances in order to deliver meaningful outcomes.
- Banks provide rationales for their chosen methods and tools and transparent information about the metrics, methodologies, assumptions and data sources used in them.

Figure 8. Methodology and tool comparison between SDA and PACTA[22]

		SBTi's Sectoral Decarbonisation Approach (SDA)	Paris Agreement Capital transition assessment (PACTA)
Description		Target setting methodology and framework, developed by CDP, UNGC, WRI and WWF	Open-source toolkit to tailor to bank's specific requirements, developed by 2DII
Scope	Sectors	Aluminium, buildings, cement, iron and steel, power generation (corporate loans), pulp and paper, and transport (passenger, freight, auto manufacturing)	Power (generation), fossil fuel (extraction/ oil, gas, coal production), automotive (manufacturing), steel (manufacturing), cement (manufacturing), aviation (owners)
	Instruments	Corporate lending; project finance (power sector only)	Corporate lending; could be extended to other financial instruments (project finance likely to be included in near term)
Scenarios	Main Benchmark	IEA B2DS, IEA's NZE2050[23]	Scenario agnostic, for target setting purposes should be Paris-aligned[24]
	Target time horizon	5-15 years	Depends on the availability of forecast data; Asset Resolution provides 5-year forecasts
Metrics		Physical emission intensity	Technology/fuel mix (power, fossil fuels, automotive) Production volume trajectory (power, fossil fuel, automotive) Physical emission intensity* (steel, cement, shipping, aviation)
Portfolio modelling & data	Alignment level	Asset class and individual sector	Sector and individual company levels
	Allocation	Attribution factor for emission intensity	Portfolio weight
	Data – Current	Preferably client-reported data (PCAF encouraged)	Data agnostic; provides external estimates based on asset level data from Asset Resolution
	Data – Future	Emissions targets	Self-reported asset investment plans, business intelligence, permit requests (5 years)
Main pros & cons	+	Prescriptive criteria drives transparency and compatibility; additional recommendations for fossil fuels; tangible and technology-linked	Enables portfolio steering; can be adapted for different banks' needs; segregation of high and low-carbon assets for integrated energy companies; compatible with any new scenario developed; data agnostic; tangible and technology-linked
	–	Does not define a pathway for financed emissions unless adapted; involves non-negotiable requirements and central verification; data-intensive with high reliance on client-reported data	Does not define a pathway for absolute financed emissions unless adapted; does not currently include project finance within instruments covered

22. Share Action – 'Paris-alignment methodologies for banks: reality or illusion?'; Portfolio Alignment Team – 'Measuring Portfolio alignment'; BCG Analysis

23. SBTi has announced that it will only validate Scope 1 and 2 targets aligned to a 1.5 degree temperature ambition after July 2022 and is incorporating 1.5 degree sector pathways from the IEA NZE2050 scenario (and selected other scenarios) into the SDA over time

24. While PACTA is scenario agnostic, it includes several climate change scenarios against which banks can benchmark their alignment. These include: IEA WEO 2019 (CPS, STEPS, SDS, IEA WEO 2020 (STEPS, SDS), IEA ETP 2017 (RTS, 2DS, B2DS), IEA NZE2050 (net zero), ISF UTS (net zero)

* Katowice Banks adapted PACTA to also use emissions intensity metrics for power, fossil fuels and automotive. They also suggested additional metrics for fossil fuels sector (financing trend and energy mix)

CASE STUDY: BNP PARIBAS PICKS PACTA APPROACH

As one of the Katowice Banks, BNP Paribas worked with 2DII to develop the PACTA methodology for loan portfolios. It chose to contribute to a standard alignment methodology to ensure that transition efforts converge toward the same actions to maximise the impact on the real economy. Adapting an existing methodology using a collaborative approach also fosters exchange amongst banks, increasing the methodology robustness and enhancing comparability across institutions.

BNP Paribas sought a methodology that incentivises client engagement and portfolio reallocation decisions within each sector rather than divestment from the highest emitting sectors. Further, the bank prioritised metrics that can easily be monitored and steered and are not volatile. These criteria are met by PACTA.

BNP Paribas and the other Katowice banks road tested PACTA to share their operational feedback with the industry and help other banks with the methodology implementation. In their PACTA application paper, the Katowice banks suggested a few modifications to the PACTA methodology to ensure that the indicators developed best enable the transition. For example, for the fossil fuels sectors, they suggested additional indicators that were not part of the standard PACTA metrics.

In its 2020 Annual Report, BNP Paribas reported its power portfolio alignment using the PACTA methodology. The bank plans to use a convergence approach to measure the portfolio's degree of alignment each year to ensure that the portfolio is on track with its target trajectory. Eventually, it plans to use PACTA company level analysis to foster engagement with clients and guide discussions on client transition strategies.

A few issues are common across alignment methodologies, including availability of climate data, which posed the biggest challenge for BNP Paribas when measuring alignment:

- As of today, only listed companies and those operating in sectors subject to specific regulations (e.g. automotive) report information related to their emissions
- The lack of standardised reporting forces many banks to use modelled data, which is less accurate than reported data, to ensure the consistency of their portfolio level climate performance
- Integrated and diversified companies should be included in the alignment analysis scope; however, segmented data on the companies' revenues by activity is not always available and when it is disclosed, it is not easily comparable among different companies of the same sector

In the future, BNP Paribas will expand its use of PACTA to other major GHG emitting sectors beyond its power portfolio. However, further methodological developments are required to cover additional climate-relevant sectors, like agriculture.

CASE STUDY: JPMORGAN CHASE SETS A COURSE WITH CARBON COMPASS℠ METHODOLOGY

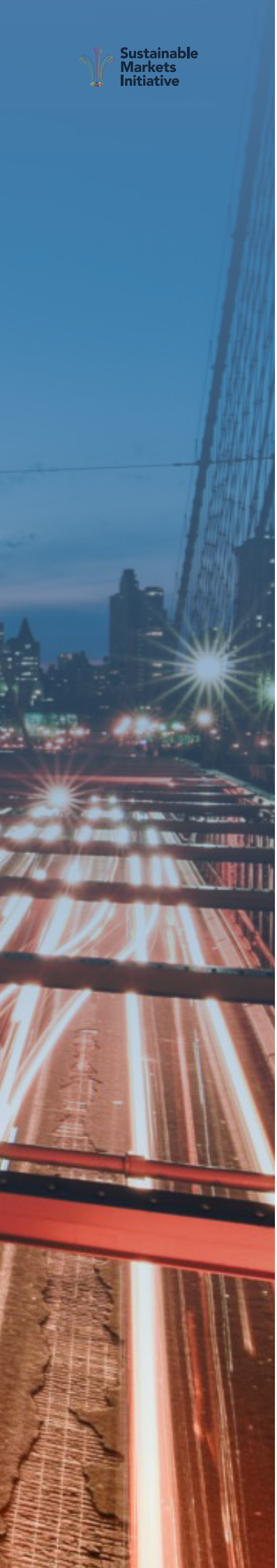
Following the announcement of its Paris-aligned financing commitment in October 2020, JPMorgan Chase set about determining its approach to measure its clients' emissions, evaluate progress and integrate carbon performance into business decision-making. It evaluated several methodologies and alignment tools and determined that the best path was to learn from, but also build on, existing tools to create its own bespoke approach. The approach, Carbon Compass℠, looks to capture the necessary business model shifts that JPMorgan Chase envisages its clients will undertake on the path to net zero. JPMorgan Chase released its methodology along with its initial Paris-aligned targets in May 2021. Its targets and Carbon Compass℠ methodology currently cover three sectors: oil and gas, electric power, and automotive manufacturing.

The primary metric that JPMorgan Chase selected for steering the portfolio and setting targets is physical emissions intensity, which expresses emissions relative to a given unit of output (e.g., kilograms of carbon dioxide per megawatt hour of electricity generation). This metric allows JPMorgan Chase to evaluate ongoing performance of its clients, regardless of the initial volume of their emissions, and is less volatile than absolute emissions. The intensities are then weighted by the proportion of JPMorgan Chase's portfolio that a client accounts for to create a sector-level metric (including the committed amount of on-balance sheet lending and facilitated financing). This selection of emissions intensity simplifies calculations by avoiding a calculation of attributed emissions to JPMorgan Chase versus other financing parties.

By building its own methodology, JPMorgan Chase was also able to adjust for key aspects that are significant for overall decarbonization in its initial sectors. For example, it determined that in the automotive sector, U.S. light trucks should be included on the same basis as other passenger vehicles, due to their similar use, and adjusted the methodology to achieve this. Further, in the oil and gas sector, it calculated separate intensity metrics for Scopes 1 and 2 emissions intensity versus Scope 3, to reflect the different decarbonisation strategies oil and gas companies will likely follow and improve the preciseness of the targets for each.

JPMorgan Chase's baseline is 2019 sector-level emissions intensity metrics, which are benchmarked against the IEA's SDS (with some small adjustments) to determine the level that the sector portfolios must reach by 2030 to be considered Paris-aligned. This formed the basis for its initial target setting.

JPMorgan Chase worked with ERM, a global sustainability consultancy, to develop Carbon Compass℠ over six months. JPMorgan Chase has made the methodology public, to assist other banks embarking on the same journey in the future.



5. SETTING TARGETS TO REDUCE FINANCED EMISSIONS

Key Messages

State of play

Targets communicate a bank's ambition and provide a measure against which progress can be assessed

Common ground

There is emerging industry consensus that banks should: prioritise carbon-intensive sectors, set long-term and interim targets aligned to credible scenarios, use absolute emissions or emissions intensity metrics, publish action plans

Discussion points

The choice of absolute emissions and/or emissions intensity targets for fossil fuels is a point of debate

The FSTF recommends

Banks closely evaluate the use of both absolute emissions and emissions intensity targets for the fossil fuels sector as data, methodology, science and client business model transitions evolve

Whether setting absolute emissions or emissions intensity targets, banks should set targets that are consistent with the absolute emissions reductions implied by science-based pathways

STATE OF PLAY

Targets communicate a bank's ambition and provide a measure against which progress can be assessed.

Target setting is critical to drive action. Targets create accountability and provide milestones that can be used to develop transition plans and assess progress.

COMMON GROUND

There is emerging industry agreement on certain principles in relation to target setting.

These principles include:

1. **Time horizons** – Banks are setting long-term targets for 2050, or sooner, in line with their net zero commitments. Long-term targets should be supported by interim targets to provide near-term milestones. Interim targets should be set for no later than 2030 and renewed on a five-year basis. This is in line with UNEP FI Guidelines.

2. **Basis of targets** – Banks are setting targets based on either absolute emissions (that may be by sector), or sector-specific emissions intensity. (See NatWest case study for setting an intensity target for residential mortgages.) When using sector-specific emissions intensity targets, banks should use physical units of activity rather than economic units (e.g. CO_2e/MJ as opposed to CO_2e/$m) where possible.[25] Both measures are compatible with climate scenarios and comparable between banks. (See Figure 10 for advantages and disadvantages of both metrics; see Box 6 for examples of further targets banks have set to support their net zero strategies.) The use of absolute emissions and/or sector-specific emissions intensity for targets is in line with the UNEP FI Guidelines.

3. **Materiality** – Banks are prioritising setting targets for the most material sectors in their portfolio based on GHG emissions, GHG intensities or financial exposure. This focuses bank attention and resources in the first instance on the opportunities with the greatest potential impact. NZBA recommends that banks set targets for all, or a substantial majority of carbon-intensive sectors, where data and methodology allow, in line with UNEP FI Guidelines. (See Figure 9.)

4. **Verification** – Banks are encouraged to obtain third-party verification of their targets. This creates transparency and bolsters credibility. For example, UNEP FI requires that banks obtain verification of targets within four years of signing its Principles for Responsible Banking. One prominent example of a body providing target verification is the SBTi, which published its Financial Sector Science-based Targets Guidance in April 2021.

5. **Action plans** – Banks are encouraged to support all targets with high-level transition plans that are aligned to their broader strategic plans. Transition plans should be sector-specific and describe how banks aim to achieve their targets. These transition plans may include details of client engagement strategies, policies, portfolio monitoring governance, and proposed actions to support client decarbonisation. UNEP FI recommends banks publish these plans within twelve months of setting targets and that the targets and transition strategies should be reviewed at board level.

6. **Scenario choice -** The construction of targets needs to be consistent with the scenario the bank is using. For example, some scenarios provide electricity generation pathways, that cover Scope 1 emissions. Associated targets would also need to cover Scope 1 emissions relating to electricity generation by clients to be comparable.

25. Physical emissions intensity better reflects the efficiency of an activity than economic emissions intensity, which may be skewed by factors such as foreign exchange rates and commodity prices. These factors also make economic emissions intensity metrics more volatile (most banks that have chosen to set emissions intensity targets have so far used physical emissions intensity)

Figure 9. UNEP FI's guidelines for expanding sectoral targets

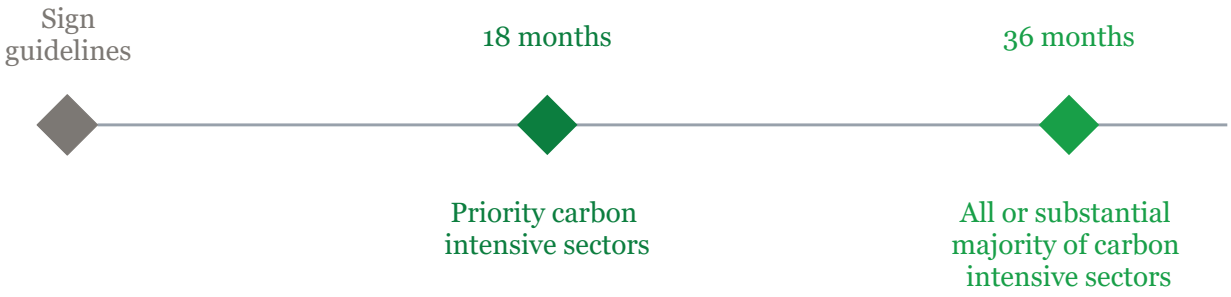


Figure 10. A comparison of absolute emissions and emissions intensity metrics

ABSOLUTE EMISSIONS	EMISSIONS INTENSITY
Absolute emissions targets define a reduction in an amount of GHG emissions measured in tonnes of CO_2e	Physical emissions intensity targets define required GHG emissions relative to a unit of activity (e.g. CO_2e/MJ in the energy sector)
✓ Unambiguous emphasis on the reduction in CO_2e emissions required in line with the Paris Agreement	✓ Recognise improvements in the carbon efficiency of business operations independent of market share changes or acquisitions
✓ Easy to communicate to stakeholders	✓ Comparable across clients and portfolios of different sizes, assuming similar underlying activities within sector
✗ Do not allow for comparisons between clients or banks of different sizes	✗ The relationship to net zero absolute emissions is less direct[26]
✗ Do not take into account changes in market share of underlying businesses	✗ Require common unit of activity for comparability. Companies with diverse operations will require targets for each sector they operate in and will not be able to define a single intensity target for the whole business

26. For example, a company can improve their emissions intensity by adding business with lower emissions intensity without making any reduction to higher emission activity

DISCUSSION POINTS

The choice of absolute emissions and/or emissions intensity targets for fossil fuels is a point of debate.

Among the banks that have set targets for fossil fuels, there are a variety of approaches that can be observed. Some banks have chosen to use absolute emissions because it more closely reflects the absolute reduction in production required under net zero pathways and they consider that emissions intensity reduction across the lifecycle emissions of oil and gas will be limited.[27] (See the Barclays case study.) Other banks have chosen to use emissions intensity because it allows for easier comparison across a portfolio of companies within a sector and between companies of different sizes, is less affected than absolute emissions by year-to-year emissions volatility (such as changes in companies' production) and avoids attributing market volatility (e.g. changes in company value) to measurement of a company's emissions, which can result in incorrect signals about a client's underlying emissions performance. (See JPMorgan Chase case study.)

However, there are also challenges associated with both types of targets, as captured in Figure 10.

THE FSTF RECOMMENDS...

- Banks closely evaluate the use of both absolute emissions and emissions intensity targets for the fossil fuels sector as data, methodology, science and client business model transitions evolve
- Whether setting absolute emissions or emissions intensity targets, banks should set targets that are consistent with the absolute emissions reductions implied by science-based pathways

BOX 6: OTHER TARGET METRICS USED BY BANKS

Some banks have set other types of targets to support their net zero strategies. The most frequently used are:

Technology mix – Developed by PACTA, technology mix targets define target percentages of low-carbon technology use within a sector.[28] Technology mix targets are useful to assess the pace of transition in sectors with clear roadmaps towards green technology. However, they do not capture efficiency improvements (e.g. internal combustion engine efficiency improvements).

Portfolio coverage – Developed by SBTi, portfolio coverage targets define a proportion of clients (in monetary or GHG emissions terms) that should have their own science-based targets. SBTi specifies that this should reach 100% coverage by 2040. Portfolio coverage targets can encourage clients to set targets. However, measuring how many clients have set targets is not necessarily equivalent to those clients achieving emissions reductions, although this can be mitigated through monitoring, reporting and verification of client progress toward targets.

Financing targets – These define limits for how much financing banks can provide to carbon-intensive sectors. Financing targets have the advantage of simplicity and link directly to action the bank can take. However, the link between financing and emissions outcomes is not necessarily linear. Targets in emissions or emissions intensity terms are typically preferable.

27. In recognition of limited emissions' data availability, Katowice Banks proposed the use of the fossil fuels extraction financing volume to measure the alignment of each sector. BNP Paribas has set a reduction target based on that measure. This target is a proxy of absolute financed emissions reduction target

28. For example, a shift from internal combustion engines to hybrid and electric engines in the automotive sector

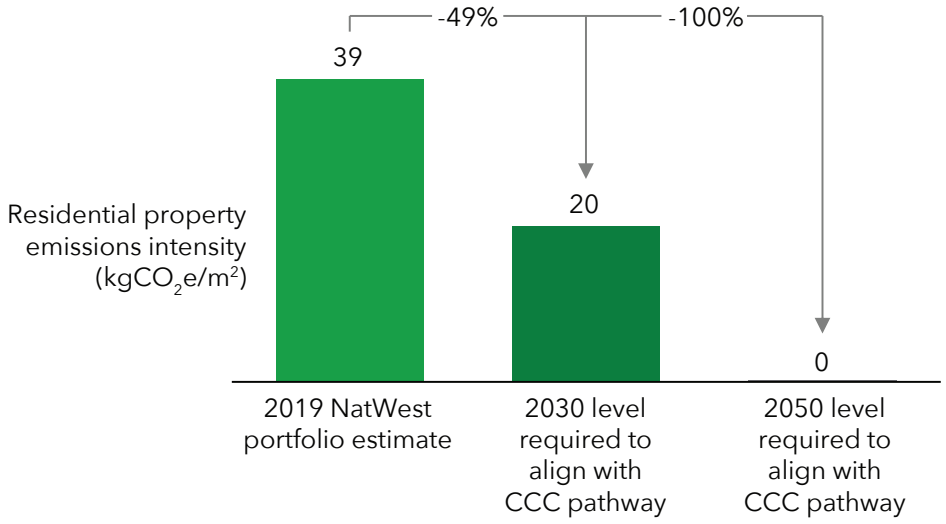
CASE STUDY: NATWEST BUILDS APPROACH FOR RESIDENTIAL REAL ESTATE

In 2020, NatWest set an emissions pathway for the residential mortgages sector, which represents over 40% of NatWest's overall lending exposure. NatWest estimated a sector-specific physical emissions intensity ($kgCO_2e/m^2$) pathway for residential mortgages using SBTi's SDA and the Committee on Climate Change's (CCC) Sixth Carbon Budget Balanced Net Zero Pathway as a scenario.

NatWest calculated the level of sector emissions intensity that would be required to converge with the scenario in 2030 and 2050. The selected scenario provides an emissions reduction pathway for UK housing stock that is consistent with a 1.5°C temperature outcome. This pathway will be used as a basis to refine the estimates over time and develop emissions intensity targets.

NatWest selected a physical emissions intensity pathway rather than an absolute emissions pathway because:

- Emissions intensity metrics remain comparable over time regardless of changes in the size of mortgage portfolio
- SBTi recommends that banks use the SDA when setting targets for the residential mortgages sector
- As residential floorspace is expected to increase in the UK in the coming decades, emissions reductions will have to come from efficiency improvements of homes as opposed to reductions in the number of homes. Emissions intensity metrics would incentivise requisite efficiency improvements (absolute targets could be achieved through market share decreases)



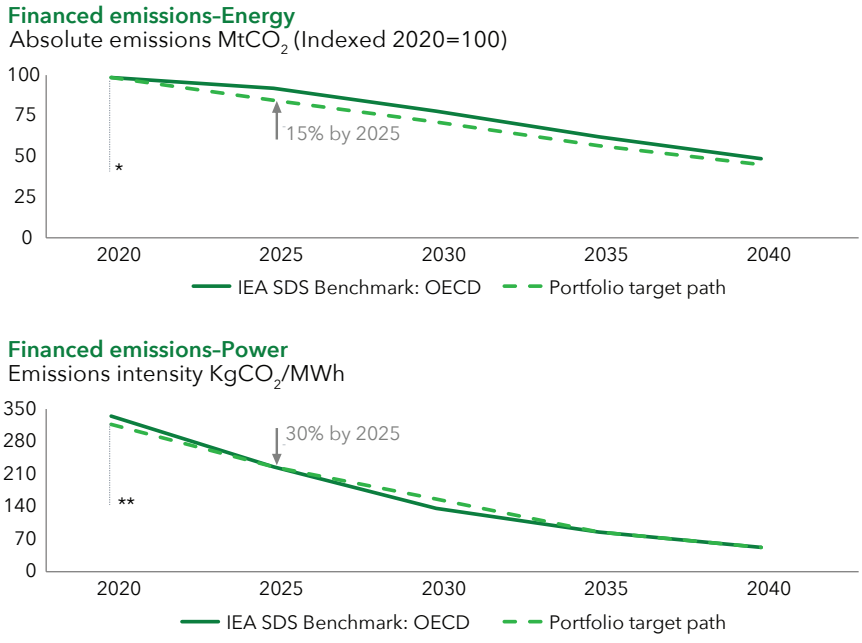
Estimated pathway based on CCC's Sixth Carbon Budget "Balanced Net Zero" emissions pathway and UK floorspace projections. Floorspace estimated using CCC "new homes" forecasts between 2019 and 2050 and average floorspace in the UK derived from EPC data

CASE STUDY: BARCLAYS SELECTS TARGETS FOR THE POWER AND ENERGY SECTORS

Barclays' BlueTrack™ methodology for measuring financed emissions uses both an absolute emissions metric and emissions intensity metric. Barclays announced sector-level emissions reduction targets for its power and energy portfolios in November 2020. These were the first sectors that it set targets for, prioritised due to their materiality. The power and energy sectors are together responsible for up to 75% of all emissions globally.[29]

Barclays considers most sectors are best measured primarily using emissions intensity, at least in the earlier stages of decarbonisation. This encourages transition to lower emitting fuel sources. Emissions intensity measures are also less affected by volatility, which can change the calculation of absolute emissions. As Barclays' power portfolio continues to decarbonise, it plans to also start tracking absolute emissions, which will enable the reduction of any residual financed emissions to zero. For the power sector, it set an emissions intensity target. It has committed to reducing emissions intensity by 30% by 2025, on the way to alignment with IEA SDS by 2035.

Barclays considered the target it set for the energy sector as an exception, where clients in this portfolio are responsible for the extraction of fossil fuels from the earth – mainly coal, gas and oil. In the energy sector, emissions intensity cannot be reduced beyond a certain point (burning a barrel of oil will always produce a similar quantity of emissions). Therefore, it opted for an absolute emissions target to measure the reductions in production that are required to achieve alignment with IEA SDS. Barclays will reduce its absolute financed emissions in the energy sector by 15% by 2025 and continue to track the IEA SDS benchmark on an ongoing basis. See target pathways and IEA SDS benchmark below.



*December 2020: 75.0 MtCO2 **December 2020: 321 KgCO2/MWh

29. For the power sector, Barclays includes Scope 1 emissions (emissions that result from combusting fossil fuels to produce electricity). For the energy sector, Barclays includes Scope 1, 2 and 3 emissions relating to coal, oil and gas extraction. It excludes midstream operations from Scope 1 and 2 emissions in order to emphasise the requirement to reduce extraction as opposed to improve production efficiencies

6. HOW AND WHERE TO USE CARBON OFFSETS

Key Messages

State of play

Offsetting is the act of financing emissions reductions outside an organisation's own baseline or removals from the atmosphere to compensate for or neutralise emissions the organisation has not yet reduced

Credits are transferable units of emissions reduction or removal generated from verified carbon projects

Common ground

The industry is aligned on a few high-level principles (e.g. that entities should first prioritise their own emissions reductions and credits should be of high quality)

Discussion points

Compensation and neutralisation contribute to society's net zero transition; some debates remain on how banks can recognise client offsets and credits and whether banks should be able to use credits to offset their financed emissions

The FSTF recommends

Banks help to catalyse and accelerate carbon markets, such that finance flows to valid emissions reduction and removals opportunities

Supporting efforts of bodies such as the SBTi, VCMI, and TSVCM to assess potential roles for offsets or develop principles for their use and recognition

Separate accounting of offsets from financed emissions to provide transparency

When measuring financed emissions, banks should not account for credits they have bought. They may choose to buy credits to accelerate the global net zero transition, but these should be disclosed separately

STATE OF PLAY

Offsetting is the act of financing emissions reductions outside an organisation's own baseline or removals from the atmosphere to compensate for or neutralise emissions the organisation has not yet reduced. Credits are transferable units of emissions reduction or removal generated from verified carbon projects.

Organisations can finance a range of projects that offset the impact of Scope 1, 2 and 3 emissions that the organisation cannot reduce. Offsetting can be broken into two categories, as outlined in Figure 11.

FIGURE 11. REDUCTION/AVOIDANCE VERSUS REMOVALS OFFSETS

REDUCTION AND AVOIDANCE OFFSETS

Represent emissions outside an organisation's Scope 1, 2 and 3 baseline that would have occurred but have not as a result of measures taken by the organisation

Examples: Avoided deforestation, renewable energy generation, methane capture

Are used to "compensate" for emissions an organisation has not yet reduced

REMOVALS OFFSETS

Represent emissions that have been removed from the atmosphere as a result of measures taken by the organisation

Examples: Reforestation, direct air capture with geological storage

Are used to "neutralise" emissions an organisation has not yet reduced

To fund compensation and neutralisation activities, organisations may invest directly in climate mitigation projects or purchase carbon credits. Carbon credits are tradable instruments that, upon retirement, allow the purchasers to claim emissions reductions, avoidance or removals achieved through the project(s) of another party that is not subject to carbon caps, regulations or other controls. They are issued by a certifying agency and acquired by a corporate directly or via a broker. At this stage, credits are more widely available for reduction and avoidance than removals,[30] although this is expected to change over time as technology develops and methodologies incorporate the distinction between types of credits. Investing in carbon mitigation projects represents an important opportunity for organisations to finance emissions reductions outside their own value chains.

Carbon credits are one of the instruments traded within the two types of carbon markets:

- Mandatory compliance markets are set up by regulatory bodies, typically on a 'cap-and-trade' basis, to limit the amount of GHGs that can be emitted by certain players within a geographic area (e.g. EU Emissions Trading System) or an industry and reduce the amount towards zero over time. In these markets, companies must acquire allowances to emit GHGs or use credits representing emissions compensation or neutralisation projects to match the amount of their emissions.
- Voluntary markets allow organisations to buy, sell and retire credits from carbon projects developed and verified by third parties to meet their voluntary climate commitments. They use the concept of baseline and credit where a 'business as usual' baseline is set and credits are issued for reducing emissions below the baseline, over and above what would have happened anyway. Voluntary markets are currently

BOX 7: TASKFORCE ON SCALING VOLUNTARY CARBON MARKETS

The Taskforce on Scaling Voluntary Carbon Markets (TSVCM) was launched by the UN in advance of COP26. Chaired by Bill Winters, Group CEO of Standard Chartered, and sponsored by the Institute of International Finance, it is a 'private sector-led initiative working to scale an effective and efficient voluntary carbon market to help meet the goals of the Paris Agreement.' The Taskforce published reports in January and July 2021, setting out the next steps to the creation of a scaled, high-integrity voluntary market for the trading of carbon credits. This included defining standards that govern supply (including Core Carbon Principles), establishing credible market intermediaries and creating a demand signal through industry-wide commitments, alongside the establishment of a high-integrity governance body.

30. The Oxford Principles for Net Zero Aligned Carbon Offsetting (2020)

substantially smaller than compliance markets but are growing quickly. (See Box 7.)

Both types of markets aim to make emitters internalise the external costs of their GHG emissions - the principle of the 'polluter pays'. The price-based mechanism can help to direct capital towards the lowest cost opportunities, including the protection of naturally existing carbon sinks and the financing of new removal and reduction technologies. At the same time, the markets are most effective at promoting internal decarbonisation efforts if carbon prices remain high, allowing policymakers to influence these efforts through supply-side restriction.

This section focuses on the use of carbon credits with respect to banks' Scope 3 emissions – specifically those generated by their client portfolios. It does not focus on their own Scope 1 and 2 emissions.

COMMON GROUND

The industry is aligned on a few high-level principles.

The use of carbon offsets and credits with respect to banks' Scope 3 portfolio emissions is generally the least mature part of banks' net zero strategies. As a result, no definitive industry standard currently exists. There are certain principles, however, that concern the use of offsets by corporates. Banks can take these into account when evaluating client use. These principles have been informed by publications such as the SBTi's Foundations for Net Zero, the UNEP FI Guidelines, the Oxford Principles on Net Zero Aligned Carbon Offsetting, and the WWF's Blueprint for Corporate Action on Nature and Climate. These principles are:

The mitigation hierarchy - Bank clients should first prioritise a direct decarbonisation strategy across Scope 1, 2 and 3 emissions, before turning to carbon offsets. As a supplement to reducing emissions in line with science-based pathways, offsetting is useful to compensate for, or neutralise, residual emissions where there are limited technologically or financially viable alternatives. According to the Oxford Principles, over time, as the requisite technology is developed, the world needs to move toward exclusively removal offsets. The NZBA Commitment Statement notes that reliance on carbon offsetting for achieving end state-net zero should be restricted to carbon removals to balance residual emissions where there is no viable alternative, as described above.

Separate accounting - Banks should account for and report carbon offsets separately from their Scope 1, 2 and 3 emissions in accordance with the Greenhouse Gas Protocol. In this way, banks can provide transparency on the way carbon reductions have been achieved. Further, separate accounting will address possible concerns of 'greenwashing' (described below).

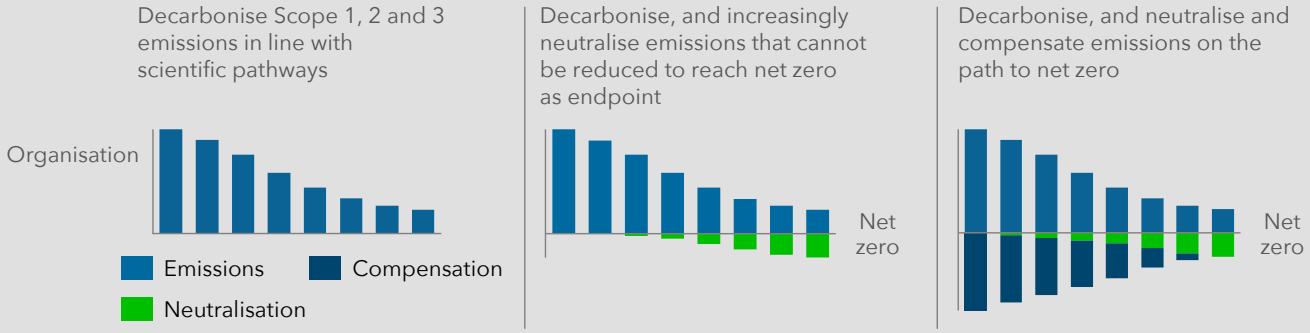
Verification of client credits - There are two concerns around carbon credits in the net zero community that may lead to reputational risks for banks. The first is the risk of 'greenwashing,' in which entities use carbon credits as a primary form of decarbonisation instead of focusing on available emissions reduction opportunities within their own baseline of Scope 1, 2 and 3 emissions. Secondly, there is the risk of poor-quality credits that do not deliver the reduction or removal promised. TSVCM's effort to develop a set of Core Carbon Principles is a welcome attempt to set a minimum quality threshold for carbon credits going forward.

Banks should evaluate clients' reliance on credits on a sector-by-sector basis since best practices for decarbonisation pathways vary by sector depending on what is technologically feasible. Banks should aim to ensure that client credits are verified by a credible third party, yield reductions that would not otherwise have occurred (referred to as 'additional'), and result in emissions permanently removed from the atmosphere. To assist with this, banks may wish to conduct due diligence on client offset claims, including periodically revising emissions criteria by sector. To enable this, banks would benefit from greater disclosure from clients about their carbon credits. Useful information might include types, quantities and issuers of credits purchased.

To help ensure verification, additionality and permanence criteria are met, banks should encourage clients to use carbon credits from the most credible standards, which include Verified Carbon Standard (VCS, founded by Verra); Gold Standard; the UN's Clean Development Mechanism (CDM); American Carbon Registry (ACR) and Climate Action Reserve (CAR).

FIGURE 12. USE OF CARBON CREDITS AS PART OF ORGANISATIONS' NET ZERO STRATEGIES

Beyond decreasing their emissions in line with scientific pathways (see left panel of Figure 12), to reach net zero organisations are committing to increasingly neutralise emissions they cannot feasibly reduce through permanent carbon removals (see centre panel). On the path to net zero, organisations can contribute to broader society's net zero ambitions by compensating for and neutralising some or all of their emissions (see right panel). SBTi and TSVCM both encourage organisations to do this, subject to decreasing their own Scope 1, 2 and 3 emissions first. High-quality carbon credits are one way for organisations to achieve this compensation and neutralisation.



Source: Adapted from The Institute of International Finance's Calling for a High Ambition Path to Net Zero

DISCUSSION POINTS

Compensation and neutralisation contribute to society's net zero transition; some debates remain on how banks can recognise client offsets and credits and whether banks should be able to use credits to offset their financed emissions.

BANKS' RECOGNITION OF CLIENT CARBON CREDITS

Organisations that use carbon credits to neutralise and compensate for their emissions should be recognised for purchasing these credits. However, how banks should recognise these efforts is a matter of debate. As raised above, there is the concern that clients may rely on carbon credits instead of focusing on opportunities to decarbonise in their own value chains. Recognising emission reductions that are not within a client's Scope 1, 2 and 3 emissions creates an accounting issue since internal emissions inventories use an attributional accounting approach, whereas reductions outside the value chain are accounted for using consequential accounting.[31] Finally, NGOs such as Greenpeace have raised the concern that since the supply of carbon credits currently available is finite, their use should be reserved for the hardest-to-abate sectors.[32] In 2019, the voluntary carbon credit market comprised only about 0.1 $GtCO_2e$ of carbon credits,[33] as compared to total global greenhouse gas emissions of 59.1 $GtCO_2e$.[34]

BANKS' CARBON CREDIT PURCHASES IN RELATION TO THEIR FINANCED EMISSIONS

Published guidance on whether banks can purchase carbon credits to compensate or neutralise their portfolio emissions is still emerging. If banks lean too heavily on carbon credits, they may not incentivise their clients to decarbonise in the first instance in line with the mitigation hierarchy and to the degree implied by relevant sectoral science-based pathways to net zero. Purchasing credits also incurs significant financial expense. However,

31. SBTi, Foundations for Science-Based Net-Zero Target Setting in the Corporate Sector
32. Greenpeace UK, Net Expectations: Assessing the role of carbon dioxide removal in companies' climate plans
33. Taskforce on Scaling Voluntary Carbon Markets Final Report, January 2021
34. UNEP Emissions Gap Report 2020

an advantage of banks purchasing credits is that it can contribute to the global net zero transition as long as they are robust in terms of certification, permanence, additionality and verifiability. It will be important for banks to follow emerging best practices as guidance evolves.

BANKS' ROLE IN SUPPORTING THE DEVELOPMENT OF CARBON MARKETS

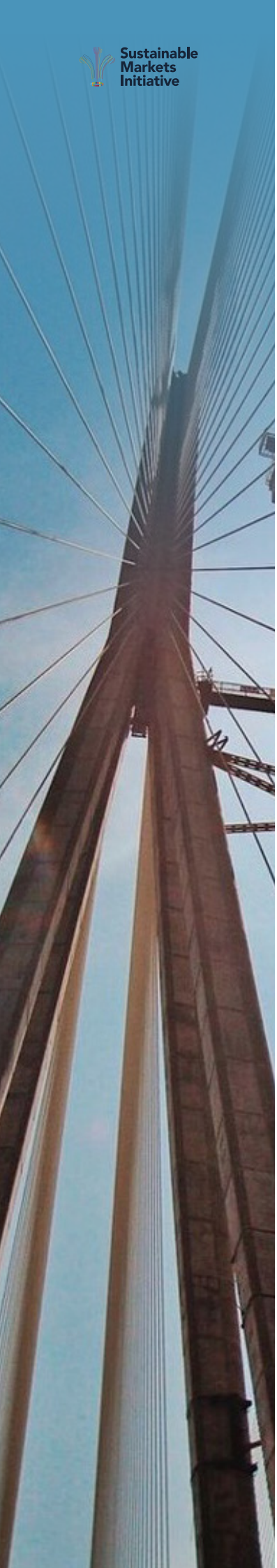
The capabilities of banks can allow them to play an important role in supporting the scaling of robust, transparent carbon markets. Potential activities include educating clients on the role of carbon credits, market making, creating new solutions for clients to manage carbon market and price risks and providing debt financing for compensation and neutralisation projects. For further information on how the FSTF banks intend to support carbon markets, see 'How to catalyse carbon markets and the role of banks', to be published on the SMI website in October 2021.

THE FSTF RECOMMENDS...

- Banks help to catalyse and accelerate carbon markets, such that finance flows to valid emissions reduction and removals opportunities.
- Supporting efforts of bodies such as the SBTi, VCMI, and the TSVCM to assess potential roles for offsets or develop principles for their use and recognition.
- Separate accounting of offsets from financed emissions to provide transparency.
- When measuring financed emissions, banks should not account for credits they have bought. They may choose to buy credits to accelerate the global net zero transition, but these should be disclosed separately.

EXTERNAL ENGAGEMENT

Part II



7. DISCLOSING PROGRESS

Key Messages

State of play

The public disclosure of information about a bank's net zero strategy and progress is a new and evolving process within the banking industry

Banks recognise that fair and balanced disclosures increase credibility of and accountability for their net zero strategies, but there is not currently a standardised approach

Discussion points

Banks must decide between disclosing in stand-alone reports and in their annual reports with associated regulatory and assurance requirements

They must also determine how they can make disclosures as credible as possible, given inconsistent data about client emissions

The FSTF recommends

Banks follow TCFD recommendations as they increasingly include net zero reporting in annual reports

Banks work with standard setting bodies to determine which disclosures will go in the annual report versus supplementary documents or websites

STATE OF PLAY

The public disclosure of information about a bank's net zero strategy and progress is a new and evolving process within the banking industry. Banks recognise that fair and balanced disclosures increase credibility of and accountability for their net zero strategies, but there is not currently a standardised approach.

Banks that have announced net zero ambitions are starting to commit to disclose progress against targets and transition plans annually. So far, banks have used different disclosure approaches. There are a number of initiatives that offer or will offer guidance for the industry, including the International Financial Reporting Standards (IFRS) Foundation's proposed International Sustainability Standards Board and a group of sustainability reporting standard-setting bodies known as the 'group of five'.[35] The 'group of five' have published a climate reporting standard prototype that builds on the TCFD's four pillars of reporting.[36]

Many banks already follow TCFD guidance in their annual climate reporting. This is already mandated or soon to be mandated in several global jurisdictions, including the G7. The TCFD has recently consulted[37] on guidance for disclosure of financed emissions, portfolio alignment metrics and transition plans for financial institutions.

TCFD guidance currently recommends that banks should increasingly make climate-related disclosures alongside annual financial reporting. At present, banks publish their net zero disclosures in a number of different locations - within the annual report, in separate Environmental, Social and Governance (ESG) supplements and on their company website. This is partly a result of jurisdictional requirements, which may impact the decision-making process around inclusion of disclosures within the annual report.

Fragmented approaches to the location, specificity and methodology of disclosures makes it increasingly difficult for external stakeholders to compare banks' net zero disclosures. Establishing reporting and methodology standards and agreeing on appropriate platforms for releasing results will create greater comparability across banks and time periods.

DISCUSSION POINTS

Banks must decide between disclosing in stand-alone reports and their annual reports with associated regulatory and assurance requirements. They must also determine how they can make disclosures as credible as possible, given inconsistent data about client emissions.

Where to disclose - Banks are accustomed to strict and prescriptive standards surrounding financial disclosures. They often find disclosure of climate-related information, which is based on less established reporting practices and standards, particularly challenging. However, investors, standards bodies and other stakeholders are increasingly requesting more prominent and more reliable reporting. The trade-offs of disclosure location choices are outlined in Figure 13 below.

Many banks have taken approaches that combines some inclusion in the annual report with more detailed information disclosed via a separate publication or website. (See case studies below.)

How to disclose credibly given low quality data – UNEP FI recommend that banks use the highest quality data sources available and provide an assessment of the data quality in their calculations.[38] When measuring emissions baselines, banks have to rely on portfolio emissions data that is often difficult to obtain with an appropriate degree of confidence.

As the quality of data reported from the real economy improves, independent limited assurance, as encouraged in the UNEP FI Guidelines, would improve confidence in banks' reporting. Rigorous testing of data sources, calculation methods and assumptions, through an independent assurance process, would help manage the reporting risk associated with disclosing forward-looking data and information.

35. CDP, Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC) and Sustainability Accounting Standards Board (SASB)
36. Governance, strategy, risk management, and metrics and targets
37. Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans – TCFD June 2021
38. One type of data quality assessment is defined by PCAF, which provides an average data quality score of between 1 and 5 that can be used to provide confidence to disclosures

FIGURE 13. COMPARISON OF DISCLO SURE LOCATIONS

Disclosure location	Pros	Cons
Annual report	• High profile and clear commitment to net zero goals • Encourages further internal and/or external assurance processes for estimations and reported data • Allows for integration into financial reporting	• Assurance carries significant compliance burdens and may not be appropriate given the level of maturity of climate-related data and disclosure • Liability frameworks in some jurisdictions create significant legal risk, particularly around disclosing forward-looking data and information • Increased disclosure requires additional effort, time and resources required to prepare the annual report • Integration with financial reporting can create more piecemeal disclosures • Challenge of disclosing financed emissions metrics as client emissions data often lags financial data
ESG or climate-related disclosure supplement (e.g. TCFD)	• Stand-alone publication provides stakeholders with a single source for climate related information • More space for qualitative explanations, which convey context, detail and any divergences from industry standards	• Difficult to connect to overall bank strategy • Investors, standards bodies and other stakeholders want more ESG data in annual reporting and detail on link to banks' overall strategic plans • Can be perceived as less material to the business if not included in annual report
Website	• Specific location to include all required detail, including complex data sets • Easily updated with progress throughout the year, keeping stakeholders informed	• Less prominent than a specific, separate report • Content may get lost in the quantities of existing information on banks' websites • Rating agencies may not easily locate information this way, nor tie it as obviously to a specific disclosure

THE FSTF RECOMMENDS...

- Banks continue to follow TCFD recommendations and put in place robust internal controls to ensure credibility of disclosures as they increasingly include net zero reporting in their annual report.
- Banks provide additional detail and surrounding narrative in a separate TCFD, ESG or other climate related disclosure supplement, unless already incorporated. They should aim to work with standard setters and guidance providers such as IFRS, TCFD and regulators to continue the development of a minimum set of standard net zero-related metrics and data. By engaging with these bodies, banks can improve transparency, comparability and the usefulness of disclosures through the definition of a common approach.
- While client emissions data remains hard to collect and verify, FSTF recommends that practitioners clearly explain the process behind their disclosures and how they intend to meet their targets. Qualitative narratives such as progress, rationale, exemptions and actions taken will help banks inform stakeholders in a transparent manner where concrete, comparable data is not available. They may also be used to share data quality assessments and give stakeholders a clear view of the likely accuracy of the reported data.
- Banks should use their public disclosures to clearly explain any divergences from industry standards. These explanations will also assist where methodologies and standards change, as banks may need to restate their baseline targets and progress.

CASE STUDY: CLIMATE DISCLOSURES FROM FSTF BANKS

Exhibit 1: In 2020, **NatWest Group** disclosed in their Climate-related disclosures report for the first time (i) estimated financed emissions, (ii) physical and economic emissions intensities (iii) preliminary physical emissions intensity estimates for year 2030 aligned to NatWest Group's climate ambition to reduce climate impact of financing activity by 50%, as well as for Paris alignment, (iv) Paris alignment physical emissions intensity in 2050 for four sectors.

	Preliminary estimates of financed emissions and emission intensities 2019						Preliminary emission intensity estimates 2030 and 2050		
Sector	Financed emissions ($MtCO_2e/y$) (1)		Physical emissions intensity (2)	Economic emissions intensity (tCO_2e/£M invested) (3)	PCAF Data quality score		Proposed 50% absolute emissions reduction intensity (2030)	Paris alignment emissions intensity (2030)	Paris alignment emissions intensity (2050)
	Scope 1 and 2	Scope 3			Scope 1 and 2	Scope 3			
Residential mortgages	2.2		39 $kgCO_2e/m^2$	12	4.1		19 $kgCO_2e/m^2$	20 $kgCO_2e/m^2$	0.1 $kgCO_2e/m^2$
Agriculture (primary farming)	3.6		2,205 tCO_2e/£m revenue	940	4.3		1,103 tCO_2e/£m revenue	1,449 tCO_2e/£m revenue	1,165 tCO_2e/£m revenue
Automotive manufacturing (4)	0.01	0.53	168 gCO_2/km	1,790	2.1	3.1	84 gCO_2/km	121 gCO_2/km	31 gCO_2/km
Oil and gas extraction	0.08	1.9	75 tCO_2e/TJ	3,054	2.4	2.6	38 tCO_2e/TJ	Guidance under development	Guidance under development

Notes:
(1) $MtCO_2e/y$ is million tonnes of carbon dioxde equivalent emitted per year.
(2) Physical emissions intensity: Financed emissions divided by an output or activity value.
(3) Economic emissions intensity: Financed emissions divided by the loan and investment amount. This helps understand how the emissions intensity of different portfolios (or parts of portfolios) compare to each other per monetary unit.
(4) For automotive manufacturing, Scope 3 emissions and emissions intensity estimates only relate to tailpipe emissions.

Exhibit 2: **Lloyds Banking Group** (LBG) developed an initial estimated view of the 2018 financed emissions baseline, disclosed in their 2020 Annual Report and Accounts. This will serve as an initial basis for LBG's goal of helping to reduce the emissions it finances by more than 50% by 2030 and to help it better support customers in their transition plans to a low-carbon economy.

Table 2. Initial estimated view of the 2018 financed emissions baseline for the Group's own lending
(excluding the Insurance and Wealth division)

Asset class	Estimated $MtCO_2e$ (Scope 1 & 2 emissions)	Equivalent share of UK total emissions by sector / asset class[6]
Motor vehicle loans[3]	3.2	c.4%
Mortgages[4]	6.3	c.6%
Business loans[5]	15.9	c.6%
Total	25.4[1,2]	c.5.6%

1 Includes Nil emissions for cash balances, which accounted for 8% of the Group's balance sheet
2 Examples of areas where there is no current method for calculating emissions include: Government securities, derivatives, personal loans, credit cards and reverse repos. Areas where data was not readily available, but coverage may be expanded in the future include: business banking, non-UK mortgages, loans and advances to banks and some assets at fair value through profit and loss.
3 Covers 95 per cent of motor vehicle loans and operating lease assets. Excludes assets that do not have a motor, specialist vehicles and vehicles where mileage is difficult to estimate. Currently does not apply a loan-to-value ratio for emissions.
4 Covers 97 per cent of mortgages. Excludes non-UK mortgages. Uses EPC emissions estimates for 45% of properties and average emission intensity profiles of EPC C to G properties to calculate emissions for the balance of properties where EPCs are not available. Property index value as at end 2018 is used for current property value in PCAF emission attribution calculations.
5 Includes 99% of Commercial Banking business loans, based on drawn lending. The PCAF sector-based approach has been used for the majority of the business loans baseline, using Office of National Statistics (ONS) UK emissions. The business loans method has been applied to project finance (excluding Power project finance) and commercial real estate assets, which will be refined in the future as better data becomes available.
6 Total UK emissions in 2018 were: 88 $MtCO_2e$ from cars and vans; c.100 $MtCO_2e$ from homes, including emissions from both electricity and heating; and 263 $MtCO_2e$ from business (excluding emissions from electricity used in residential property). Source: Department for Business, Energy and Industrial Strategy - 2018 UK Greenhouse Gas Emissions, Final Figures.

Exhibit 3: **BNP Paribas** applied PACTA methodology to the portfolio of loans issued to corporates in the electricity sector to calculate an overview of the portfolio's alignment at end-2020 and a projection of its alignment by 2025. Results of the calculations were disclosed in its 2020 TCFD report. This chart details electricity mix funded by BNP Paribas compared to IEA's SDS scenario subset for the OECD, in capacity (PACTA methodology).

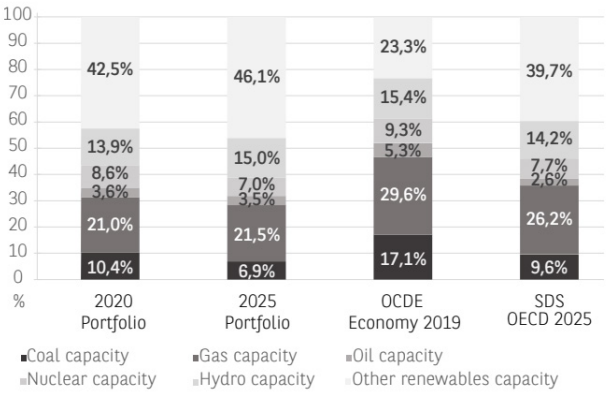
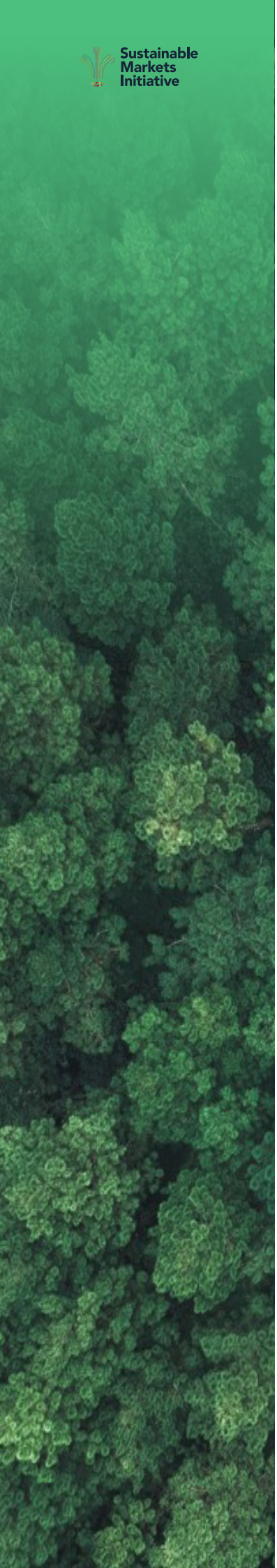


Exhibit 4: In its 2020 TCFD report, Standard Chartered disclosed an estimated temperature alignment metric for six sectors. The scores were based on an initial sample of 100 clients taking into account different decarbonisation rates across various sectors and regions. Standard Chartered noted the methodology for the metric is still evolving and it is committed to advancing its approach as industry-wide standards develop.

Industry category	Number of clients	Weighted average temperature alignment projected at 2030 (in degrees Celsius)
Construction	16	3.36
Consumer Durables & Apparel	20	2.54
CRE	20	3.21
Energy	21	3.45
Manufacturing – Automobiles and Components	16	3.08
Manufacturing – Cement	7	2.27
Total	100	3.14



8. FINANCING THE TRANSITION

Key Messages

State of play

As providers and arrangers of capital for the real economy, banks play a crucial role in financing the transition to net zero

The transition is expected to require annual investment of up to $7 trillion versus current levels of approximately $600 billion[39]

Discussion points

Banks must balance the need to finance emerging technologies to support the transition against the increased capital necessary for these potentially riskier investments

The development of some products supporting climate mitigation (e.g. transition bonds) will depend on clear definitions

Initial Considerations

To help with the transition, banks can:

- Expand sustainable financing products to accelerate the growth of climate finance
- Partner with public and private capital providers to develop innovative financing structures, such as blended finance
- Encourage governments to support the clean energy transition through policies, subsidies and incentives
- Support the development of standardised definitions of 'transition' and 'sustainable' to enable further investment

39. OECD, 'Financing Climate Futures: Rethinking Infrastructure' (2018); CPI, 'Updated View on the Global Landscape of Climate Finance' (2019)

STATE OF PLAY

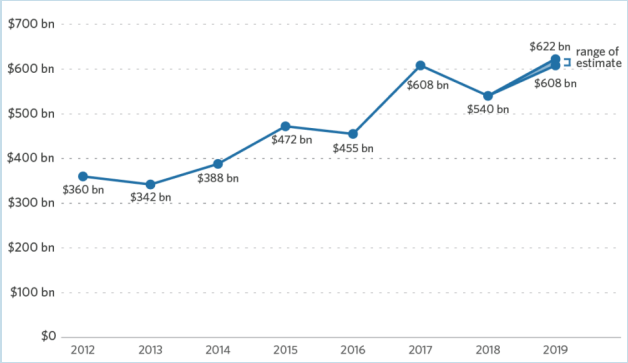
As providers and arrangers of capital for the real economy, banks play a crucial role in financing the transition to net zero.

Climate finance funds the transition to a net zero economy by directing capital towards activities that mitigate climate change or adapt to its results. Climate finance flows reached approximately $600 billion in 2019, having grown 75% since 2013.[40] This growth has been driven by asset classes such as green bonds and green loans.[41] (See Figure 14.) More recently, innovative structures such as sustainability linked bonds and loans as well as green mortgages have emerged and seen significant growth.

Despite the recent growth, there is a significant gap between today's investment levels and investment that will be required over the next three decades to finance the transition to net zero, which is estimated to be as high as $7 trillion annually up to 2030.[42]

So far, the expansion of climate finance has been limited to a few sectors, including public utilities, energy utilities and real estate. Sectors where transition pathways are typically less clear, such as heavy-industry, manufacturing and agriculture, have been less involved. Banks will need to provide 'transition' financing to these harder-to-abate sectors to decarbonise their operations as traditional 'green' financing alone will not be enough to meet the temperature objectives of the Paris Agreement.[43] As providers of capital to the real economy, banks play a crucial role in closing this gap. They will need to accelerate the expansion of existing products, such as green bonds and sustainability-linked bonds. They will also need to deliver product improvements and innovations to unlock the combination of public and private capital needed to achieve net zero.

FIGURE 14. GROWTH OF CLIMATE FINANCE SINCE 2012



Source: CPI, 'Updated View on the Global Landscape of Climate Finance 2019'

DISCUSSION POINTS

Banks must balance the need to finance emerging technologies to support the transition against the increased capital necessary for these potentially riskier investments. The development of some products supporting climate mitigation (e.g. transition bonds) will depend on clear definitions.

As banks look to scale their climate financing, they will need to consider the following challenges:

The risk-return mismatch – The transition to net zero requires investments in technologies that provide clean energy, decarbonise buildings and industrial processes and remove emissions from the atmosphere, among other objectives. Some of these technologies already exist (e.g. electrification, batteries, building insulation), while others have yet to be developed at scale (e.g. green or clean hydrogen, carbon capture and storage).

Investments in new and unproven technologies can be higher in risk than existing technologies for both the companies making the investments and the banks financing them. Such investments are often associated with long payback periods for companies and delayed returns for investors. Capital requirements for the banking sector mandate

40. CPI, 'Updated View on the Global Landscape of Climate Finance 2019'

41. BloombergNEF, Global Sustainable Debt Annual Issuance 2020

42. The OECD estimates the financing need at $6.3 – 6.9 trillion a year until 2030; the IEA estimates the need for energy investments to be $5 trillion a year by 2030; the Global Financial Markets Association (GFMA) estimates a need of $3-5 trillion per annum until 2050

43. S&P Global Ratings, 'Transition Finance: Finding A Path To Carbon Neutrality Via The Capital Markets', 2021

that banks must hold significantly more capital when they make riskier investments. That can be exacerbated in emerging markets where significant investments in clean energy will be needed in the coming years.[44] Banks using traditional methods and products will not be able to tackle the full magnitude of transition capital required.

Lack of standardised definitions of transition – The growth of green bonds has been underpinned by transparent definitions of what is 'green', such as the Green Bond Principles.[45] At the same time, the breadth of activities required to support the transition extends beyond standardised definitions of 'green,' as described in Box 8. However, there are no standard definitions for 'transition' finance. Common definitions are important because they bolster investors' confidence, reduce the risk of greenwashing, reduce transaction costs and help increase capital flows. Growth of 'transition' finance–as opposed to the narrower category of 'green' finance–has been slow: only 11 transition bonds were issued in 2020[46] as compared to over 7000 green bonds that same year.[47]

INITIAL CONSIDERATIONS

Banks can work with sources of public or concessional capital to create financing structures that de-risk sustainable investments. One example is blended finance, which uses public or philanthropic funds to de-risk a portion of an investment so that further private capital can be mobilised. (See the Standard Chartered case study.) Similarly, banks can develop innovative ways to de-risk projects that contribute to the transition. (See the Macquarie case study.)

BOX 8: TAXONOMIES AS A TOOL IN FINANCING CLIMATE TRANSITION

In the context of sustainable finance, taxonomies are classification systems used to label and identify sustainable activities. As taxonomies increase in prominence, users should be aware of complexities around activity definitions and jurisdictional differences.

1. Activity definitions

Green finance generally takes the form of 'Use of Proceeds' loans, where funding is tied to a specific purpose (as opposed to 'General Purpose' loans). Use of Proceeds loans depend on taxonomies that categorise the activity being funded as 'green.'[48] However, not all activities required to support the transition meet standardised definitions of 'green'.[49] Examples include enabling activities (such as R&D in construction materials using low-emissions cement and steel) or interim activities involving products expected to be stranded by 2050 but which are very present today (such as the operation of plastics recycling facilities). There is currently no standardised definition of 'transition' activities to label these activities, but they often need funding, particularly in hard-to-transition sectors. Creating a standard definition of 'transition' activities is necessary to ensure that all activities that help companies transition can be funded through Use of Proceeds loans.

The support of government and policymakers is also key. Banks should engage with regulators and policymakers to advocate for policy support that

44. For instance, see the IEA report "Financing clean energy transitions in emerging and developing economies"

45. International Capital Market Association (ICMA), Green Bond Principles (GBP)

46. Oxford Business Group 'Transition bonds: a new tool to fund the shift towards climate sustainability?'

47. Climate Bonds Initiative, "Sustainable Debt: Global State of the Market 2020"

48. International bodies including the EU and ICMA have developed taxonomies defining which activities are aligned with long term climate goals (note taxonomies differ, for example the EU taxonomy is more stringent in its definition of 'green' than ICMA's Green Bond Principles)

49. Climate Bonds Initiative, 'Financing credible transitions', 2020

Further, expanding taxonomies to categorise entire companies as 'transitioning' could help unlock General Purpose loans as a tool for green finance. Companies meeting certain criteria could earn a classification as 'transitioning,' making them eligible for green General Purpose loans. In this way, both Use of Proceeds loans and General Purpose loans can be harnessed by green finance.

2. Jurisdictional differences

Several countries and regions have developed their own taxonomies, including the EU and China. Others, including Canada, Malaysia, and the UAE, are at early stages of development. These taxonomies vary according to the specificities of their local markets. Cross-border differences can bring challenges to companies operating in multiple jurisdictions. Potential issues also exist where the majority of funding required for transition is in areas with shallower pools of private capital, such as Asia. A framework for mutual recognition of both private and government-derived taxonomies on a cross-border basis will increase investor confidence that cross-border capital flows will be aligned with the Paris Agreement's climate change mitigation objectives.[50]

mitigates the challenges raised in the Discussion Points section. Governments can reduce the payback period for clients and improve investment profiles for beneficial projects that would otherwise not be investible by offering subsidies for developers of new, green technologies. Other government incentives, such as stamp duty incentives, grants and VAT reductions, can also be helpful. Similarly, banks have the opportunity to partner with governments to create strong enabling environments for projects (e.g. supporting the creation of a domestic supply chain and workforce for green technology).

Banks should make a suite of products available to support the transition beyond green and sustainability-linked bonds, including sustainability linked loans, supply chain finance and trade finance. These can all be linked to climate related KPIs and are scalable.

As mentioned above, broader product definitions encompassing all transition activities will be necessary to close the financing gap. Two entities already addressing this issue are the Climate Bond Initiative and Credit Suisse, who collaborated on a 2020 white paper entitled 'Financing credible transitions: How to ensure the transition label has impact.' Definitions should be clear, accessible, and ensure that incremental compliance costs are offset by the benefits of standardisation. For an example of the development of a flexible labelling framework, see the case study on FAST-Infra, which has been supported by some members of the FSTF.

In addition, expanding the definition of transitioning to apply to entire companies (see Box 8) can help unlock additional financing to companies seeking to finance their transition strategies.

50. Note, the EU has proposed four minimum design principles for Taxonomy development to support future harmonisation

CASE STUDY: STANDARD CHARTERED AND GULF SOLAR ENERGY PROJECT - SHINING A LIGHT ON BLENDED FINANCE

In January 2020, Standard Chartered participated in a blended finance deal to provide long-term financing for the development and operation of a 50-megawatt photovoltaic solar power plant in Tây Ninh province in Vietnam. The financing consisted of:

- A loan of $11.3 million from the Asian Development Bank (ADB)
- A loan of $7.6 million loan from the Leading Asia's Private Infrastructure Fund (LEAP), which is supported by the Japan International Cooperation Agency
- A loan of up to $18.9 million from Standard Chartered and two other commercial banks

The financing was structured to encourage commercial banks to co-finance the project. ADB and LEAP agreed to loan tenors of 17 years, 2 years longer than the commercial bank loan, to reduce annual repayments and ensure a sufficient debt servicing buffer from the project cashflows for the commercial banks' risk appetite.

This deal illustrates the use of public capital to 'crowd in' private capital in order to support investment that will contribute to net zero goals.

CASE STUDY: THE FAST-INFRA SUSTAINABLE INFRASTRUCTURE LABEL

FAST-Infra — the 'Finance to Accelerate the Sustainable Transition-Infrastructure' initiative — was established in 2020 with the objective of accelerating private investment in sustainable infrastructure.[51] It now has over 90 member organisations including banks, investors, development banks, governments and NGOs.

FAST-Infra recognises that the way infrastructure has been built over the last century has been extremely carbon-intensive and that a new generation of sustainable infrastructure is required for the world to meet both the UN's Sustainable Development Goals and the temperature objectives of the Paris Agreement. According to the OECD, this will require investment of up to $7 trillion per year until 2030, a level that is not currently being met by private investment or multilateral development banks (see chart below for total investment required by category).

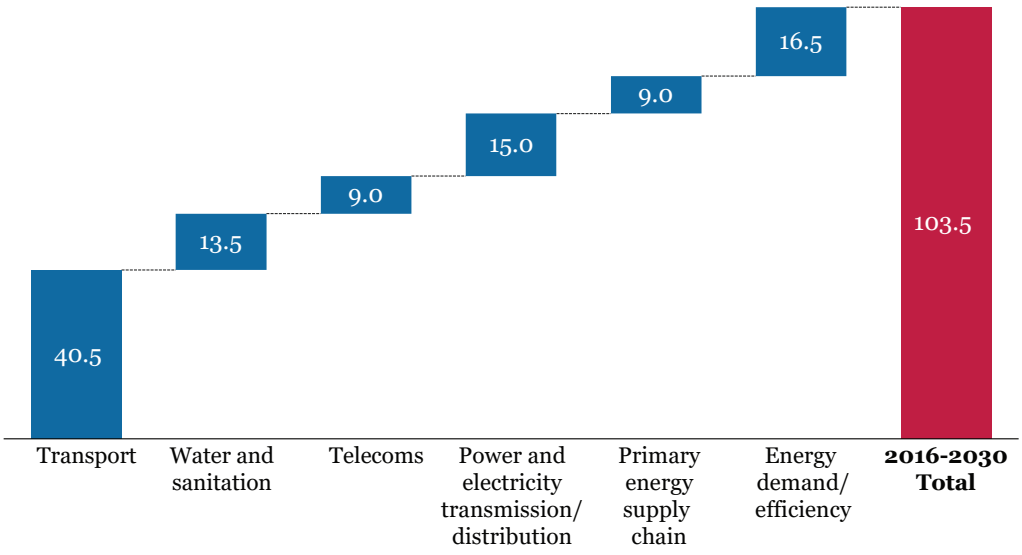
To attract the necessary investment, FAST-Infra has created a Sustainable Infrastructure Label to enable project sponsors, developers and owners to signal the positive sustainability impact of infrastructure assets. It aims to increase financing potential, motivate governments and developers to design more projects with sustainability criteria at their core, and encourage high sustainability standards at all stages of the infrastructure life cycle.

51. The initiative was established by Climate Policy Initiative, HSBC, the International Finance Corporation, Organisation for Economic Cooperation and Development and the Global Infrastructure Facility

Eligible assets must meet 14 baseline sustainability criteria and provide a positive contribution against at least one criterion. In the context of net zero, the positive contribution would be against GHG mitigation, for instance, through renewable energy facilities or electric buses. Key design features of the Label include:

- It applies to an asset across multiple stages of the project life cycle
- It is designed to build on and be flexible with the use of existing taxonomies, standards and frameworks to facilitate reporting and compliance
- It relies on self-declaration (with independent review encouraged), alongside transparent disclosure and reporting

Global infrastructure investment needed by 2030 for a 66% chance of 2-degree Celsius temperature rise (USD trillion 2016-2010)



Source: 'Investing in Climate, Investment in Growth', OECD/IEA, July 2017

CASE STUDY: MACQUARIE'S RENEWABLE ENERGY PPAS

The mainstreaming of renewable technologies at increasing pace and decreasing cost has prompted governments to pare back publicly-funded support schemes created to stimulate the market. In this lower subsidy world, developers must find alternative sources of revenue to anchor the low-cost, long-term financing needed for projects to be economically viable. At the same time, a growing number of corporations are looking to access green power through power purchase agreements (PPAs) – usually long-term agreements between energy producers and consumers for the delivery of renewable energy from a specific source to provide alternative revenue certainty. Macquarie's Green Investment Group (GIG) works with clients, including energy-intensive industrials, to structure tailored PPAs. To date, GIG has supported 23 corporates with their green transition through PPAs, providing almost 4 GW of renewable energy capacity across several markets, including the US and the Nordics.

GIG is also driving PPA activity in newer markets, where the delivery of public climate ambitions often relies more heavily on private sector investment or private sector-led solutions. Poland is the largest electricity market in Central Eastern Europe, with commitments to deliver more than 50% of power generation from wind, solar and biomass by 2050.

October 2019, GIG secured its first corporate PPA in Poland with Signify, one of the world's leading lighting companies. The virtual PPA with Macquarie's Kisielice wind farm reduces Signify's annual carbon footprint and is accelerating Poland's emergent renewables market by demonstrating an innovative route to market.

Since then, GIG has continued to build its portfolio of Polish wind farms, linking their output to tailored PPAs that allow corporate clients to meet their own decarbonisation commitments. These range from physical PPAs such as the provision of baseload power to Danone's seven Polish production plants, to virtual PPAs that are distributing renewable energy into the Polish grid and providing clients like Air Products with Guarantee of Origin certificates to set against their emissions from industrial gas generation.

Macquarie is also innovating to meet other challenges. In many markets, demand from off-takers is outpacing the supply available from new projects coming on stream. Aggregating volumes – pooling smaller companies together to buy energy from a larger project – not only gives corporates access to a broader set of projects but also provides projects with the ability to match their production volumes with an appropriate group of customers. One example is Macquarie's Murra Warra development, a 429 MW onshore wind farm in Australia, which was underpinned by a multi-buyer PPA with five separate corporate off-takers.

Sustainable Markets Initiative

9. CUSTOMER ENGAGEMENT

Key Messages

State of play

Engaging with customers to understand their strategies and support their transitions is essential to enabling change in the real economy

Bank roles can include raising awareness, supporting decarbonisation strategy development, sharing best practices and developing financing solutions

Discussion points

There is no 'one-size-fits-all' engagement approach (e.g. smaller businesses may be less aware of opportunities as they have fewer internal sustainability resources)

The transition must balance emissions reduction and social and ecological goals

Initial Considerations

In order to support clients, banks can:

- Build strategy to adapt engagement based on customer size, sector, geography and transition maturity
- Design processes to balance accelerating the transition with supporting local economies and ecosystems to help ensure a 'just transition'

STATE OF PLAY

Engaging with customers to understand their strategies and support their transitions is essential to enabling change in the real economy. Bank roles can include raising awareness, supporting decarbonisation strategy development, sharing best practices and developing financing solutions.

Client engagement is essential for banks to achieve their net zero commitments.[52] When banks set a net zero target, they tie their financing activities to a metric best achieved in partnership with their clients. At a time when levels of climate awareness are rapidly changing and transition pathways are emerging, banks have the opportunity to develop constructive dialogues with clients that will support change in the real economy and accelerate the transition to net zero.

Banks can offer support to clients across the following categories:

- **Raising awareness and starting a dialogue** – Ensuring clients understand the need to transition to net zero, the bank's role and their own role in that process, and the importance of collecting data to inform transition strategy
- **Understanding and supporting client decarbonisation strategy development** - Sharing expertise and best practice, guiding towards key resources, communicating bank sector-level targets to clients to help inform their strategies
- **Developing financing and hedging solutions** – Financing client investments in decarbonisation technologies (see Section 8 - Financial the transition) and hedging solutions (e.g. ways to mitigate risk related to carbon prices).

In addition to providing support, banks need to engage with their clients to understand their emissions and track progress. (See Section 2 - Measurement.)

DISCUSSION POINTS

There is no 'one-size-fits-all' engagement approach. The transition must balance emissions reduction and social and ecological goals.

Customer attributes will determine engagement strategies:

Customer size – Larger companies are more likely to have access to climate resources, expertise, and tools than small and medium enterprises (SMEs). Bank support to large companies will likely take the form of understanding their strategies and developing financing solutions. These solutions are typically more complex and involve a broader range of investors. On the other hand, SMEs (who represent about 90% of all businesses) and retail customers are more likely to be at an early stage in their journeys and benefit from information to increase awareness and tools to measure climate impact.[53] (See the NatWest case study on CoGo.)

Customer sector – Transition pathways differ for all sectors. Some sectors require immediate financing support to scale technologies (e.g. the automotive industry increasing electric vehicle production) while others require longer-term investment (e.g. the cement industry developing hydrogen technologies). Banks need sector-specific expertise to understand the differences in decarbonisation investments and sector pathways. (See the Lloyds case study.) There is also an opportunity to share best practices across clients within sectors.

Customer geography – Science-based scenarios describe different decarbonisation pathways by geographical region. Banks must build expertise to be able to carefully consider a customer's decarbonisation and climate risk management strategies in the context of the region and country in which the customer operates. They also need relevant knowledge of local market specifics when engaging with clients.

52. For further discussion of this topic, please see WRI working paper Banking Beyond Climate Commitments and Cambridge Institute for Sustainability Leadership's Let's Discuss Climate: The Essential Guide to Bank-Client Engagement

53. We Mean Business coalition, SME Climate Hub

Maturity of a customer's climate strategy – Customers at an earlier stage of their decarbonisation strategy require support and training in understanding emission pathways and regulatory requirements. Customers with developed strategies are more likely to require financing support. (See the Credit Suisse case study.)

Balancing the transition with supporting local communities and ecosystems

As banks engage with clients to support their decarbonisation, they should consider the transition in the context of the communities and ecosystems in which their clients operate. Banks have a responsibility to shift financing away from activities that are not moving towards a net zero outcome. However, they also have a responsibility to support clients and communities in achieving the UN's Sustainable Development Goals and help ensure a just transition. Banks should work with clients to support local communities and those whose livelihoods may be displaced by the transition. The solution may involve retraining and providing resources to assist in redeployment in the low carbon economy. The case study on Standard Chartered's geographical approach to client engagement offers an example of how banks might balance these considerations.

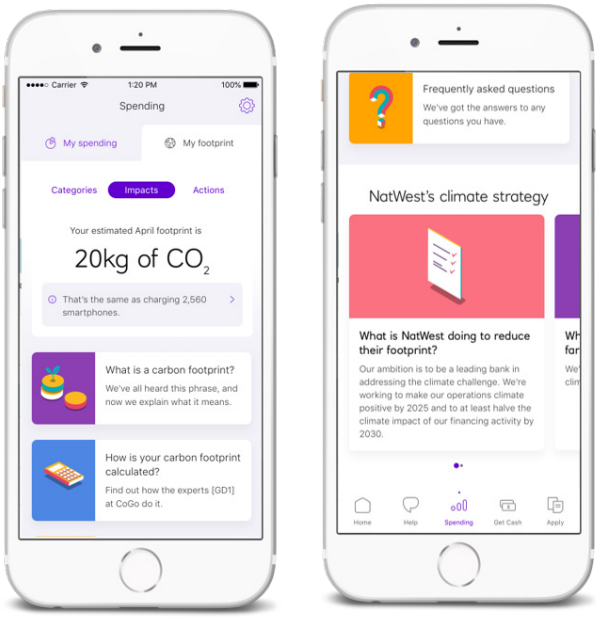
INITIAL CONSIDERATIONS

To support client engagement, banks will likely need to upskill their workforces across relationship managers, product specialists, risk and finance professionals, sustainability experts and sector experts (see HSBC case study). Employees should be trained in new technologies, climate pathways and financing needs in the context of transition. Banks also need to put in place incentives that are aligned with their net zero commitments and targets to motivate management and employees to become advocates for the decarbonisation of their business and those of their customers.

Further, banks must consider client decarbonisation strategies in the context of the sector and geography in which they operate and their impact on local communities. Banks can play a key role in making sure client transition plans are pragmatic and credible given each client's context. Finally, banks need to set clear expectations for clients around financing decisions and share guidance with customers on activities and strategies incompatible with their net zero pathway (e.g. coal-fired power, arctic oil projects). The Citi case study provides an example of a clear policy regarding financing the expansion of coal-fired power.

CASE STUDY: NATWEST'S COGO CLIMATE FOOTPRINT APP FOR RETAIL CUSTOMERS

In July 2021, NatWest announced an upcoming rollout of a carbon footprint tracking feature on its mobile app to help retail customers measure, track and reduce the climate impact of their spending. The feature will show users the CO_2 emissions associated with their daily spending habits. It will also allow them to create and log commitments to reduce these emissions and provide them with guidance on how to do so. For example, the app might guide users to compost their food waste, change to renewable energy suppliers, reduce meat consumption or buy second-hand clothing.

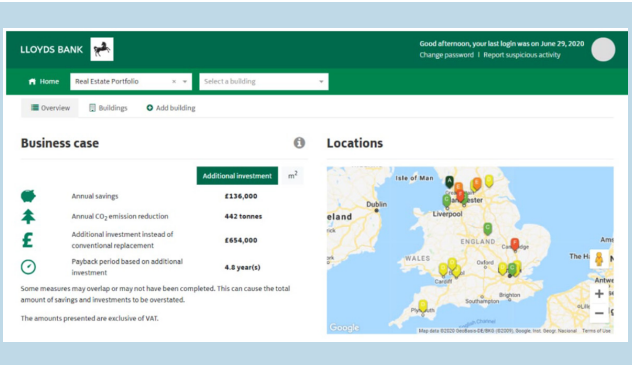


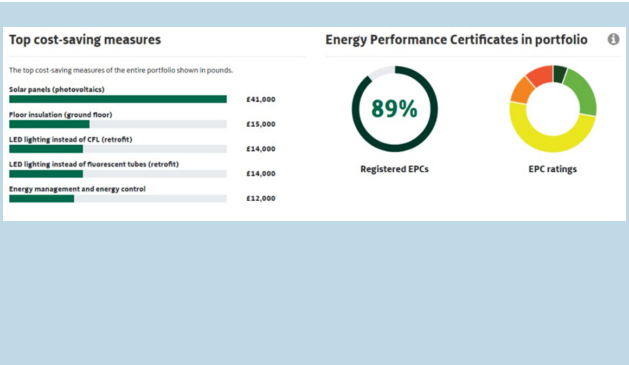
In an 8-week pilot featuring 250 staff and customers, NatWest found that the average user was able to reduce their CO_2 emissions by about 11 kg per month. If each of the 8 million NatWest customers who use the app utilised the feature with the same results, it would save over 1 billion kg of CO_2 emissions per year from NatWest's client emissions portfolio. The most impactful measures were switching to renewable energy providers (an average saving of 90kg of CO2 per month) and composting food waste. 60% of the behaviours committed to were reported as being new, suggesting that the trial provided customers with new and meaningful choices.

The new feature will be launched in partnership with CoGo, a carbon footprint tracking company. CoGo is partnering with banks in multiple markets to provide their app, or integration with the bank's app, to retail customers.

CASE STUDY: LLOYDS' GREEN BUILDINGS TOOL

As part of Lloyds' commitment to a low carbon future, it has developed the Green Buildings Tool to help reduce the emissions of the commercial real estate sector in the UK, working alongside sustainability consultants CFP Green Buildings. Buildings are a significant source of GHG emissions in the UK and 80% of the buildings that will exist in 2050 have already been built. Therefore, along with expected changes in regulatory requirements in this space, reducing the emissions of the sector will require efficiency improvements to existing buildings.





For clients who own or lease properties, it can be challenging to know where to start to reduce the emissions of their premises. The Green Buildings Tool helps clients understand their emission reduction opportunities and build a sustainability strategy. The tool has a simple interface allowing customers to assess the business cases for up to 58 cost-saving measures to improve the green credentials of a property or portfolio of properties. The impact of all measures can be viewed in terms of their potential impact on EPC ratings, estimated payback period and annual savings, investment required and the reduction in carbon emissions. The tool is free to use and designed for clients of all sizes, from SMEs with single premises to the largest companies in the UK. The tool is also designed to be updated after measures have been implemented so that clients can review their progress.

More than 150 million square feet of real estate has already been loaded into the tool, which is the equivalent footprint of over 225 London Gherkin towers.

Once clients have determined the optimal investments to reduce the emissions of their properties, they can apply for discounted financing from another Lloyds programme, the Clean Growth Financing Initiative. Launched in 2018, the initiative is designed to incentivise sustainable investments by offering up to 0.25% interest rate reductions for term loans for projects with one of the following five green purposes: reducing emissions, energy efficiency, low-carbon transport, reducing waste and recycling, improving water efficiency. It is designed to be the broadest green purpose financing in the UK.

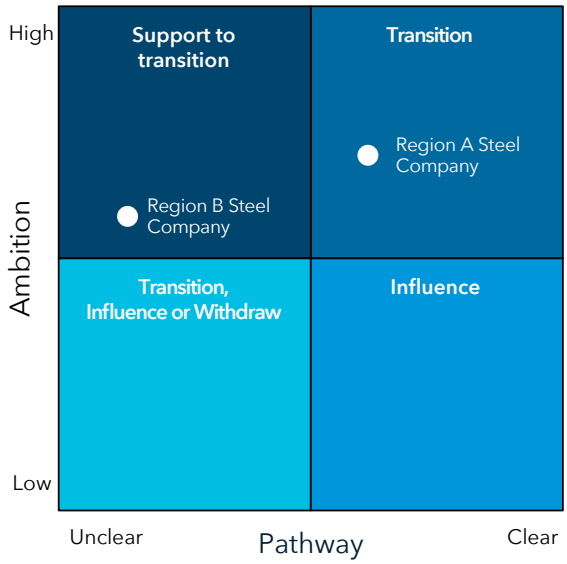
CASE STUDY: STANDARD CHARTERED'S GEOGRAPHICAL APPROACH TO CLIENT ENGAGEMENT

Standard Chartered is developing a methodology to support its clients in ongoing and sustainable development through an orderly transition to a low carbon economy and an engagement framework to assess clients in the context of the geographies in which they operate. The methodology will build on global standards and industry leading expertise and will be made transparent for the wider banking sector as it takes forward its net zero ambitions. The engagement framework follows Paris-aligned decarbonisation trajectories, under which different industries and regions are expected to decarbonise at different rates. The speed of decarbonisation will be influenced by the availability of technologies and capital as well as the need for a just transition. This is particularly critical in emerging markets, where high-emitting sectors may be essential for livelihoods and economic growth.

As the first step in this engagement framework process, Standard Chartered evaluates companies based on their net zero ambition and transition pathway.

As part of its evaluation, Standard Chartered will normalise against the pathway for the geography in which a client operates. A country's climate ambitions and supporting policies have tremendous influence on the climate ambitions of the companies operating there. In the example shown, the steel company in Region B has limited climate ambition, due to limited regulatory and shareholder pressure. However, this level of ambition is relatively high compared to its country and regional peer set. After normalising by geography, Standard Chartered places clients on a matrix and considers its ability to influence the ambition or pathway. To ensure that it supports a just transition, Standard Chartered will also take other factors into account, such as the impact of financing decisions on local sustainable development. Finally, the bank will decide on the next steps for engagement of each client.

Example: two different steel producers might perform very differently along the dimensions below (generalised and for illustration purposes only):



Region A Steel Company has medium to high climate ambition and a clear pathway, so it is natural to support the client in its transition. Standard Chartered will help determine the relevant KPIs for the transition as well as how these could be written into financing agreements. The learnings from the leaders in the transition will then be transported across the bank's network.

Region B Steel Company has no clear pathway at present, but its level of ambition, normalised for geography, places it in the top left quadrant. Standard Chartered will collaborate with the client to look for decarbonisation opportunities across the value chain and consider its support while a transition pathway develops.

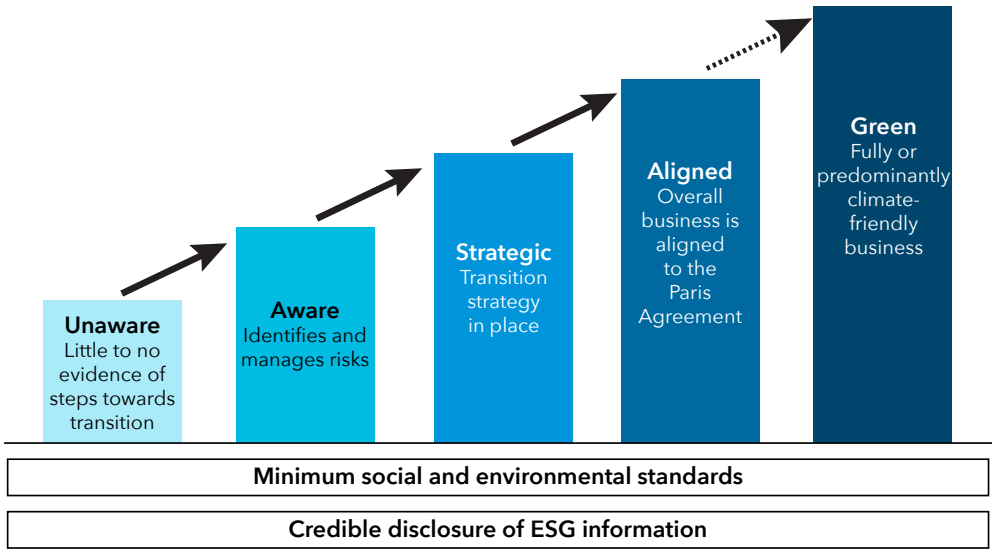
Dimension	Region A steel company	Region B steel company
Company's level of ambition	Some climate ambition	Limited climate ambition
Ambition relative to country/peers	High	Above average
Company pathway to net zero	~1.7T CO_2/tonne of steel produced (compared to Region A sector average of 1.5T CO_2); access to scrap steel	~3T CO_2/tonne of steel produced (compared to Region B sector average of 3.5T CO_2); limited access to scrap steel
Country pathway to net zero	Some access to renewables	Limited access to renewables

Standard Chartered is still exploring how to make these trade-offs and solve these challenges and its methodology and engagement framework will continue to evolve and improve. It will require deep expertise, including climate expertise, sector-level expertise, and regional/policy expertise. It will also require collaboration between multiple divisions of the bank, such as risk management, business, climate team and finance.

CASE STUDY: CREDIT SUISSE'S CLIENT ENERGY TRANSITION FRAMEWORKS (CETFS) EVALUATE AND SUPPORT CLIENT TRANSITION PLANS

In 2020, Credit Suisse introduced Client Energy Transition Frameworks (CETFs) to support their clients' transitions towards Paris alignment. These frameworks provide a methodology to categorise the bank's clients operating within a given sector according to their energy transition readiness (see diagram below). With this approach, Credit Suisse aims to actively encourage clients to transition along the CETF over time and to support them in this process by providing financing and advisory services. At the same time, Credit Suisse will progressively reduce its own business and reputational risk exposure as it phases out financing for clients with the lowest categorisation in terms of transition readiness (i.e. 'Unaware' clients) over time.

To date, Credit Suisse has rolled out CETFs for the highest priority sectors in terms of carbon intensiveness, including oil and gas, coal mining and fossil fuel-based utilities/power generation, shipping, aviation and commodities trade finance. Credit Suisse discloses the rollout and client coverage as part of TCFD reporting, providing a significant level of transparency. The bank's introduction of CETFs has been strongly supported by senior management, which has helped to overcome natural implementation hurdles. Such hurdles have included the need to agree on a sector-by-sector set of criteria to classify clients, and the need to ask clients climate-related questions that may not be posed by competitors. These questions, however, allow Credit Suisse to engage in fundamental discussions with clients, opening the door to financing of potential solutions towards transition. Thus the CETF and accompanying senior management support have enabled the level of client engagement necessary for meaningful climate action.



CASE STUDY: HSBC UPSKILLS EMPLOYEES TO SUPPORT CLIENTS' NET ZERO TRANSITIONS

HSBC recognised that effectively supporting clients' transitions across the 64 countries and territories where it operates requires its 200,000+ employees throughout the bank to acquire new skills. These skills are needed to facilitate client engagement and the development of practical financial solutions. In recent years, HSBC has pursued approaches at multiple levels to address the challenge.

Across the broad organisation, as part of HSBC's global mandatory training curriculum for staff, it developed a seven-part online course in partnership with the University of Cambridge Institute for Sustainability Leadership, including materials on climate, HSBC's climate strategy and sustainable finance. Over 100,000 sustainability modules have been completed since 2018.

As an initiative to accelerate beyond the mandatory curriculum, HSBC launched a Sustainable Finance Ambassador Network in the UK with more than 280 ambassadors receiving fast-track training and the opportunity to gain a professional sustainability qualification. In order to build knowledge on potential transition and financing solutions, through its Centre of Sustainable Finance HSBC shares thought leadership and collaborates with organisations such as the Energy Transition Commission, WRI, Climate Bonds Initiative, Singapore Institute of International Affairs and the Asia-Pacific Structured Finance Association.

To ensure senior management fluency and leadership in the topic, HSBC has held a series of dedicated climate and sustainable finance workshops for the top 250 executives and held Board and Executive Committee briefings on climate change, net zero and sustainable finance. This is supported by quarterly sessions with an expert advisory group which has representation from NGOs, industry and scientific organisations.

HSBC will continue to reassess its employee education opportunities in this topic to ensure that it builds the capabilities required to play its part in the real economy's transition to net zero.

CASE STUDY: CITI DEVELOPS RESTRICTION POLICY ON COAL FINANCING

On Jane Fraser's first day as CEO in March 2021, Citi announced its commitment to net zero emissions by 2050. As the world's most global bank, Citi is connected with many carbon-intensive sectors that have driven global economic development for decades. The work needed to achieve net zero makes it imperative that Citi works with its clients—including fossil fuel clients—to help them and the energy systems that we rely on transition to a net zero economy.

When Citi announced its net zero commitment, however, it had years of previous climate risk management work to build on. The bank released its first coal mining sector policy in 2009 and its first coal-fired power policy in 2018, and it has continued to strengthen these policies related to thermal coal over time. In 2020, Citi made the decision to reduce exposure to thermal coal mining companies to zero by 2030. In early 2021, Citi updated its coal-fired power policy, setting expectations for its clients with coal-fired power generation to align with the Paris Agreement in the years ahead, starting with publicly reporting their GHG emissions and engaging with Citi on their strategies to diversify away from coal-fired power generation. The policy states that after 2021, Citi will not provide acquisition financing or advisory services related to coal-fired power plants, nor will it on-board any new clients with plans to expand coal-fired power generation; after 2025, Citi will no longer extend capital and/or provide other financial services to clients that do not have a low-carbon transition strategy to phase out coal. Further, Citi will cease business with any power generation clients that have not reduced the share of power generation from coal-fired power plants to less than 5% by 2030 for clients with assets in OECD countries and by 2040 for clients with assets in non-OECD countries.

These updated coal policies have already been integrated into business strategy. In 2020, Citi made the strategic decision not to pursue a number of transaction opportunities related to coal power or coal mining during the early stages of engagement. The shift away from fossil fuels in pursuit of renewable energy will continue to have a significant effect on coal clients, but Citi remains focused on engaging clients to achieve their own net zero transitions and bringing as many of them as possible along in the bank's own net zero journey.

CONCLUSION

The time to act is now. Although there are varying approaches to net zero across the finance industry at present, banks must not be deterred from building a robust transition strategy. Banks must take the best-informed choices today that will allow them to finance the real economy's journey to net zero.

Banks should aim to be transparent in how they have built their strategy and be prepared to defend their choices to regulators, NGOs and industry peers. Above all, banks should aim to drive towards practices that will enable them to best support their clients in moving towards net zero.

Opportunities for convergence are already present to facilitate comparisons across portfolios and engagement with stakeholders on a commonly understood basis. Banks are consistently including client emissions from on-balance sheet lending and investment activities in the scope of their net zero strategies. They are setting client targets by prioritising the most carbon-intensive sectors. The industry is converging around TCFD as a way to transparently disclose strategies and progress to external stakeholders. Finally, banks are increasingly looking for innovative ways to support their clients in the transition.

At the same time, banks need support from external stakeholders. Banks universally cite the need for internationally consistent publicly reported data—particularly from corporates in high emissions sectors. Banks also need additional emissions scenarios that are ambitious, credible and detailed. They need standard definitions and taxonomies for climate finance activities to support the development of innovative products. And as shown by the divergences in this guide, banks would benefit from consensus around industry standards to maintain credibility and reduce ambiguity.

The support of policymakers, governments and regulators is essential. Banks need the support of policymakers to set the regulatory conditions to achieve meaningful emissions disclosure from the real economy. Government assistance in the form of public capital, subsidies or incentives can also help bank clients make progress on their transition plans.

Finally, momentum towards net zero within other parts of the finance industry, including investors and asset managers, is critical to ensure that client transitions are supported by the entire financial community.

Looking forward, this guide is expected to be an evolving document, with future versions incorporating the latest emerging guidance. This guide is based on the observations and experiences of FSTF members, and there are other approaches being taken in the industry. By continuing this dialogue, the industry can build a credible approach that all banks can follow as they play their part in the net zero journey.

FOR MORE INFORMATION, CONTACT:

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sustainability@hsbc.com

GLOSSARY

1.5°C Pathway	A pathway of emissions of greenhouse gases and other climate forcers that provides an approximately one-in-two to two-in-three chance, given current knowledge of the climate response, of global warming either remaining below 1.5°C or returning to 1.5°C by around 2100 following an overshoot
Absolute emissions	Greenhouse gas emissions attributed to a financial institution's lending and investing activity, expressed in metric tonnes of CO_2 equivalent (tCO_2e)
Attribution share or attribution factor	The share of total greenhouse gas emissions of the borrower or investee that are allocated to the loan or investments
Avoided emissions	Emission reductions that the financed project produces versus what would have been emitted in the absence of the project (the counterfactual baseline emissions)
Carbon budget	(1) the cumulative amount of global carbon dioxide emissions that is estimated to limit global surface temperature to a given level above a reference period, taking into account global surface temperature contributions of other GHGs and climate forcers; (2) the distribution of the carbon budget defined under (1) to the regional, national, or sub-national level based on considerations of equity, costs or efficiency
Carbon dioxide removal (CDR)	Anthropogenic activities removing CO_2 from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical sinks and direct air capture and storage, but excludes natural CO_2 uptake not directly caused by human activities
Carbon intensity	The amount of emissions of carbon dioxide (CO_2) released per unit of another variable such as physical output (e.g. energy production or vehicle kilometres driven) or a monetary unit (e.g. loan and investment volume)
Climate change	The Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'
Decarbonisation	The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport
Double counting	Occurs when a single GHG emission reduction or removal is counted more than once toward attaining mitigation pledges or financial pledges for the purpose of mitigating climate change within one or multiple organisations
Emissions intensity	See 'Carbon intensity'
Greenhouse gas (GHG)	Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds. This property causes the greenhouse effect. Water vapour (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and ozone (O_3) are the primary GHGs in the Earth's atmosphere. Moreover, there are a number of entirely human-made GHGs in the atmosphere, such as the halocarbons and other chlorine- and bromine-containing substances, dealt with under the Montreal Protocol. Beside CO_2, N_2O and CH_4, the Kyoto Protocol deals with the GHGs sulphur hexafluoride (SF_6), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). See also Carbon dioxide (CO_2), Methane (CH_4), Nitrous oxide (N_2O) and Ozone (O_3)

Net zero	Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. Where multiple greenhouse gases are involved, the quantification of net zero emissions depends on the climate metric chosen to compare emissions of different gases (such as global warming potential, global temperature change potential, and others, as well as the chosen time horizon)
Overshoot pathways	Pathways that exceed the stabilisation level (concentration, forcing, or temperature) before the end of a time horizon of interest (e.g., before 2100) and then decline towards that level by that time. Once the target level is exceeded, removal by sinks of greenhouse gases is required
Paris Agreement	The Paris Agreement, adopted within the United Nations Framework Convention on Climate Change (UNFCCC) in December 2015, commits all participating countries to limit global temperature rise to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C, to adapt to changes already occurring, and to regularly increase efforts over time
Scenario	A plausible description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces (e.g., rate of technological change, prices) and relationships. Note that scenarios are neither predictions nor forecasts, but are used to provide a view of the implications of developments and actions
Scope 1 emissions	Emissions from operations that are owned or controlled by the reporting Company
Scope 2 emissions	Emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company
Scope 3 emissions	All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions
Sustainable Development Goals (SDGs)	The 17 global goals for development for all countries established by the United Nations through a participatory process and elaborated in the 2030 Agenda for Sustainable Development, including ending poverty and hunger; ensuring health and well-being, education, gender equality, clean water and energy, and decent work; building and ensuring resilient and sustainable infrastructure, cities and consumption; reducing inequalities; protecting land and water ecosystems; promoting peace, justice and partnerships; and taking urgent action on climate change

Definitions based on IPCC and SBTi

SOURCES

Connecting Science, clients and finance

ETC Mission Possible: Reaching Net-zero Carbon Emissions from Harder-to-Abate Sectors by Mid-century, https://www.energy-transitions.org/publications/mission-possible/#:~:text=The%20report%20Mission%20Possible%3A%20Reaching,60%25%20by%20mid%2Dcentury%20as

Greenhouse Gas Protocol, https://ghgprotocol.org/

IPCC, Special Report – Global Warming of 1.5°C, https://www.ipcc.ch/sr15/

Nature, 'Climate tipping points — too risky to bet against,' https://www.nature.com/articles/d41586-019-03595-0

UNEP Mercator Research Institute on Global Commons and climate change (MCC), https://www.mcc-berlin.net/en/index.html

CDP, 'Finance sector's funded emissions over 700 times greater than its own' https://www.cdp.net/en/articles/media/finance-sectors-funded-emissions-over-700-times-greater-than-its-own

PART 1 – METHODOLOGY AND TARGET SETTING

1. Defining the scope of emissions

NZBA, 'UNEP FI NZBA Commitment Statement', https://www.unepfi.org/wordpress/wp-content/uploads/2021/04/UNEP-FI-NZBA-Commitment-Statement.pdf

PCAF, 'The Global GHG Accounting & Reporting Standard for the Financial Industry', https://carbonaccountingfinancials.com/standard

TCFD, 'Frequently Asked Questions', https://www.tcfdhub.org/faq/

UNEP FI, 'Guidelines for Climate Target Setting for Banks', https://www.unepfi.org/wordpress/wp-content/uploads/2021/04/UNEP-FI-Guidelines-for-Climate-Change-Target-Setting.pdf

WBCSD-WRI, 'GHG Protocol: Corporate Value Chain Accounting Reporting Standard', https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

2. Measuring baseline emissions

EU TEG, 'Taxonomy: Final report of the Technical Expert Group on Sustainable Finance' https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

PCAF, 'The Global GHG Accounting & Reporting Standard for the Financial Industry', https://carbonaccountingfinancials.com/standard

PCAF, 'Financial institutions taking action - PCAF website', https://carbonaccountingfinancials.com/financial-institutions-taking-action#overview-of-financial-institutions

PCC, Special Report – Global Warming of 1.5°C, https://www.ipcc.ch/sr15/

3. Selecting future emissions scenarios

CCC, 'The Sixth Carbon Budget The UK's path to Net Zero', https://www.theccc.org.uk/publication/sixth-carbon-budget/

IEA NZE2050, 'Net Zero by 2050: A Roadmap for the Global Energy Sector,' https://www.iea.org/reports/net-zero-by-2050

IEA SDS, 'World Energy Outlook - Sustainable Development Scenario', https://www.iea.org/reports/world-energy-model/sustainable-development-scenario

IEA B2DS, 'Energy Technology Perspectives 2017 - Flagship Report', https://www.iea.org/reports/energy-technology-perspectives-2017

IPCC, 'Special Report on Global Warming of 1.5C', https://www.ipcc.ch/sr15/

NGFS, 'NGFS Climate Scenarios for central banks and supervisors', https://www.ngfs.net/sites/default/files/medias/documents/820184_ngfs_scenarios_final_version_v6.pdf

NZBA, 'Commitment Statement', https://www.unepfi.org/wordpress/wp-content/uploads/2021/04/UNEP-FI-NZBA-Commitment-Statement.pdf

UN, Principles for Responsible Investment (PRI), https://www.unpri.org/

4. Measuring portfolio alignment

2DII & Katowice Banks, 'Credit Portfolio Alignment,' https://2degrees-investing.org/wp-content/uploads/2020/09/Katowice-Banks-2020-Credit-Portfolio-Alignment.pdf

JPMorgan Chase, Carbon Compass℠: Paris-Aligned Financing Commitment Methodology', https://www.jpmorgan.com/content/dam/jpm/cib/complex/content/investment-banking/carboncompass/Carbon_Compass_Final.pdf

PACTA, 'PACTA for Banks Methodology Document', https://www.transitionmonitor.com/wp-content/uploads/2021/07/PACTA-for-Banks-Methodology-document-02-07-2021_v1.2.0_v4.pdf

Portfolio Alignment Team – 'Measuring Portfolio alignment,' https://www.tcfdhub.org/resource/measuring-portfolio-alignment-assessing-the-position-of-companies-and-portfolios-on-the-path-tonet-zero/

Share Action, 'Paris-alignment methodologies for banks: reality or illusion?' https://shareaction.org/resources/paris-alignment-methodologies-for-banks-reality-or-illusion/

SBTi, 'Financial Sector Science-Based Targets Guidance', https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf

SBTi, 'Sectoral Decarbonization Approach (SDA): A method for setting corporate emission reduction targets in line with climate science', https://sciencebasedtargets.org/resources/files/Sectoral-Decarbonization-Approach-Report.pdf

5. Setting targets to reduce financed emissions

Barclays, 'Introducing BlueTrack™' https://home.barclays/content/dam/home-barclays/documents/citizenship/ESG/Introducing%20Bluetrack.pdf

CCC, 'The Sixth Carbon Budget The UK's path to Net Zero' https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net zero.pdf

JPMorgan Chase, 'Carbon Compass Paris-Aligned Financing Commitment Methodology' https://www.jpmorgan.com/content/dam/jpm/cib/complex/content/investment-banking/carboncompass/Carbon_Compass_Final.pdf

PACTA, 'PACTA for Banks Methodology Document' https://www.transitionmonitor.com/wp-content/uploads/2021/07/PACTA-for-Banks-Methodology-document-02-07-2021_v1.2.0_v4.pdf

SBTi, 'Financial Sector Science-based Targets Guidance' https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf

UNEP FI, 'Guidelines for Climate Target Setting for Banks' https:// www.unepfi.org/wordpress/wp-content/uploads/2021/04/UNEP-FI-Guidelines-for-Climate-Change-Target-Setting.pdf

UNEP FI, 'Principles for Responsible Banking' https://www.unepfi.org/wordpress/wp-content/uploads/2019/07/PrinciplesOverview_Infographic.pdf

6. How and where to use carbon offsets

Barclays, 'Introducing BlueTrack™', https://home.barclays/content/dam/home-barclays/documents/citizenship/ESG/Introducing%20Bluetrack.pdf

CCC, 'The Sixth Carbon Budget The UK's path to Net Zero', https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net zero.pdf

Greenpeace, 'Net Expectations: Assessing the role of carbon dioxide removal in companies' climate plans,' January 2021, https://www.greenpeace.org.uk/resources/net-expectations-cdr-briefing/IIF, 'Taskforce on Scaling Voluntary Carbon Markets,' https://www.iif.com/Portals/1/Files/TSVCM_Phase_2_Report_Summary.pdf

JPMorgan Chase, 'Carbon Compass Paris-Aligned Financing Commitment Methodology', https://www.jpmorgan.com/content/dam/jpm/cib/complex/content/investment-banking/carboncompass/Carbon_Compass_Final.pdf

NatWest, 'Climate-related disclosures report 2020', https://investors.natwestgroup.com/~/media/Files/R/RBS-IR-V2/results-center/19022021/2020-climate-related-disclosure-report.pdf

PACTA, 'PACTA for Banks Methodology Document', https://www.transitionmonitor.com/wp-content/uploads/2021/07/PACTA-for-Banks-Methodology-document-02-07-2021_v1.2.0_v4.pdf

SBTi, 'Financial Sector Science-based Targets Guidance', https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf

TSVCM, 'Phase 2 Report,' https://www.iif.com/Portals/1/Files/TSVCM_Phase_2_Report.pdf

UNEP FI, 'Guidelines for Climate Target Setting for Banks', https://www.unepfi.org/wordpress/wp-content/uploads/2021/04/UNEP-FI-Guidelines-for-Climate-Change-Target-Setting.pdf

UNEP FI, 'Principles for Responsible Banking', https://www.unepfi.org/wordpress/wp-content/uploads/2019/07/PrinciplesOverview_Infographic.pdf

University of Oxford, 'Oxford Principles on Net Zero Aligned Carbon Offsetting,' https://www.smithschool.ox.ac.uk/publications/reports/Oxford-Offsetting-Principles-2020.pdf

PART 2 – STAKEHOLDER DIALOGUE

7. Disclosing progress

BNP Paribas, 'TCFD Report 2020,' https://cdn-group.bnpparibas.com/uploads/file/tcfd_2020_bnpparibas_en.pdf

CDP, CDSB, GRI, IIRC and SASB, ' Reporting on enterprise value Illustrated with a prototype climate related financial disclosure standard' https://29kjwb3armds2g3gi4lq2sx1-wpengine.netdna-ssl.com/wp-content/uploads/Reporting-on-enterprise-value_climate-prototype_Dec20.pdf

Lloyds Banking Group, 'Helping Britain Recover: Annual Report and Accounts 2020,' https://www.lloydsbankinggroup.com/assets/pdfs/investors/annual-report/2020/2020-lbg-annual-report.pdf

NatWest Group PLC, 'Climate-related disclosures report 2020,' https://investors.natwestgroup.com/~/media/Files/R/RBS-IR-V2/results-center/19022021/2020-climate-related-disclosure-report.pdf

Standard Chartered, 'Facilitating climate action where it matters the most: TCFD 2020,' https://av.sc.com/corp-en/content/docs/tcfd-climate-change-disclosure.pdf

TCFD, ' Recommendations of the Taskforce on Climate-related Financial Disclosures' https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf

UNEP FI, 'Guidelines for Climate Target Setting for Banks' https://www.unepfi.org/wordpress/wp-content/uploads/2021/04/UNEP-FI-Guidelines-for-Climate-Change-Target-Setting.pdf

8. Financing the transition

BloombergNEF, 'Global Sustainable Debt Annual Issuance 2020,' https://about.bnef.com/blog/sustainable-debt-breaks-annual-record-despite-covid-19-challenges/

Climate Bonds, 'Climate Bonds White Paper: Financing credible transitions' https://www.climatebonds.net/files/reports/cbi_fincredtransitions_final.pdf

CPI, ' Updated view on the Global Landscape of Climate Finance 2019' https://www.climatepolicyinitiative.org/wp-content/uploads/2020/12/Updated-View-on-the-2019-Global-Landscape-of-Climate-Finance-1.pdf

EU TEG, 'Taxonomy: Final report of the Technical Expert Group on Sustainable Finance' https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

International Energy Agency (IEA), 'Financing clean energy transitions in emerging and developing economies' (June 2021) https://www.iea.org/reports/financing-clean-energy-transitions-in-emerging-and-developing-economies

GFMA, 'Climate Finance Markets and the Real Economy', https://www.sifma.org/wp-content/uploads/2020/12/Climate-Finance-Markets-and-the-Real-Economy.pdf

International Capital Markets Association (ICMA), 'The Green Bond Principles (GBP) 2021' https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf

Jelti et al, "Renewable Power Generation: Supply Chain Perspective," https://www.mdpi.com/2071-1050/13/3/1271/pdf

OECD, ' Financing Climate Futures RETHINKING INFRASTRUCTURE', https://www.oecd.org/environment/cc/climate-futures/policy-highlights-financing-climate-futures.pdf

Oxford Business Group, 'Transition bonds: a new tool to fund the shift towards climate sustainability?' https://oxfordbusinessgroup.com/news/transition-bonds-new-tool-fund-shift-towards-climate-sustainability

S&P Global Ratings 'Transition Finance: Finding A Path To Carbon Neutrality Via The Capital Markets' https://www.spglobal.com/ratings/en/research/articles/210309-transition-finance-finding-a-path-tocarbon-neutrality-via-the-capital-markets-11864585

9. Customer engagement

NatWest Group, 'NatWest to launch free carbon footprint tracker to app users,' https://www.natwestgroup.com/news/2021/06/natwest-to-launch-free-carbon-footprint-tracker-to-app-users.html

We Mean Business coalition, https://www.greenbiz.com/article/net-zeros-big-challenge-small-business

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