FINANCE-FIT-FOR PARIS (3FP) BANKS HANDBOOK

A technical handbook on aligning the banking business model with the Paris climate goals - December 2020

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3fP finance fit for Paris

THE 3FP-BANKS HANDBOOK AT A GLANCE

The aim of the finance fit for Paris (3fP)-Banks Handbook is to inform and support the banking sector in finding a proactive and constructive role in the transition of European economies in line with the goals of the Paris Agreement. Building on the formulation of a vision of how a Paris aligned Bank could look like, the Handbook particularly intends to inform about:

- Existing tools and methods for commercial banks to align with the Paris Agreement,
- Practical steps towards implementing respective methods and tools,
- The status quo amongst European banks in aligning with the Paris Agreement, and
- Good practices observed in the market.

To this end, the 3fP-Banks Handbook provides a collection of current knowledge and guiding documents on aligning commercial banks with the Paris climate goals, structured along ten 3fP-Banks areas of action. Table 1 below provides an overview on the scope of the 3fP-Banks Handbook, its areas of action and the key actions and good practices in the European banking market as covered in the Handbook.

AREA OF ACTION	KEY ACTIONS	3fP-BANKS GOOD PRACTICE EXAMPLE(S)
STRATEGY	Develop long-term perspective Set clear targets Quantify ambition	HSBC: an incoming Paris-aligned bank
GOVERNANCE	Integrated Governance Solid Monitoring, Reporting and Verification Setting up a Sustainability Committee	LBBW: a Committee to steer the bank's Paris alignment
INCENTIVISATION	Adjust remuneration and non-financial incentives Set the tone from the top	ING: incentivising clients to support them towards more sustainable business models
PRODUCTS	Green finance framework consistent with EU Taxonomy Use of EU Green Bond Standard Annual reporting	LBBW and ING: developing innovative green financial products
PORTFOLIO MANAGEMENT	Partnership for Carbon Accounting Financials (PCAF) Paris Agreement Capital Transition Assessment (PACTA)	Triodos Bank: adopting methods to assess contribution of financing and investing activities to climate objectives
RISK MANAGEMENT	Paris Agreement Capital Transition Assessment (PACTA) Climate Transition Risk Methodology Climate Excellence	Piraeus bank: managing climate risks
DATA	Apply the EU Taxonomy for data usage Develop internal data collection frameworks Upgrade IT infrastructure	SEB: seizing the opportunities resulting from new market and policy initiatives to improve climate-related data collection and management
FINANCIAL ADVISORY	Set up a dedicated sustainable finance advisory team Run questionnaires Offer climate reporting services	LBBW: supporting clients in their transition towards greater sustainability
COMMUNICATION & COMMITMENT	Follow principles of Paris-aligned communication. Involve a range of stakeholders Sign comprehensive commitments	Triodos Bank: committing to international initiatives and raising awareness of financial markets participants
DISCLOSURE	Task Force on Climate-related Financial Disclosures Non-Financial Reporting Directive Risk disclosure metrics by the Climate Financial Risk Forum	ING: reporting the carbon intensity of its portfolio in most critical sectors

Table 1 : Overview 3fP-Banks areas of action

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INTRODUCTION TO 3fP BANKS

The climate crisis poses huge challenges to the global economy. Taking climate action to fight adverse consequences of climate change has become a major driver for the transformation of both our economies and financial systems.

The transformation of the European economy towards net zero greenhouse gas (GHG) emissions and climate resilience is under way, guided by the EU's Green Deal for sustainable economic growth. The president of the European Commission, Ursula von der Leyen, has announced the 2030 EU emission reduction target of 55% relative to 1990 levels. To achieve this target, the EU's economy will undergo a fundamental transformation that will include innovation and major technology, policy, and demand shifts over the next ten years. A supportive financial system is necessary to redirect capital flows towards the transformation and to ensure that the European financial system becomes a strong partner for the European economy in financing the transformation, while building up sufficient resilience against climate change related risk in the financial sector to ensure the financial system's stability. The Paris Agreement provides the framework, which guides a future that aims to limit adverse consequences from climate change. Article 2.1.c) of the Paris Agreement stipulates that all financial flows should be made consistent with a low-carbon and climate resilient economic development. Financial institutions and financial regulatory bodies around the globe are acting upon it. Banks are at the core of any financial system and have started to act as well.

The transformation will not be purely market-driven but will be guided by major policy frameworks such as the European Green Deal which sets targets and boundaries, acts as enabler and provides a long-term predictive and credible policy environment for investments into the transformation. The European policy agenda on sustainable finance by the EU and many European governments show that governments have started to take on their role. Banks should assume at least two roles within the public sphere. (i) Banks will need to operationalise regulatory action and (ii) should become a partner for regulators and governments so that they can jointly work towards workable solutions.

This requires thinking ahead and pro-actively developing visions, ideas, solutions, methods and tools.

Banks play a crucial role in supporting the transformation. They are the central provider of capital to the real economy and the key financiers for Small and Medium-sized Enterprises (SMEs)[1]. Based on their capital provision banks can advise on and steer the transformation of European economies towards sustainable development. This entails being a manager of climate risks and climate opportunities, being an advisor on climate impact and opportunities, being an intermediary for climate-related financing opportunities, being a communicator on progress and investment needs. Faced with a growing customer awareness, banks will need to position themselves internally and externally as to where they stand in the sustainability transformation.

The transformation will not occur overnight, but it has started and sustainability leaders have started acting already. Therefore, banks should set a long-term strategy and become long-term partners for the real economy in financing the transformation. Instead of binary approaches of divestment/investment, it will be important to develop processes and pathways in collaboration with the real economy that allow for a targeted, just, inclusive and effective transformation. The aim of the finance fit for Paris (3fP)-Banks Handbook is to support the commercial banking sector in finding a pro-active and constructive role in the transformation of European economies. To this end, the 3fP-Banks Handbook provides a collection of current knowledge and guiding documents on aligning commercial banks with the Paris Agreement, structured along ten key areas of action for 3fP-Banks:

- Strategy
- Governance
- Incentivisation
- Products
- Portfolio management
- Risk management
- Data
- Financial advisory
- Commitment and Communication
- Disclosure

Building on the formulation of a vision of how a Paris aligned Bank could look like, the Handbook particularly intends to inform about:

- **Existing tools and methods for commercial banks to align with the Paris Agreement,**
- **Practical steps towards implementing respective methods and tools,**
- **The status quo amongst European banks in aligning with the the Paris Agreement, and**
- **Good practices observed in the market.**

We invite banks and all interested stakeholders to use this paper as a starter for discussions, a "shopping list" for action, an enabler for climate impact, and as a kick-starter for joint collaboration on supporting the transformation.

1 ECB (2018): *Financing the economy - SMEs, banks and capital markets* (https://www.bankingsupervision.europa.eu/press/speeches/date/2018/html/ssm.sp180706.en.html).

BANKS FIT FOR PARIS ? THE VISION FOR A PARIS-ALIGNED COMMERCIAL BANK

In order to capture the transformational process of banks towards a Paris aligned future, this Handbook formulates a vision of what the key features and the transformational pathway of banks could look like.

A Paris-aligned commercial bank tackles the climate crisis on various levels using a wide range of methods and tools. In the following, we outline a vision for a Paris-aligned bank. This visionary statement does not claim to be comprehensive and should be regarded as an opener for discussion and a guide to the development of the 3fP-Banks areas of action.

A Paris-aligned commercial bank integrates climate action holistically in its core business strategy. The corporate strategy reflects the perspective through commitments to climate goals and the respective integration into its own targets. The bank takes a role as steward for climate action. Reorienting capital flows towards the Paris climate goals represents a key target on the agenda. While C-level management sets the tone from the top, the organization-wide process integration ensures that climate considerations form part of daily operations. A spirit of transformational and forward-looking thinking is encouraged. A long-term perspective is the foundation for decision-making processes, underpinned by a science-based vision for sector-specific decarbonization pathways.

A Paris-aligned commercial bank creates climate-related opportunities and impact. Its product portfolio contains a strong track-record in climate finance and a variety of Paris-aligned financial products. A continuous effort to grow the project pipeline and portfolio ensures that increasing customer demand is satisfied with adequate products and services. A sufficiently developed entrepreneurial culture allows testing of new ideas. A solution and innovation-oriented position places the bank as a thought leader and as an institution recognised for its pioneering practices. The development of frameworks, tools and new structures is ongoing in all departments.

A Paris-aligned commercial bank fully comprehends its business environment and its investees. It aims at contributing to and increasing the climate resilience of the financial system and, by that, support financial stability. Its efforts in understanding and measuring the impacts of its business activities on the climate and vice versa forms part of reiterative decision-making processes. Climate risk management is a central pillar of adapting risk management in a transforming world. Forward-looking approaches entail the inclusion of all relevant internal actors as well as the use of climate scenario analyses, which contribute to a comprehensive and decision-useful risk assessment.

A Paris-aligned commercial bank shares information on its business activities, its research and its strategic views with the outside world. Transparency is sought wherever possible and where not resulting in competitive disadvantages. A Paris-aligned bank "walks the talk" and discloses on its progress towards achieving the Paris climate goal in its business as well as on its positive and negative impacts and on achievements (methodological, technological, etc). In dialogue with academia, policymakers, the civil society, peers and investees information is shared, action demanded and room for joint initiatives evaluated.

A Paris-aligned commercial bank actively helps raising awareness and shifting societal and economic activities towards the achievement of the Paris climate goals. In an advising role, (i) customers are made aware of climate impacts resulting from investment decisions, (ii) investees are presented with options to green activities, and (iii) employees are encouraged to take action themselves. The bank becomes an agent of change.

A Paris-aligned bank follows a gradual process in translating those attributes into action. It sets itself a roadmap for transformation towards Paris alignment and towards reaching a net-zero portfolio by 2050, with clear interim targets and actions for the short- and medium-term. The following indicative timeline should provide a sense of how this process could look like.

2020

A bank sets a strategy, kicks-off processes and sets the tone from the top, e.g. via commitments. Immediate action should focus on avoiding harm, i.e. not financing activities contradicting the Paris goals, and building a pipeline for Paris-aligned portfolios.

2025

Capacities, processes and frameworks are established.to grow the portfolio for Paris-aligned products. Avoiding harm is the new normal and climate co-benefits are generated where possible.

2030

Portfolio emissions are reduced by at least 55%. The focus lies on issuing Paris-aligned products. The support for the transformation in hard to abate sectors is in full swing.

2050

The Paris-aligned bank has reached a net-zero portfolio. Emissions from business operations have been already nullified some years after 2030 (and not offset!). As the effects of the 1.5°C heating starts to unfold more strongly, climate resilience in all products remains the major key challenge.

Figure 2-Timeline for the Paris-alignment of banks

THE BUSINESS CASE FOR PARIS-ALIGNED BUSINESS MODELS IN THE BANKING SECTOR

The nature of the banks' business allows them to take on a pro-active vital role in financing the sustainability transformation while renewing and strengthening its business models. Four key elements of the business opportunity for banks in the climate transformation are outlined in *Figure 3*.

Product development
Demand for green products is increasing. Paris-aligned banks are in a better position capture this market opportunity through a dedicated product development.

Extended advisory role
Banks an extend their advisory role to support the real economy in their transformation which could open up new revenue streams through advisory fees or improve positioning in a thight market.

Reputation
Paris - aligned banks have the potential for better reputation due to their impact on the transformation sparking interest amongst customers.

First mover advantage
First movers can capture customer demand. They will be in a position to contribute to regulatory processes and thus tailor them existing process.

Figure 3-Climate as business opportunities for banks

THE STATUS QUO OF PARIS-ALIGNING BANKS

Compared to institutional investors or insurance companies, banks were usually perceived as being less advanced in aligning with the Paris Agreement. Various aspects might be the reason for this situation such as a common shorter time horizon within the banking business or more recent or less advanced development of regulatory requirements on climate change for banks as compared to other parts of the financial sector, e.g. on climate risk integration. However, the situation is currently changing. Four key drivers of change are displayed in *Figure 4*.

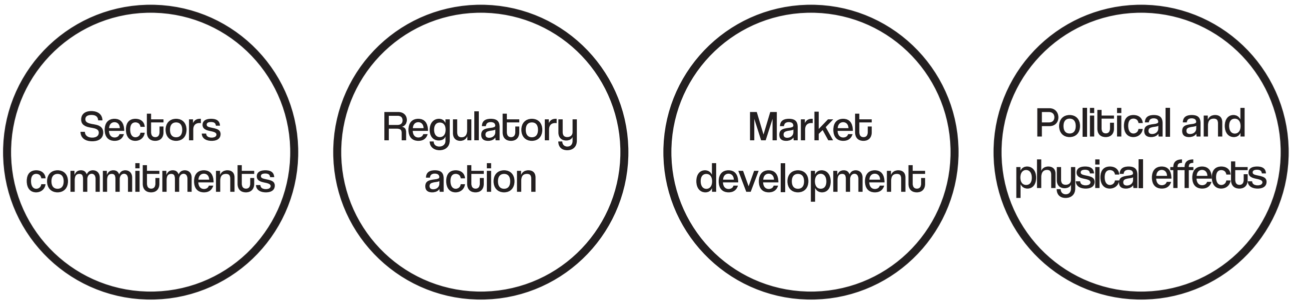

Figure 4-Key drivers for climate action in the banking sector

Sector commitments by the banking industry such as those in Spain, Germany and the Netherlands will move the markets on a voluntary basis. Signatories to those sector commitments will align their portfolios with the Paris Agreement over the coming years. Currently, the sectors in those countries seek agreed technical solutions to measure progress towards their targets. Also, banks throughout Europe have signed up to the Principles for Responsible Banking (PRB) by UNEP Finance Initiative (UNEP FI)[1] since its launch in 2019.

Regulatory action on the EU and the national European level has become a driving force in moving the entire EU banking market. The recent publication of the ECB Guide on climate-related and environmental risk[2] (November 2020) as well as the EBA sustainable finance action plan[3] show that regulatory positioning and climate-related banking regulation at the EU level is progressing. National regulators e.g. in France or Germany are complementing this action by becoming role models or publishing guiding documents on their own or as part of international networks such as the Network for Greening the Financial System (NGFS). The introduction of further EU regulation resulting from the EU Action Plan on Financing Sustainable Growth is integrating the European sustainable finance market, including the EU Taxonomy, the Sustainable Finance Disclosure Regulation (SFDR) including the European Supervisory Authorities' Regulatory Technical Standards (RTS) or the EU Green Bond Standard.

A **market-driven development** pushing for Paris-aligned banks mainly results from changing customer demand patterns and the move by competitors. Conversations with the banking industry show that retail and corporate clients increasingly ask for green and sustainable financial solutions and financial advisory services. Next to this demand push, many banks, and particularly front-runners, are aware of this trend and adapting their business model. This creates peer pressure on the entire market to move as well.

Actual physical effects related to the climate crisis are increasingly being felt across European economies. Over the last years, the effects of the climate crisis became more frequent, e.g. wildfires in California and Australia or water scarcity in Germany. In the last ten years, the world saw eight out of the ten hottest years on record[4]. This experience triggers societal reaction (e.g. Fridays for Future or Extinction Rebellion) and increases the pressure on a more stringent policy response (EU climate targets). Supranational, national, regional and city governments are increasingly raising their ambitions in taking action on the climate crisis. This changes the business cases for many technologies (e.g. green activities become financially viable while some brown activities get exit roadmaps). This will have a strong impact on the real economy and the financial system.

1 UNEP FI (2019): Principles for Responsible Banking (https://www.unepfi.org/banking/bankingprinciples/)

2 ECB (November 2020): ECB Guide on climate-related and environmental risks (https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf).

3 EBA (2019): EBA Sustainable Finance Action Plan (https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

4 Climate Central (2020): Data on hottest years on record (https://www.climatecentral.org/gallery/graphics/10-warmest-years-globally).

CHALLENGES

The ongoing efforts by European banks to align with the Paris Agreement have already unearthed some key challenges in operationalizing the 3fP-Banks vision. From the dialogue with banks, three challenges stand out.

Climate data gap:

a Paris-aligned bank will need to process many climate-related data in order to assess progress towards the transformation, identify and manage climate risks and impacts, assess the sustainability of existing business models of their clients, measure the level of Paris alignment of their products and portfolios, etc.. Data is currently not readily available at the scale necessary. Data providers and disclosure obligations can help to reduce the climate data gap. Much of the data relevant to banks however will need to be provided by SMEs, which are currently not obliged to disclose under existing disclosure regimes, often are too small for data providers to be covered in their analysis, and lack their own resources to collect large amounts of data themselves. Therefore, the climate data gap persists, and banks will need to fill the data gap themselves or request assistance from public authorities.

Harmonisation and standardisation of methods and tools:

Paris alignment of banks is an ongoing challenge and therefore methodologies and approaches are just starting to evolve. Regulators often provide methodological freedom to a certain degree to allow banks to develop methods and tools that best fit their operations and to let the market develop tools. However, this approach reduces appetite to invest too heavily in those methods and tools as the regulator or other standardisation bodies might set a different method or tool as the standard in the future. Therefore, pre-competitive formats or cooperation between regulators and banks should be sought to increase the pace of harmonisation and standardisation of methods and tools. This could increase efficiency in the process. Cases for this would involve for instance the development of standardized scenario tools for climate risk assessment, a standardized approach towards measuring portfolio impacts, and a set of standardised reporting templates, and data flows from SMEs to banks.

Capacities:

a successful steering of the transformation requires new skills and capacities within banks and amongst clients and other stakeholders of banks. From the front desk to the back end, from the retail client to the treasurer at a large corporate and from the supervisor to the reporting team, all actors need to acquire the capacities to fulfil their role in the transformation, to interact with other stakeholders and to ask the right questions. This process will take time and will require efforts by all sides. From the dialogue with the banks, it appears that most banks have actively started to educate their employees on climate-related aspects, while some have integrated respective governance and remuneration structures within the bank. However, only a few banks have started actively raising the awareness of their clients and offering them dedicated advice. In order to overcome this challenge, public agents, civil society and banks alike will need to get active and support this capacity building process.

THE 3FP-BANKS AREA FOR ACTIONS

This Handbook structures its guidance for commercial banks along ten 3fP-Banks areas for action, see Figure 4 for an overview of the areas. The 3fP-Banks areas for action cover all relevant aspects of a bank's operations and business with its real economy clients. Within each area of action, the Handbook describes key fields of action for a Paris aligned approach, specific approaches and the status quo related to available methodologies and tools required for implementation. Good practice from the banking sector based on the 3fP-Bank based on interviews with fifteen European banks provides further illustration for each action area. The following chapters define and detail each area of action.

Figure 5-Overview 3fP-Banks areas of actions

STRATEGY

This chapter is intended for those with an executive management role and responsibility for strategic decisions in the bank. This includes board members and senior managers as well as members of the sustainability division.

In the 2020 World Economic Forums' Global Risks Report, five of the ten most likely and most impactful global risks are related to climate change[1]. This illustrates the relevance of climate related risks across our economies and the perceived exposure to climate related risks, inducing the need for a technological, political and societal transformation of our economies. Against this backdrop, it is crucial for banks to react to this trend and to seize the opportunities arising from endorsing a leading position in this transition.

A strategy is a strong tool available to banks to draw on market and society developments to set overarching goals, to coordinate its activities and operations, and to ensure long-term growth. The alignment of a bank with the Paris agreement should thus be integrated into the banks' strategic agendas. Adopting a consistent climate strategy will allow banks to:

- **Take their role in the reshaping of the banking sector and indirectly of the real economy and to profit from a future-oriented leading position in a fast-evolving world.**
- **Meet a growing demand by clients and the banks' stakeholders for a Paris aligned strategic position.**
- **First mover banks will not only benefit from reputational gains but also from reduced financial risk exposure due to a greater understanding of the challenges of a transition towards a low-carbon and climate-resilient economy.**
- **Seize new opportunities, to develop a strong expertise on growing markets for green and sustainable economic activities**

Considering climate-related variables in strategic developments requires adopting a longer time horizon than today's strategies usually include. By anticipating market movements and new regulatory requirements decision-making and the overall long-term sustainability of a banks' business models will be improved.

1 WEF (2020): *Global Risks Report* (http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf).

Key considerations of a Paris-aligned strategy

The following aspects can support a Paris aligned strategy of banks:

Adopting a long-term horizon: in order to develop a strategy consistent with the Paris Agreement, banks need to adopt a longer time horizon than the one of conventional strategic plans. Adopting a Paris alignment strategy is not only about managing existing risks but also about responding to emerging risks and preparing for market shifts, policy developments and technology evolution. The business strategy should be articulated around short, medium and longer term horizons in order to protect the actual strategic positioning against potential negative consequences of climate change and financial risks in the future. Towards the long-term horizon, strategies should consider concrete interim milestones for the bank's climate objectives.

Developing a strategic Paris alignment framework: the strategic framework may include a concrete Paris alignment vision with clear goals and a transformation pathway. The bank's strategic framework may furthermore entail the adoption of strategic decisions related to inclusion and exclusion criteria for respectively financing activities (e.g. strategic exit from coal financing). A set of internal and comprehensive guidelines can contribute to a coordinated consideration of climate and environmental challenges across all operations and ensure coherence in all divisions.

Quantifying ambitions of the climate strategy: banks' Paris aligned strategy should translate overarching goals into a set of objectives linked to a defined level of ambition and a clear and realistic timeline (Specific Measurable Achievable Reasonable Time Bound (SMART). The set of objectives and targets could relate to growth targets for climate mitigation and adaptation financing activities, together with phase-out targets for the financing of non-Paris aligned economic activities. Further objectives could refer to the development of methodologies supporting the monitoring of Paris alignment of the bank and the integration of climate-related risks assessment in the bank's risk management and portfolio management.

Reflecting and pre-empting the bank's regulatory compliance in the strategy: when developing their climate strategy, Banks should reflect how the strategy assures their alignment with the existing and evolving regulatory framework stemming from European and national regulation and the linked supervisory process. In the European Union, banks should for example closely follow advancements linked to the implementation of the EU Green Deal as well as guidelines and upcoming strategic re-positioning of the European Supervisory Authorities such as the European Central Bank (ECB), the European Banking Authority (EBA) and the European Securities and Markets Authority (ESMA).

Methodologies for a Paris-aligned strategy

A methodological framework for defining alignment with the Paris-Agreement: one of the biggest challenges in developing a Paris alignment strategy is defining to which extent should the bank be Paris-aligned and to translate that into the bank's vision towards 2050. The Institute for Climate Economics (I4CE) offers a definition by identifying 3 degrees of Paris alignment: "do no harm", "support Paris consistent climate co-benefits" and "foster transformative outcomes"[1].

Integration of climate opportunities into the banks' climate strategy: in order to develop a climate strategy, UNEP FI encourages banks to develop an "opportunities taxonomy". Based on market analysis, socio-economic data, sectoral climate risk and opportunity assessments, and respective national governments' National Adaptation Plans (NAP) and Nationally Determined Contributions (NDC), an opportunities taxonomy could inform the banks' strategic activities and core developments to seize new business opportunities in climate aligned activities.

Integrate insights from TCFD Recommendations into strategy planning: The Task Force on Climate-related Financial Disclosures (TCFD) provides disclosure guidelines that can be applied by banks in framing their strategy process. For financial and corporate institutions, there is an increasing body of analysis helping to implement TCFD in concrete banks' strategy process (e.g. by Olivier Wyman[2]).

Allow trial-and-error towards Paris alignment: banks should make use of test phases and pilots as part of the bank's Paris alignment strategy. Given the lack of data and the uncertainty around the evolution of climate, structured pilot programs can help testing the integration of climate-risks into management models or to develop sustainable finance frameworks. Based on the learnings of pilot programmes, the bank can then develop tools that can be mainstreamed and used across its operations.

1 *I4CE (2019): A framework for aligning with the Paris-Agreement: Why, what and how for financial institutions? (https://www.i4ce.org/wp-core/wp-content/uploads/2019/09/I4CE•Framework_Alignment_Financial_Paris_Agreement_52p.pdf).*
2 *Oliver Wyman (2020): (https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2020/February/climate-finance.pdf).*

Status quo & gaps in Paris-aligned strategies in the European banking sector

Our bank assessment shows that climate-related issues are broadly discussed in European banks' strategy processes. Most of the banks have adopted a strategy to reduce the climate impact of their operations such as their building, business travels and paper use. A majority of banks also adopted targets in relation to sustainable finance. Some banks have adopted targets linked to the financing of low-carbon economic activities or linked to the disinvestment from critical industries. Some banks also introduced targets based on the use of practices, instruments and methodologies for example linked to the disclosure of climate-related information, to the steering of the portfolios against goals of the Paris agreement. However, only few banks enacted objectives with a time horizon beyond 2030 and only one bank (HSBC) has a clear assignment of becoming Paris-aligned. We therefore identified room for improvement in the following areas:

- **Strategy orientation towards long-term horizon:** by adopting targets over less than 10 years or by assessing objectives on a year-to-year basis, banks may not show enough ambition and lack of foresight of medium-term market developments implied by the economic transformation. They might therefore risk missing their alignment with the Paris agreement or being unexpectedly overwhelmed by sudden changes in policies, consumer and investors behaviours or economic directions.
- **Define the meaning of the banks's alignment with the Paris agreement:** while most banks are describing the contribution of their targets to climate goals, almost no bank is actually referring to its full alignment with the Paris agreement in its climate strategy. It is however crucial that banks move towards an understanding of how they can themselves align with Paris and develop a strategy compliant with Paris goals.
- **Clear definition of strategic targets and milestones:** in order for banks to monitor and steer appropriately the achievement of their climate-related objectives, it is necessary to define quantitative objectives with measurable targets linked to concrete milestones. This could include targets on the amount of financing and investment, the portion of total assets, the percentage of portfolios that the bank aims to achieve.

Good practice HSBC: an incoming Paris-aligned bank

In October 2020, HSBC has defined the pledge to reduce financed emissions from their portfolio of customers to net zero by 2050 or sooner, in line with the goals of the Paris-alignment. HSBC defined several milestones in order to achieve this long-term target. In 2017, the bank committed to providing USD 100 bn of sustainable finance by 2025. Recently, HSBC also pledged to provide between USD 750 bn and USD 1 trn of finance and investment having a positive contribution to the environmental goals of the Paris agreement by 2030.

In order to achieve their climate strategy, HSBC has identified their potential actions into various of their activities. Aligning their client base with the Paris Agreement supposes the steering of their client portfolio. HSBC is, therefore, working on the adoption of the Paris Agreement Capital Transition Assessment (PACTA) methodology to assess the carbon intensity of its portfolio in specific sectors. But this objective also means a stronger consideration of climate-related issues in their financial advisory activities and the intensification of their support for customers to switch to more sustainable business models.

HSBC is also planning on improving their disclosure of their climate-related information by reporting their progress against this objective and aligning their reporting with the recommendation of the TCFD. Finally, HSBC is engaging in dialogue with their peers, central banks, governments and companies to mobilise the financial system around globally consistent standards to measure financed emissions and developing a carbon offset market.

GOVERNANCE

This chapter is intended for members of the bank's management and supervisory board, management level staff and for bank employees within the sustainability division. The chapter is also intended for all bank units that are responsible for, inter alia, strategy, risk management and incentive setting.

The governance of financial institutions defines how strategic decisions and actions of the bank are taken. The governance has an impact on the management of interests by stakeholders and the interaction between different units in the bank. A strong climate governance can result in new opportunities for a bank's business growth thanks to a better resilience to climate related risks and a stronger portfolio of climate-related business opportunities[1]. A structured and stringent climate-related governance requires banks to take decisive actions. As to the bank's organizational structure, banks should integrate climate-related aspects into the responsibility of committees that are responsible for, inter alia, strategy, risk management and incentive setting. A bank's holistic climate governance approach:

- Establishes formal climate-related mandates, responsibilities and tasks at board level, management level and division level;
- Includes a step-by-step process that ensure structure and stringency, for instance, when measuring the bank's climate impact performance or guiding decision-making processes in financing decisions;
- Aligns management practices with international good practices and standards, such as the Principles for Responsible Banking (PRB)[2].

A holistic climate governance approach in the bank should ensure that climate-related aspects are mainstreamed across the bank and a cultural shift within the organization is triggered. This cultural shift for instance may refer to a long-term perspective in decision making along with clear mandates and responsibility for (senior) management. Paris-aligned goals and objectives (for the short, medium and long term) throughout the organisation ensure that long-term objectives become tangible.

Transparent and robust Paris-aligned leadership and board oversight structures are crucial when it comes to the holistic implementation of the respective bank's strategy towards Paris alignment. A comprehensive and holistic climate governance structure is necessary to manage climate-related impacts, risks and developments and is required to monitor the achievement of targets in alignment with the Paris Agreement.

Major reasons to develop and establish a comprehensive and holistic climate governance system that supports the Paris alignment of the bank include:

- **Good governance helps seizing climate business opportunities:** The Bank-wide integration of a Paris-aligned governance can result in new opportunities for business growth. Strong governance structures enable banks to address climate issues within their portfolios with early action, and thus stay at the top of the game and opportunities[3]. The identification of climate-related synergies between bank units can reduce organizational silos and facilitate overcoming challenges towards Paris alignment.
- **Employee involvement and retention:** Awareness and capacity amongst employees can be increased by addressing climate-related matters regularly. This allows management to establish a bank-wide, internal community of employees who are "fit for a sustainable future" and support the bank's transformation by enabling employees to provide concrete contributions and take on responsibility for climate-related matters. Employee engagement can be strengthened through dedicated events, webinars, meetings, seminars, newsletters, workshops or public recognition for "Paris-aligned champions" within the bank.

1 *UNEP FI (2015): Integrated Governance (https://www.unepfi.org/fileadmin/documents/UNEPFI_IntegratedGovernance.pdf).*
2 *UNEP FI (2019): Principles for Responsible Banking (https://www.unepfi.org/banking/bankingprinciples/).*
3 *Ceres (2008): Corporate Governance and Climate Change: The Banking Sector (https://era.library.ualberta.ca/items/ab2b6b4d-4414-460b-ad7a-cf39c40954c7/view/d0af3bde-bc35-4ce3-a0d3-73d2bfe-c5ab5/ceres_climate_change_banking_report2008.pdf).*

Key considerations for a Paris-aligned governance system

Key considerations for building, establishing and maintaining a strong climate governance structure within a bank include:

Develop a climate governance framework and policy: framework and policy for internal governance regarding climate-related financial matters include step-by-step processes for different situations, such as the bank's climate impact assessment and climate-related financial decision making. Paris-aligned considerations should be integrated into committees that are responsible for matters such as strategy, risk and incentives. Management practices should be aligned with international good practices and standards, such as but not limited to e.g. the PRB by the UNEP FI, which provide a framework for ensuring that signatory banks' strategy and practice align with the UN Sustainable Development Goals (SDGs) and the Paris Agreement. Formal mandates, responsibilities and tasks at Board level, Management level and Division level need to be established.

Managers involvement at all levels: the members of the Board should have the clear responsibility to mainstream climate action and green finance implementation throughout the bank. The CEO of the bank should be the bank's spokesperson on sustainable finance and she/he should refer to the bank's climate action in speeches, articles, open letters and conferences. All other management levels should have specific tasks assigned in relation to Paris alignment within the bank.

Establish a dedicated sustainability division: sustainability divisions need to have the resources, mandate and power to develop and support the implementation of the bank's climate actions. The division can take a role in building climate awareness and internal expertise among employees of all levels through training, dedicated events etc.

Implement stringent climate impact performance monitoring and benchmarking/verification: comprehensive monitoring of the bank's progress regarding its own climate goals as well as a dedicated benchmarking against international or national climate goals should be implemented within the Bank. Reporting on the bank's performance should be directly to the bank's CEO. Further, well-defined intersection points and regular exchange of experience for impact monitoring results from other divisions (e.g. portfolio) should be established.

Involve employees: regularly address climate-related matters in various formats in order to raise awareness among employees, and to understand the current knowledge and interest for such matters among them. The establishment of both top down and bottom up approaches to involve employees to reach climate targets is necessary. On the one hand, employees should be instructed from (senior) management positions on specific tasks and approaches to achieve Paris alignment within the bank. Basic capacity building measurements (such as dedicated training, workshops and webinars) should be mandatory for employees, depending on the position and division. On the other hand, room and capacity for bottom-up ideas and approaches regarding the achievement of a Paris-aligned bank through various channels (e.g. official e-mailing channels, online platforms, brainstorming sessions) should be given.

Promote a cultural shift: a cultural shift towards a Paris-aligned, sustainability-based working culture should be aimed for and concrete actions with measurable outputs should be taken. Therefore, the establishment of a bank-wide, internal community of employees with concrete contribution, responsibility and/or interest into climate-related matters should be made possible. Appropriate fundamentals such as engagements (events, webinars, meetings and seminars), newsletters, workshops or publicly recognition of "Paris-aligned champions" within the bank should be provided.

Methodological overview

Integrated Governance: UNEP FI has proposed a new governance model, the so-called Integrated Governance[1]. The idea is to move from "governance for sustainability" to an integrated governance perspective. The steps from the individual level of board independence to the group level and then the alignment of incentives should be supervised by investor long-term active ownership. Based on the UNEP FI approach, an integrated governance model can be achieved by implementing major steps:

- Creation of a sustainability committee;
- Understanding the value of creating a governance for sustainability;
- Making members of the board responsible for contributing to the formulation of a sustainability strategy;
- Adopting integrated reporting[2];
- Innovating through sustainability;
- Extending the Performance Frontier[3].

Build a solid Monitoring, Reporting, Verification of the bank's climate targets: good climate governance is characterised by a solid monitoring, reporting and verification mechanism. This involves the monitoring of the bank's progress towards its climate goals. The monitoring should be established throughout the bank to align and coordinate action by all divisions. The coordination can be further strengthened by establishing a direct reporting line from the coordinating head to a board member. The board should have the capacity and mandate to take action if climate goals and targets are about to be missed. Finally, governance disclosure processes should be transparent and a regular audit by internal and/or external auditors should verify quality and stringency. The targets developed by the Science-Based Target initiative (SBTi)[4] for example can help in developing a clearly-defined pathway for companies to reduce GHG emissions. Setting a science-based target is a five-step process:

- Commit: submit a letter establishing intent to set a science-based target;
- Develop: work on an emissions reduction target in line with the SBTi's criteria;
- Submit: present target to the SBTi for official validation;
- Communicate: announce target and inform stakeholders;
- Disclose: report company-wide emissions and track target progress annually.

Setting up a Sustainability Committee Charter: several initiatives have issued guides, handbooks and tools for setting up a Sustainability Committee Charter. The National Association of Corporate Directors (NACD), a nonprofit membership organization for corporate board members, published the Sustainability Committee Charter Tool[5] as well as the Oversight of Corporate Sustainability Activities Handbook[6]. The Tool outlines the process for creating and updating a sustainability charter and helps the board to understand the purpose of a sustainability charter, to draft an initial sustainability charter, and to update an existing sustainability charter.

Approaches for corporate governance principles: The Basel Committee on Banking Supervision published corporate governance principles for banks[7]. The Committee's guidance draws from principles of corporate governance published by the Organisation for Economic Co-operation and Development (OECD). 13 principles in the fields of board's responsibilities, risk management, compliance and disclosure are set up to support corporate governance in safeguarding stakeholders' interest in conformity with public interest on a sustainable basis.

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1 *UNEP FI (2015): Integrated Governance (https://www.unepfi.org/fileadmin/documents/UNEPFI_IntegratedGovernance.pdf).*
2 *The International Integrated Reporting Council (IIRC) defines integrated reporting as: a process founded on integrated thinking that results in a periodic integrated report, by an organization about value creation over time and related communications regarding aspects of value creation (https://integratedreporting.org/).*
3 *Extending the Performance Frontier includes major innovations in terms of new products, processes, and business models to shift the overall slope and create a positive relationship between financial and ESG performance, innovations that would include large-scale investments and long payback periods.*
4 *Science-based Targets initiative (https://sciencebasedtargets.org/how-it-works).*
5 *NACD: Sustainability Committee Charter Tool (https://www.nacdonline.org/insights/publications.cfm?ItemNumber=67185).*
6 *NACD: Oversight of Corporate Sustainability Activities Handbook (https://www.nacdonline.org/insights/publications.cfm?ItemNumber=12138).*
7 *Basel Committee on Banking Supervision published Corporate governance principles for banks (https://www.bis.org/bcbs/publ/d328.htm).*

Status quo and gaps in Paris-aligned governance systems at European banks

Our bank assessment has revealed that climate related goals and aspects are reflected at different management levels and with differing levels of importance across the interviewed banks' governance structure. Most of the banks already elevate climate change as a governance priority for board members and CEOs. Sustainability divisions in charge of green finance matters are mostly standard at the banks that we assessed. Only for very few banks, the governance structure does not reflect any climate-related aspects. Most of the analysed banks already signed the PRB. Overall we found that most of the banks are on a good path towards a Paris-aligned governance. Still, we identified room for improvement in the following areas:

- **Make tangible long-term climate objectives part of the bank's climate governance:** Paris-aligned targets and objectives throughout the organisation ensure that long-term objectives become tangible. Most of the banks do not set quantitative long-term objectives regarding their Paris-aligned governance structure. The time span for those targets should at least include 20 years. Clear actions need to be defined in case the respective targets cannot be reached.
- **Benefit from climate-aware employees:** by addressing climate-related matters regularly, the awareness and the capacity amongst employees can be increased. Especially in making use of bottom-up ideas and approaches, most of the banks need to catch up. Through the establishment of various channels regarding the achievement of a Paris-aligned bank, employees get the opportunity of making contributions and to take on responsibility for climate-related matters.
- **Integrate climate monitoring into the climate governance model:** monitoring, reporting and verification mechanisms are of great importance for a good climate governance. The examined banks need to make targets for the establishment of solid monitoring, reporting and verification processes and make them visible and quantifiable in their governance across the bank.

Good practice LBBW: a Committee to steer the bank's Paris alignment

In early 2019, LBBW translated the central sustainability project into a new organizational structure[1]. The Board of Managing Directors of LBBW is responsible at the highest level for the sustainable corporate governance of the Group and compliance with the sustainability policy. A member of the Board of Managing Directors is head of the Sustainability Committee. The Committee acts as the bridge between the Board of Managing Directors and the specialized divisions.

Above that, there is a Core Sustainability Team that implements resolutions made by the Sustainability Committee and actively pursues sustainability issues in the respective area. The Sustainability Management & ESG Group consolidates the Group's many sustainability activities into a sustainability program that is drawn up annually and coordinates all sustainability activities at LBBW. The sustainability programme includes projects in the action areas lending, investment, carbon footprint, human resources, regulation, and sustainability management. For each project, a responsibility is defined and its implementation is described. At the end of the project the implemented status is assessed and disclosed in the yearly annual report.

1 LBBW (2019): Sustainability Report (https://www.lbbw.de/konzern/nachhaltigkeit/lbbw_sustainability_report_2019_abyedze-n4o_m.pdf).

INCENTIVISATION

This chapter should inform and support the work of the bank's C-level management, its strategy and business development, sustainability departments and human resources.

Rewards and incentivisation schemes, often in the form of financial remuneration and bonuses, are a powerful tool for banks to institutionalise their strategic priorities. This is also the case for banks that aim to institutionalize their Paris-aligned strategy throughout business and cultural aspects. Commercial banks worldwide are in the process of adjusting their remuneration structure to reward longer-term success by means of deferring compensation to future years or paying bonuses in bonds or stocks. Additionally, climate-related non-financial incentives increase in importance. The European Central Bank (ECB) underlines the importance of incentivisation in its Guide on climate-related and environmental risks, which states that "institutions are expected to ensure that their remuneration policy and practices stimulate behaviour consistent with their climate-related and environmental (risk) approach, as well as with voluntary commitments made by the institution". The ECB recommends developing remuneration policies, which are in accordance with the bank's strategy and long-term business goals, risk appetite and the long-term objectives.

Next to ECB, also European Banking Authority (EBA) states that " [remuneration policies] shall ensure that remuneration is consistent with sound and effective risk management and provides an incentive for prudent and sustainable risk taking"[1]. The statement by EBA shows that climate aspects in remuneration policies might remain risk-driven and that little attention could be given to the impact perspective. Banks can benefit from Paris-aligned incentivisation in many ways.

- **Innovation:** the development and mainstreaming of climate-related financing solutions in the lending sector is still ongoing, which requires creative and innovative solutions. By creating financial and non-financial incentives, banks can activate and promote the creative potential of its employees in developing new solutions.
- **Employees' perspective:** the large majority of Europeans sees the climate crisis as a pressing issue and supports action upon it[2]. Allowing room for tackling the climate crisis on the job and aligning the work with the financial goals, banks can expect to increase employee satisfaction and reduce employee turnover.
- **Compliance with regulatory and clients expectation:** the statement by the ECB shows that the regulator is expecting banks to ensure that climate-related aspects are reflected in remuneration appropriately. Furthermore, customers are increasingly considering climate aspects in decision-making and hence might soon expect to see alignment of their banks' employees remuneration with their intrinsic values.

1 https://eba.europa.eu/regulation-and-policy/remuneration
2 https://ec.europa.eu/clima/citizens/support_en

Considerations and methodologies for a Paris-aligned remuneration

Commercial banks should establish remuneration schemes, which focus on long-term success rather than financial performance of a single year to promote sustainable business growth of the bank. A long-term perspective in incentive system can support overcoming the tragedy of the horizon in banks, i.e. help bridging the shorter term focus of the existing banking operations (usually one to five years) and the longer term effects of climate change (ten years plus)[1]. Banks should consider deploying a combination of financial and non-financial incentives. The combination will allow to leverage the employees' intrinsic motivation while also applying mainstream methods.

Adjust remuneration: banks could develop, communicate and establish a financial incentive policy. Such a policy will take into account specific quantitative and qualitative targets on aligning behaviour and decision-making with the Paris climate goals. Such incentive schemes are oftentimes established at the top of the institutions and then passed on through the banks hierarchy, which is important to incentivize all employees. Financial incentives include cash incentives and stock options.

A clear climate strategy and climate targets are pre-conditions for the development and deployment of financial incentive systems. In the absence of an overall strategy, it is difficult to benchmark employees' climate performance. Banks should aim to translate overall climate goals into individual SMART goals. The banks' governance structure should describe a clear process.

Add non-financial incentives: banks could develop, communicate and establish a non-financial incentive system using both qualitative and quantitative factors. Those could include promotions based on performances along climate targets, rewards such as additional days off, public transportation pass etc. Furthermore, competitions for employees to develop and present their own climate project or ideas for the bank could encourage action.

Set the tone from the top: typically, a strong hierarchical system persists in the banking sector. Therefore, setting the tone from the top can have a significant impact on the organisation. The same applies for remuneration. If the remuneration policy for the C-level management includes SMART climate targets, the policy will penetrate the whole organisation, as goals will be passed through the management ranks.

1 *It is important to note that climate effects lead to economic damage already today (e.g. the hot summers of 2018-2020 led to the need of government support for farmers in several EU countries).*

Status quo and gaps on incentivisation in the European banking landscape

The assessment of incentive systems amongst European banks shows that climate-related incentives are not applied by most banks yet. Most banks are not aligned with the Paris Agreement on this dimension, which represents a key challenge in relation to the ECB's and EBA position as described above. From the analysis of the European banking market, the following aspects on incentivisation stand out.

- **Low coverage of climate-related financial incentives in reporting:** only few analysed banks report that sustainability or climate considerations influence the remuneration of the top management. Concrete climate targets as a basis for remuneration are not reported. Some banks report that remuneration includes a share for long-term performance, which might imply climate-related aspects.
- **Undisclosed internal incentive mechanisms exist:** some interviews with banks show that at least parts of the middle management have sustainability-related targets in the variable share of their remuneration. However, those targets seem mostly insufficient to motivate managers to put Paris alignment high up on their agenda.
- **A need for mainstreaming of employee activities on sustainability:** most banks have introduced information events, working groups or individual development opportunities on sustainability. The ongoing challenge is to use those initiatives (i) to mainstream climate action in the core business of the banks, and (ii) to engage employees who do not see the benefit in climate action for the bank's core business. For instance, a company electric vehicle fleet might spark enthusiasm for sustainable mobility amongst its employees. However, if such a project does not translate into the integration of climate action in the employees' core tasks, the bank would not significantly increase its sustainability.
- **A lack of (non-financial) incentives and their link to core business:** although non-financial incentives could play a major role in shifting the mind-set of many employees towards the climate agenda, those are rarely used. In particular, a stronger use in the core business should be sought to increase employee motivation for the issue. Employee engagement on sustainability should show a clear link to their daily work. Sustainability programmes should therefore always link back to the core business of the bank. For instance, if a risk management plants trees during a sustainability day, it would be worthwhile to discuss the financial and economic risks and effects associated with the loss of biodiversity in forests due to climate change for the existing portfolio or specific sectors or geographies.

Good practice ING: incentivising clients to support them towards more sustainable business models

Besides the establishment of financial and non-financial incentives to leverage the employees' motivation for sustainability, the establishment of external incentives for clients is crucial. This may foster a faster decrease in portfolio emissions and climate-related risks in the portfolio as well as increase opportunities for developing green financial products. ING has created climate-related incentives for clients. ING introduced the world's first sustainability improvement derivative in 2019[1]. The derivative has a credit spread that is linked to sustainability performance of the underlying activity. Currently, it is provided to SBM Offshore. The credit spread of the sustainability improvement derivative can increase or decrease, depending on SBM Offshore's ESG performance. The agreed sustainability key performance indicators (KPIs) are tracked by Sustainalytics on an annual basis.

Additionally, ING and European Investment Bank (EIB) established a loan agreement for sustainable projects in 2019[2]. EIB will provide a EUR 200 mio loan at a low interest rate to ING. ING passes this benefit to customers and doubles the loan amount, bringing the total amount available to EUR 400 mio. Companies selected for their sustainable impact will benefit from an interest rate discount of up to 0.3% or 30 basis points.

1 *ING: Introducing the world's first sustainability improvement derivative (https://www.ing.com/Newsroom/News/Introducing-the-worlds-first-sustainability-improvement-derivative.htm).*

2 *ING: ING and EIB in loan agreement for sustainable projects(https://www.ing.com/Newsroom/News/ING-and-EIB-in-loan-agreement-for-sustainable-projects.htm).*

PRODUCTS

This chapter is intended to support the work of bank departments responsible for the bank's products and services, strategy and business development and sustainability departments.

Banks have the opportunity to use their financial products and services to support and accelerate financial flows towards the Paris climate goals[1] and sustainable economic activities. They further support the bank in meeting its own climate targets and can offer a way for banks to seize new business opportunities. A green financial product that has seen a dynamic market development are green bonds. Green bond market volumes are often used as the key example for green product market development. With an USD 258.9 billion issuance in 2019, green bonds issuances have grown five-fold in volume since 2015. Various other green financial products have been created such as green loans, green deposits, green mortgage, sustainability-linked loans, etc. In a recent survey, 75% of issuers (primarily businesses) say that ESG-linked loans are "very" or "potentially interesting" to them[2]. Green financial products can be offered across all "standard" financial product and services segments of banks, in retail as well as in corporate banking (see some examples in table 1)[3].

Retail Banking	Corporate and Investment Banking
Green mortgage Sustainability-linked mortgage Green Home Equity Loan Green Commercial Building Loan Green Car Loan Credit Card Energy equity loan Green deposit	Green Bonds Green Loans Green Project Finance Green Securitization Green Venture Capital Carbon Finance Green property investment Green Technology Leasing Sustainability-linked Loan

Table 2-Examples of green banking products

Options for channelling capital into the low-carbon economy include:

- Use of capital markets, e.g. debt structuring, marketing themes of bonds, or investment funds?
- Increasing own lending capacity, incl. green securitisation, synthetic risk transfer, or green bond issuance
- Taking direct risk exposure to clients, such as green loans, green revolving facilities linked to sustainability, green asset finance, green project finance, blended finance, specific pot for clean growth lending, or synthetic power plants.
- Funding innovations, e.g. through venture capital, sponsorship, or crowdfunding.

The demand for and supply of green and/or sustainability-linked financial products are growing. This may lead a first mover advantage for those banks reacting quickly. Those will be in a better position to advise clients and to offer a broad range of green financial products.
Developing green financial products as part of banks' product and services portfolio entails:

- The adaptation of well-known financial products, linking them with green/sustainability criteria while ensuring trust and reliability of these well-known financial products.
- The introduction of new product categories or variations of standard categories to meet the rising demand and tap into new client segments, e.g. with green venture capital and sustainability linked loans.
- The bank could also offer technical support and advisory services related to issuing sustainable financial products.

A structured development process of green financial products and services facilitates the implementation process. This involves adapting the bank's internal tracking of green financing and the steering of the bank's lending portfolio toward alignment with the Paris Agreement.

1 *UNEP FI: Principles for Responsible Banking (https://www.unepfi.org/banking/bankingprinciples/).*
2 *HSBC (2019). Sustainable financing and investing survey (https://www.gbm.hsbc.com/insights/sustainable-financing/sustainable-financing-and-investing-survey-2019).*
3 *UNEP FI: Green Financial Products and Services Current Trends and Future Opportunities in North America (https://www.unepfi.org/fileadmin/documents/greenprods_01.pdf).*

Key considerations on Paris-aligned products

In order to grow their green financial products and services, banks should consider the aspects throughout the implementation process and the rollout.

- **Set quantitative and qualitative targets for green financial products development:** banks should set quantitative (e.g. share of green products, number/volume of green bond issuances) and qualitative (e.g. launch of a first green bond, development of a new green financial product offer) targets for the development of their green financial products and services. The progress on the development and achievements should be monitored internally.
- **Establish a green financing framework for all green financial products and services:** banks should develop a green finance framework consistent with the Paris Agreement, guiding their green financing decisions. The framework could include the definition of inclusion criteria related to green and climate-resilient activities and exclusion criteria for projects, activities, and sectors not compliant with the Paris climate objectives. The framework could require external reviews or second party opinions. Financing criteria should be aligned with national and international regulation and sector benchmarks such as the PRB, the Green Bond Principles by the International Capital Market Association (ICMA)[1], or the Green Loan Principles[2]. European banks could use the EU Taxonomy as an underlying framework for defining green and sustainable activities.
- **Climate-related incentives for clients:** banks should develop climate-related incentives for their clients. These may refer to preferential lending conditions, such as preferential interest rate for energy retrofit subsidized by governments or state agencies, or to valorized financial terms, such as interest rate related to the sustainability performance of the client. Client-related incentives could be linked to qualitative, e.g. ESG reporting, or quantitative, e.g. CO2 emissions reduction, targets. A clear communication about these incentives should be implemented.

Overview of methodologies relevant to products

- **EBF and UNEP FI developing a green finance framework consistent with the EU Taxonomy:** The European Banking Federation (EBF) and the UNEP FI are working on a project to assess the extent to which the EU Taxonomy could be applied to core banking products[3].
- **EU Green Bond Standard:** based on the EU Action Plan on Financing Sustainable Growth, the Technical Expert Group on Sustainable Finance (TEG) proposed a voluntary EU Green Bond Standard in order to enhance effectiveness, transparency, comparability, and credibility of European green bond markets as well as to encourage market participants to issue and invest in EU Green Bonds. Based on the TEG's report, the EU Commission launched an impact assessment that has been in consultation until October 2020. A prospective EU Green Bond Standards could be applied to bond financing in the EU as well as outside the EU. It can be used for any type of listed or unlisted bond or capital market debt instrument by any public or private issuer.
- **Annual reporting on green financial products:** EU Directive 2014/95/EU[4], the Non-Financial Reporting Directive (NFRD), requires companies to include non-financial statements in their annual reports and applies to large public-interest companies with more than 500 employees. The Guidelines on reporting climate-related information[5] enhances the NFRD along the recommendations by the TCFD. According to this non-binding document, banks should use a percent turnover in the reporting year from products or services associated with activities that meet the criteria of the EU Taxonomy. The review of the NFRD will most likely lead to a mandatory inclusion of the Guidelines.

1 *ICMA: Voluntary Process Guidelines for Issuing Green Bonds (https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf).*

2 *Loan Market Association, Asia Pacific Loan Market Association, Loan Syndications & Trading Association.: Green Loan Principles - Supporting environmentally sustainable economic activity (https://www.lsta.org/content/green-loan-principles/#).*

3 *EBF: High-level recommendations on the voluntary application of the EU taxonomy to core banking products (https://www.ebf.eu/sustainable-finance/high-level-recommendations-on-the-voluntary-application-of-the-eu-taxonomy-to-core-banking-products/).*

4 *Directive 2014/95/EU (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095).*

5 *EU Communication on reporting climate-related information: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XC0620%2801%29*

Status quo and gaps in European Paris-aligned products

In the 3fP-Bank status quo analysis, nearly all banks have defined climate-related financing criteria and implemented respective policies related to financial products. Most of the banks interviewed issued green bonds for their clients. In many cases this involved giving technical advice. Most banks are planning to develop further climate-related financial products. Many banks still show ample room to improve the product portfolio in terms of volume, number of products on offer, and quality of existing standards. The following gaps remain according to the 3fP-Banks status quo analysis:

- **A lack of longer-term quantitative and qualitative targets on green products development:** many banks set targets regarding their green products development. However, binding long-term targets for e.g. the share of new green financial products as part of the overall product portfolio are still missing in many cases. Most of the examined banks have a horizon over the next one to three years regarding green product development targets, but almost no bank has targets for 2030 or beyond.
- **Meet demand for green bonds while maintaining product credibility:** demand for green and sustainability-linked bonds and loans is growing. Banks need to work on meeting the demand while (given limitations in project pipelines) ensuring credibility of the climate purposes of the bonds proceeds and guaranteeing transparency post-issuance.

Good practice ING: sustainability Linked Loans

ING offers sustainability-linked loans[1] to support corporates in achieving their sustainability goals. Corporates benefit from reduced interest rates when sustainability objectives are met. ING links margins to external ratings (such as Sustainalytics, EcoVadis, or Viegeo Eiris) or ties pricing to tailor-made, relevant KPIs in relation to the sustainable performance. The ESG performance can result in a discount or premium to the loan pricing.

Good practice LBBW: green Bond Framework

LBBW has issued its first Climate Bonds Certified Bond in 2017 in order to finance loans related to low-carbon buildings. It was the first Climate Bonds Certified Bond from a German bank. LBBW created a Green Bond Framework[2] in accordance with ICMA Green Bond Principles 2017. It claims that these investments will contribute towards achieving the UN SDGs, including SDG 11 (sustainable cities and communities), SDG 13 (climate action), and SDG 7 (affordable and clean energy).

1 ING: Sustainability Linked Loans (https://www.ingwb.com/themes/americas-here-i-come-articles/introducing-the-sustainability-linked-loan).
2 LBBW: Green Bond Framework (https://www.climatebonds.net/files/files/LBBW_Green_Bond_Framework.pdf).

PORTFOLIO MANAGEMENT

This chapter is intended to support the work of units in the bank that steer and develop the bank's lending portfolios.

Lending activities to private and corporate clients is a core business activity of most banks. Corporate clients' activities can have both positive and negative effects on climate change mitigation and adaptation, the same holds for the underwriting of securities with underlying "brown" or "green" assets.

Aligning banks' portfolios with the Paris Agreement will support a more resilient business model that integrates climate-related risks and opportunities. The alignment will facilitate the operationalisation of disclosure obligations such as the upcoming disclosure based on the EU Taxonomy. Aligning a portfolio with the Paris Agreement means to measure the difference between the climate performance of the respective portfolio and temperature benchmarks or trajectories such as from scenarios provided by the International Energy Agency (IEA), the Intergovernmental Panel on Climate Change (IPCC), the Potsdam Institute for Climate Impact Research (PIK), International Institute for Applied Systems Analysis (IIASA), International Renewable Energy Agency (IRENA), or Greenpeace. The IEA Sustainable Development Scenario[1] for example reflects a major transformation of the global energy system, showing how the world could change course to deliver on the three main energy-related SDGs (SDG 3, 7, 13) simultaneously. The IPCC Special Report[2] on Emissions Scenarios describes new scenarios of the future, and predicts GHG emissions associated with such developments. Reasons to develop and establish Paris-aligned portfolio management processes:

- **Resilience to climate-related risks (physical and transition):** more frequent or severe weather events like flooding, droughts, and storms triggered by the climate crisis lead to physical risks that affect the economy. The transition to a low-carbon economy may also create huge financial risks due to changes in regulations, technologies, and economic value chains, which need to be considered in financial materiality metrics[3]. Paris-aligned portfolios reflecting the physical and transitional risks are more resilient[4].
- **Pre-empt the operationalization of regulatory requirements:** the revised NFRD[5] will most likely oblige banks to report on the EU Taxonomy share in their portfolios. By starting early, banks can already go through major EU Taxonomy application steps today, including determining economic activities of each portfolio asset, assessing compliance with technical screening criteria for substantial contribution and Do No Significant Harm (DNSH) as well as social safeguards.
- **Positive contribution to climate protection:** by definition, a Paris-aligned portfolio is supporting climate protection. With a view to changing demand patterns by customers, corporate clients, and investors, having a Paris-aligned portfolio will help gain a competitive and financial edge over peers.

1 *IEA: World Energy Model-Sustainable Development Scenario (https://www.iea.org/reports/world-energy-model/sustainable-development-scenario).*
2 *IPPC: Emissions Scenarios (https://www.ipcc.ch/site/assets/uploads/2018/03/emissions_scenarios-1.pdf).*
3 *WRI: Exploring metrics to measure the climate progress of banks (https://files.wri.org/s3fs-public/exploring-metrics-to-measure-the-climate-progress-of-banks.pdf).*
4 *UNEP FI (2016): Guide to Banking & Sustainability (https://www.unepfi.org/fileadmin/documents/guide_banking_statements.pdf)*
5 *Directive 2014/95/EU (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095).*

Most relevant aspects of a Paris-aligned portfolio management

A solid portfolio management framework can serve as a critical link between climate-related matters and other market trends, risks, opportunities and financial return requirements to be considered. A holistic and comprehensive integration such a framework is crucial to achieve both financial profitability and strategy-alignment, which should include:

- **Climate risk exposure of portfolios:** integrating climate risk metrics across a bank's portfolio management process should ensure that the effects of climate-related risks and opportunities on the portfolio performance are well understood. Integrating climate metrics includes the definition of scope (e.g. sectoral approach) and targets (e.g. volume or output) and the use of appropriate tools and methodologies. Portfolio managers should be given the mandate to make decisions based on information in relation to the assets' climate-related risks and opportunities.
- **Climate impact of portfolios:** portfolio managers should use models to measure the climate impact of their portfolios. The Partnership on Carbon Accounting Financials (PCAF) and the Paris Agreement Capital Transition Assessment (PACTA) may offer helpful tools to develop a comprehensive measurement of a portfolio's impacts.
- **Categorisation of the portfolio's assets:** the categorisation of products and assets according to their «green-ness» should be based on accepted standards such as the EU Taxonomy for banks with operations in the EU or the Climate Bond Initiative (CBI) Taxonomy [1] for without any exposure to EU markets. Taxonomies can help to identify assets and projects that align with the Paris climate goals. Portfolio managers should receive mandates to steer portfolios based on this KPI. Industry and sector data in this process as is a forward-looking approach towards the climate alignment of assets and companies. Methodologies provided by e.g. PACTA's tool for corporate lending portfolios[2] or UNEP FI's Portfolio Impact Analysis Tool[3] are evolving and may support these efforts.
- **Portfolio carbon accounting:** Scope 3 emissions (i.e. indirect emissions or financed emissions) represent the largest share of banks' emissions as banks themselves do not produce goods nor consume much energy compared to corporates in the real economy. Financed activities are thus the biggest lever for banks to create an impact on mitigating the climate crisis. For this, the bank needs to establish an internal carbon accounting framework such as the PCAF. These carbon accounting frameworks should be applied throughout the portfolio management process and respective information should be used in decision-making processes.

1 *CBI: Climate bonds taxonomy (https://www.climatebonds.net/files/files/CBI_Taxonomy_Tables_January_20.pdf).*
2 *2° Investing Initiative: Paris Agreement Capital Transition Assessment (https://2degrees-investing.org/resource/pacta/).*
3 *UNEP FI: Portfolio Impact Analysis Tool (https://www.unepfi.org/publications/positive-impact-publications/portfolio-impact-tool-for-banks/).*

Overview of methodologies relevant to portfolio management

Methods for portfolio carbon accounting are still evolving. Two methods are mostly used according to the 3fP-Banks status quo analysis.

Partnership for Carbon Accounting Financials (PCAF)[1] : PCAF is a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the GHG emissions associated with their loans and investments. The vision of PCAF is that harmonized and transparent GHG accounting becomes an imperative. Measuring and disclosing the GHG emissions associated with the lending and investment activities of financial institutions is the foundation to create transparency and accountability, and to enable financial institutions to align their portfolio with the Paris Agreement. Triodos Bank, one of the banks involved in the 3fP-Banks study, is a member of the Steering Committee of PCAF and therefore responsible for leading the progress towards achieving the mission and objectives of PCAF. Triodos Bank calculated its own carbon footprint by applying the PCAF methodology to the covered portfolio in its annual report 2018[2]. They also applied an attribution approach, which means that they calculated the emissions as they relate to the proportion of the finance in a project or customers' balance sheet.

Paris Agreement Capital Transition Assessment (PACTA)[3]: PACTA enables banks to measure the alignment of their corporate lending portfolios with climate scenarios across key climate-relevant sectors and technologies. The tool produces an output report based on global forward-looking asset-level data, such as the production plans of a manufacturing plant over the next five years, and parent company level. The report allows banks to assess the overall alignment of their portfolios with various climate scenarios and with the Paris Agreement. Banks can use this information from PACTA to steer their lending in line with climate scenarios, to inform their decisions around climate target setting, and to gain insights into their engagement with clients on their respective climate actions. The toolkit can also help banks identify their exposure to transition risks associated with a disruptive shift to a low-carbon economy. BNP Paribas has been one of the first banks working on achieving the alignment of their loan portfolios with climate targets and studying their capacities for gradually moving their financial flows towards activities compatible with the Paris Agreement with the development of the PACTA method.

1 PCAF (https://carbonaccountingfinancials.com/about#our-mission).
2 Triodos: Annual Report 2018 (https://annual-report-triodos.com/2018/servicepages/downloads/files/annual_report_triodos_ar18.pdf).
3 PACTA (https://2degrees-investing.org/resource/pacta/).

Status quo and gaps in Paris-aligned portfolio management in Europe

Banking sector commitments to portfolio alignment with the Paris climate goals: sector commitments by the banking industry in Spain, Germany, and the Netherlands will move the markets on a voluntary basis. Signatories to those sector commitments will align their portfolios with the Paris Agreement over the coming years. In Germany, signatories will develop and introduce mutually accepted methods for measuring the climate impact of their loan and investment portfolios by the end of 2022 and then manage the portfolios in accordance with national and international climate targets.

European banks still show ample room to align their lending portfolios with the Paris climate goals. The 3fP-Banks status quo assessment found in particular a need for further action in the following areas:

- **Measuring climate risk exposure of portfolios:** some banks started redefining their goals to align their loan portfolios with the aims of the Paris Agreement. Still, climate-related risks are mostly not considered in all risk management processes. Furthermore, Paris alignment is also largely missing in overall capital allocations, loan approvals, portfolio monitoring, and reporting.
- **Measuring the climate impact of portfolios:** banks increasingly start using PCAF and PACTA to provide insight into their climate impact and Paris alignment. Based on these methods, some banks already take steps to reduce their climate impact in line with the goals set in the Paris Agreement. However, monitoring and tracking of climate impacts in portfolios is not mainstreamed yet.
- **Using carbon accounting methods:** the 3fP-Banks status quo analysis shows that only few banks use carbon accounting methods for portfolios. A lack of data might drive this finding. However, a couple of banks are currently in the process of establishing carbon accounting methodologies and commitments will force banks to apply those methods in the future.

Good practice Triodos Bank: adopting methods to assess contribution of its financing and investing activities to climate objectives

Triodos Bank uses PCAF and its in-house developed Impact Prism to assess both the positive and negative impacts on sustainability of loans and investments. Since the Paris Climate Summit in 2015, the bank participates in PCAF and applies the methodology to account for the carbon footprint of loans and investments. By publishing the results, Triodos provides stakeholders with a clearer picture of the climate impact that results from the bank's financing activities.

Furthermore, the bank developed the Impact Prism Tool to understand, monitor, and steer the impact of its financing activities in a more deliberate way. The tool provides insights into the sustainability value of the projects, provides a mechanism to discuss opportunities to increase the impact of the customers, and it includes a SDG report. Through the Impact Prism Tool, Triodos understands and provides transparency on the full societal impact of a financed project. When estimating uncertainty impact figures, the bank takes a conservative approach.

RISK MANAGEMENT

This chapter is written for risk management units and, to a certain degree for sustainability and strategy departments.

Risk management is at the core of banks' businesses as it aims to identify, assess and manage risks that are or may become material for the bank. Climate-related risks directly affect a bank's operations, e.g. through physical events damaging the bank's premises, and a bank's client activities through the exposure of its clients to climate-related risks, influencing client's credit-worthiness and underlying asset values. For a portfolio of 46 banks assessed in the EU, 15% of portfolios are subject to high physical and transition risks due to climate change[1]. A similar study shows that 43% of major global banks do not explicitly capture climate risks in their credit rating processes to corporate clients[2]. The area of climate risk management was also among the weakest scores in a recent ranking of 20 large European banks[3].

Risk management of European banks is strongly regulated and implemented through European banking supervision by ECB and EBA. On 27 November 2020, the ECB published its final guide on climate-related and environmental risks for banks[4]. It expects banks to perform a self-assessment on the expected climate risk exposure in 2021 and will perform a full review of banks' practices in 2022. It also announced that the next stress test in 2022 would involve a climate-related component. Integrating and reflecting climate-related risks (and opportunities) in banks' overall risk management is a key building block towards Paris alignment. It will benefit the bank due to the following reasons:

- **Meet regulatory requirements:** it enables the bank to prepare and later on meet the upcoming regulatory requirements (ICAAP, CRD IV, etc.).
- **Understand future climate effects:** it helps the bank's understanding of the scope and impact of climate-related risks and, by that, it supports the bank in understanding the "range of uncertain future conditions" implied by climate change[5].
- **Take mitigation measures:** it enables the bank to take risk mitigation and management measures that can reduce the bank's exposure to climate-related risk and make the bank more robust for the sustainability transition.
- **Strategic portfolio management:** it allows the bank to steer its lending and overall business strategy towards resilient and low-carbon projects and assets.

1 McKinsey & Company (2020): Banking imperatives for managing climate risks (https://www.mckinsey.com/business-functions/risk/our-insights/banking-imperatives-for-managing-climate-risk).
2 Oliver Wyman (2019): Climate Change – Managing a new financial risk.
3 ShareAction (2020): Banking on a low-carbon future II (https://shareaction.org/research-resources/banking-on-a-low-carbon-future-ii/).
4 Final guide on climate-related and environmental risks for banks (https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr201127~5642b6e68d.en.html).
5 TCFD (2017): Final repor (https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf).

How to design a climate-related risk management

In the process of designing and building out a Paris-aligned risk management, banks should:

- **Build a comprehensive framework for assessing and managing climate-related risks** of clients by making use of risk assessment and management tools. These tools may be internal tools or external services and tools provided by third party specialized service providers.
- **Consider managing a bank's own operational risk** related to climate change which for instance can refer to operational, reputational, legal, and policy risk.
- **Comprehensively integrate climate risk management across the bank's overall risk management,** including a strong climate risk governance function, the alignment with overall credit and capital allocation strategies, and the integration into overall risk processes[1]. This integration may for instance cover the target setting for managing climate exposure in the bank's overall portfolio, as well as transition, phase out, or exclusion policies for carbon-intensive sectors.
- **Make use of scenario analysis and stress testing to explore possible futures** to reflect that timing and magnitude of climate risks are often uncertain and longer term. Climate-related scenario analysis tests the portfolio's resilience against climate change risks, based on different assumptions and constraints. There is guidance e.g. based on the TCFD by UNEP FI[2] or the NGFS, as well as tools such as the Transition Pathway Initiative (TPI) and PACTA. Stress tests and scenario analysis should include different global heating scenarios, different levels on which the impact assessment is conducted as well as different parameters and the corresponding exposure, sensitivity and adaptive capacity.

Scenario analysis is not stress testing (or vice versa)
A difference between scenario analysis and stress testing exists. The main difference lies in the granularity of the analysis. Climate-related scenario analysis tries to understand the impact of a specific climate scenario on the environment of a specific asset. Thereby, an in-depth analysis of demand and supply patterns or the adaptive capacity of the company is conducted and the impact on the financials is calculated based on the interdependencies of different variables. In contrast, a stress test is mainly conducted on extreme states of key macroeconomic variables, usually taking a portfolio perspective.

1 Compare McKinsey & Company (2020). Banking imperatives for managing climate risks (https://www.mckinsey.com/business-functions/risk/our-insights/banking-imperatives-for-managing-climate-risk).
2 UNEP FI (2019). CHANGING COURSE: A COMPREHENSIVE INVESTOR GUIDE TO SCENARIO-BASED METHODS FOR CLIMATE RISK ASSESSMENT, IN RESPONSE TO THE TCFD, (https://www.unepfi.org/publications/investment-publications/changing-course-a-comprehensive-investor-guide-to-scenario-based-methods-for-climate-risk-assessment-in-response-to-the-tcfd/).

Overview of relevant climate risk management tools

A variety of tools for climate risk management and scenario analysis exists in the market, see Figure 6. However, most approaches seem to focus on capital market oriented companies, leaving a large part of the banking portfolio untapped. This overview shows key tools that might also be applicable to non-capital market oriented companies.

Figure 6: Overview of different climate scenario tools[1]

PACTA by 2° Investing Initiative
The objective of the PACTA assessment framework is to measure the alignment of financial portfolios with 2°C decarbonization pathways. The PACTA tool provides a "technology exposure gap", i.e. the gap between the activities of a company and a climate scenario with the underlying technology and energy mix. Banks can apply the tool to analyse the exposure to climate relevant technologies of the companies in the portfolio change.
For more information see: https://2degrees-investing.org/resource/pacta/.

Climate Transition Risk Methodology by Oliver Wyman
The Climate Transition Risk Methodology is specifically aimed at banks and should assess the transition-related exposures in their corporate loan portfolios. It is designed to capture risks and opportunities alike. The methodology identifies potential impacts of climate policy and technology transition to the credit risk of a bank's corporate loan portfolio. It is possible to calculate (i) direct and indirect emission costs, (ii) low-carbon CAPEX, (iii) changes in revenues, and (iv) segment sensitivities to risk factors. The tool highlights potential impact on expected losses, i.e. the impact of climate scenarios on the various corporate performance drivers (price, volume, capital expenditure, costs). The final outputs are adjusted financials, which translate into a credit risk impact.
For more information see: https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/feb/Oliver_Wyman_Climate_Change_Managing_a_New_Financial_Risk1.pdf.

Climate Excellence by PwC
Climate Excellence allows for a forward-looking financial assessment of climate related risks and opportunities. The model can build upon any climate scenario and cover various levels of detail for assets. The tool builds on fundamental analysis, i.e. taking market and competitive dynamics, technological advancements, and regulations into account. The model uses a bottom-up asset-level approach and takes a high geographic resolution. The tool also models the impact of strategic choices of companies, i.e. adaptive capacities.
For more information see: *https://www.pwc.de/en/sustainability/climate-excellence-making-companies-fit-for-climate-change.html.*

1 Green and Sustainable Finance Cluster Germany (2019). TCFD Think Tank – User Guidance on TCFD Recommendations. Available at https://gsfc-germany.com/wp-content/uploads/2019/08/190820_TCFD_Handreichungen_EN-1.pdf

Status quo and gaps in European climate-related risk management

European banks are in the process of integrating climate-related risk into their overall risk management. Respective tools are at various stages of development and include the development of internal tools and using solutions purchased from external providers. While some banks are already integrating tools throughout their risk management, other institutions are taking first steps. The use of scenario analysis and stress testing remains at an early stage. Most of the banks plan, however, to apply those methods within the next few years. Banks face several challenges when trying to conduct climate-related risk management throughout the portfolio.

- **Data availability:** while access to data for capital market-oriented companies is improving, banks still struggle to access data for unlisted companies and particularly SMEs. This hinders a proper climate risk assessment in many cases and prevents banks from applying sophisticated scenario analysis methods throughout their portfolios.
- **Methodological gaps:** non-proprietary and cross-sectoral methods for climate-related risk management are still not fully available on the market. This poses a challenge for banks even as regards the definition of material climate-related risks for many sectors. Pre-competitive working groups between banks are currently forming in Europe to overcome this barrier[1]; however, the challenge will most likely remain for a couple of years.
- **Lack of reflection of climate risks management in financing conditions:** so far, none of the interviewed banks is able to translate climate-related risk into changes to financing conditions for the mainstream of their corporate clients. Climate-related risk management mainly has an impact on internal pricing. The burdensome process of reporting manual changes to approved risk models, which would be necessary in this case, seems to reduce appetite by many institutions to integrate manual risk adjustments for climate risk considerations. Approved risk models with a climate risk component seem necessary to circumvent this challenge. Additionally, European regulators do not increase capital requirements based on increased climate-related risks yet, reducing the regulatory drive for banks to analyse climate-related risks.

1 *See for instance the TCFD Think Tank by the Green and Sustainable Finance Cluster Germany https://gsfc-germany.com/en/tcfd/*

Good practice ECB expectation:

The ECB formulates its expectation on banks' risk management: "Institutions are thus expected to comprehensively analyse the ways in which climate-related and environmental risks drive the different risk areas, including liquidity, credit, operational, market and any other material risk to capital or any of its sub-categories that it is or might become exposed to. Furthermore, they are expected to pay particular attention to concentrations within and between risk types that climate-related and environmental risks may cause."[1]

Good practice Piraeus banks: managing climate risks

Piraeus uses its Climate Risk Management Model to assess climate risk of businesses and sectors in which it has significant exposure. A simulation of borrower's risks and opportunities is performed using standard units, i.e. illustrations of an «average» Greek company operating in an economic sector and sub-sector. This assessment is based on business borrower's turnover and sector-specific factors. The model is able to identify, analyse and categorise risks related to climate change into physical Risk and transition Risk. In this context, the Climate Risk Management Model assesses in monetary terms the climate risk of companies from specific sectors operating in Greece on the following parameters for the borrowers (i) the cost of physical and transition risk related to climate change at economic sector, sub-sector and business level, (ii) the cost and benefits of measures that can be implemented by a business borrower in order to reduce its climate risk, and (iii) the environmental footprint of the sector, e.g. gaseous emissions, liquid waste, solid waste, at sub-sector and business level.

Piraeus Bank conducted a gap analysis between the UNEP FI scenario approach and the Climate Risk Management Model in order to identify discrepancies and convergences. The main discrepancies between the two methodological approaches were captured and actions were taken to align the Climate Risk Management Model with the UNEP FI scenario approach. For 2019, the model calculated climate risk of the Bank's business borrowers amounted to EUR 1.05 bn corresponding to 1.8% of the total turnover of the specific creditors. The physical risks constitute 32.7% and the transition risks 67.3% of the overall climate risks.

1 *ECB Guide on climate-related and environmental risks, November 2020. Available at https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011final-guideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf*

DATA

This chapter should support the work of data management, IT and technological infrastructure services as well as (data) specialists in sustainability divisions, risk management roles, and other data-driven services.

In May 2019, the NGFS identified bridging the data gap as one of the six priorities in their call for action[1] to ensure the resilience of the financial sector to climate-related risks and to support the development of sustainable finance. For the alignment of banks with the Paris Agreement, the availability and use of climate-related data is relevant for the measurement of climate risks and their potential impact on the long-term performance of financial assets as well as for the quantification of the environmental footprint of financing and investing activities. The adoption of an appropriate climate-related data management system will be necessary to comply with evolving European regulatory requirements, e.g. to meet the expectations of the ECB[2] or to report under a revised version of the NFRD[3].

Enhancing an integrated climate-related data management system is crucial for banks' Paris alignment and unleash the following benefits.

- Improved decision-making: availability and access to data on climate-related risks and opportunities is a prerequisite to make informed decisions in alignment with the Paris climate goals. (Please also see chapters e.g. on risk management and portfolio management)
- Meaningful disclosure of climate-related information: data forms the basis of any external reporting, which is increasingly required by supervisory authorities, investors, and clients.
- Better product development: access to climate-related data will enhance the quality and the variety of green financial products. Data allows for the measurement of impact or tracking of targets. As a side-effect, data could also lead to the identification of new opportunities and the development of innovative green digital financial products such as green robo-advisory or blockchain-powered green bonds.

1 NGFS (2019) – *A call for action* (https://www.ngfs.net/sites/default/files/medias/documents/ngfs-resume-fr-2019_vf.pdf).
2 ECB (2020) – *Guide on climate-related and environmental risks, supervisory expectations relating to risk management and disclosure*
3 *Directive 2014/95/EU, October as regards disclosure of non-financial information by certain large undertakings and groups* (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095).

Key aspects of Paris-aligned data management

First steps in establishing a strong data infrastructure include:

Conducting a climate-related data availability gap analysis: banks could undertake an analysis on accessible and missing climate-related information and identify sources that could support the analysis of climate risks and opportunities. Based on the outcomes of the analysis, banks could engage with their clients and investors on potential information flows of climate data, collaborate with ESG-data providers, and cooperate with other banks to improve the climate-related data environment on a sectoral level.

Defining climate-related variables and KPIs: to ensure comparability and coherence of collected data, banks should define metrics for its operations and financial instruments. This will allow setting targets and benchmarks at the bank and the individual asset / product level. Regular access to KPI-relevant data will help to evaluate progress towards targets and benchmarks along KPIs.
Ensuring the adequate collection and application of data: internal reporting mechanisms should be established to ensure timely and appropriate use of data within processes and models. This would also involve providing guidance and training to clients on the communication of climate-related information and employees on its collection and use. Tools with a high degree of usability should underpin this process.

Reviewing methodologies and adapting IT systems: to include climate-related data collection and management within processes such as credit rating and portfolio management, banks might have to adapt their traditional models and algorithms, including rating programmes, transaction management interfaces, excel models, storage capacities, bank-wide platforms.

Seizing opportunities of digital transformation: artificial intelligence, Big Data and machine learning can be complex but useful tools to analyse large data sets with respect to climate impacts on assets and products. Commercial banks can seize the opportunities of the digital transformation in order to minimize the cost of climate-related information collection and management.

Overview of methodologies relevant to Paris-aligned data management

Using the EU Taxonomy for sustainable activities to ensure consistency and comparability of collected climate-related information: The EU Taxonomy is a classification defining which economic activities are substantially contributing to six environmental objectives of the EU. It sets science-based and technology-neutral technical screening criteria for many economic sectors. The EU Taxonomy is a relevant tool to increase standardization, harmonisation, and comparability between data in the EU. Banks will largely benefit from the EU Taxonomy when applying it across portfolios and operations. The EU Taxonomy could serve as a key climate-related KPI.
More information: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en.

Encourage the bank's clients and investors to disclose climate-related data based on methodologies like ACT: banks can encourage their clients and investors to disclose climate-related information following renowned methodologies. This would ensure consistency and comparability between collected information. For example, the French project ACT provides a framework to assess the alignment of companies to the Paris climate goals on a sectoral basis.
More information: https://actinitiative.org.

Adopting the NGFS climate trajectories: different data types are required to assess the exposure of financial assets to climate-related risks. By adopting the NGFS climate scenarios for climate-related risks assessment and management across all operations, banks will benefit from harmonised and comparable trajectories of several variables in relation to transition risks and physical risks. The NGFS scenarios explorer is a platform that provides time series data on variables such as CO^2 emissions, GDP, population size, energy demand, primary energy production, economic losses in the different economic sectors. The climate trajectories allow banks to define data needs and provide a starting point for scenario analysis.
More information: https://www.ngfs.net/en/publications/ngfs-climate-scenarios.

Status quo and gaps in Paris-aligned data accessibility and usage in the European banking sector

The 3fP-Banks status quo analysis shows a lack of data still represents a major barrier to Paris alignment for risk management, portfolio management, product development, and disclosure. Strategies to collect climate-related data differ between financial institutions and range from assessment to qualitative questionnaire, through evaluations of publicly available climate information, to cooperation with ESG data providers. Data collection is mostly sector-specific and partly not comprehensive. Major gaps still remain and would at least require the following actions:

- **Motivate or incentivize clients to disclose climate-related information:** improve access to climate-related data, particularly from SMEs, banks should require corporate clients to report specific indicators. The 3fP-Banks status quo analysis shows that only few banks are submitting questionnaires on ESG issues in the credit rating process. Most existing questionnaires contain qualitative questions and rather link to social issues.
- **Partnering with ESG data providers:** following an assessment of data gaps, banks could work with ESG data providers to collect climate-related data. A particular challenge will remain in convincing ESG data providers to cover SMEs as well.
- **Engaging in the development of a better climate-related data environment:** in Europe, there are several initiatives to overcome the lack of climate-related data. Banks could develop joint climate-related databases and guidelines for climate-related disclosures / information flows as well as being engaged in policy processes to support public authorities in adopting regulations and guidelines to improve corporate climate-related reporting.

Good practice SEB: Seizing the opportunities resulting from new market and policy initiatives to improve their climate-related data collection and management

SEB recognizes the importance of developing an agreed definition for activities aligned with the Paris Agreement that would be understood by financial institutions, investors, corporate, and retail clients. The Swedish bank has therefore contributed to the development of the EU Taxonomy.

SEB aims to label all assets in its credit portfolio in accordance with the EU Taxonomy. The project is rolled out in two steps. First, SEB is classifying sectors based on carbon impact and divides the sub-sectors into four categories "low-emissions sector", "CO^2 positive emissions", "negative emissions", and "significantly CO^2 intensive". A company classification will follow in the second step. SEB will most likely benefit from a more precise picture of their exposure to climate risks and the climate impact of their financing and investing activities. This could result in more informed decision-making. Furthermore, SEB is planning on developing guidance for its portfolio managers and tools to support client dialogues.

FINANCIAL ADVISORY

This chapter is relevant for advisors, sales teams, front offices, and HR of the bank.

The transformation of the real economy strongly depends on the building and implementation of an appropriate pipeline of assets to be financed. Advice from banks on how to finance Paris-aligned assets will be very relevant for the bank's corporate clients and it will be of particular relevance for SMEs, who usually do not have the capacities to hire dedicated experts to assess the impact and potential courses for action in the climate transformation. Thus, not only the provision of green products to finance the real economy transition is highly important for Paris alignment, but also the technical support of banks for this transition.
Banks have increasingly realized the need for sustainability advisory teams. Often integrated in the corporate finance or advisory division, such sustainability advisors have a particular focus on supporting climate-related aspects in the bank's financing activities through exchange with the bank's clients. They further advise clients on strategies to transition to Paris-aligned practices across their business.
Paris-aligned financial advisory offers benefits to banks:

- **New business opportunities for the bank:** banks may acquire new or additional business opportunities based on their role as a financial advisor who is not only in the position to provide green financial products to corporates but also understands the transformation of the sector and can therefore provide additional advisory services. A comprehensive and clear approach towards the definition of green projects and business activities will enable banks to identify green opportunities in their clients' corporate business models.
- **Minimizing climate risk in their clients' business activities:** the climate financial advisory activities of a bank will involve in-depth assessments of the corporate clients' businesses as regards climate-related risks and opportunities. This will put banks in a position to better identify and understand the climate -related risks in their corporate client's business model, which supports a better understanding of climate-related risks in loan portfolios.

Key considerations on a Paris-aligned financial advisory

For a Paris aligned financial advisory services, the following considerations can be helpful:

- **Mainstreaming climate into standard advisory processes and products for corporate clients:** alignment of banks' standard advisory products and processes, such as in the fields of M&A, debt advisory or IPOs to climate and environmental aspects is a crucial aspect of Paris-aligned advisory. Mainstreaming of the advisory for products includes clear product frameworks as well as environmental risk scenario assessment. Banks can provide specific advice to clients in preparation for the issuance of green instruments such as green and sustainability-linked bonds
- **Providing non-financial corporate advisory:** banks can utilize internal knowledge on climate change related risks and opportunities, together with internal expertise in the client's sector, to advise on climate strategies. This may include advisory on climate risk management, Paris-aligned operations, regulatory and general (financial) management services as well as analyses on industry and geography specific aspects in relation to climate change. Furthermore, banks should extend assessments to reputational and regulatory climate-related matters of the company and advisory services on disclosure practices e.g. through using the TCFD recommendations[1] and the application of scenario analysis. Banks can help in building capacities amongst corporate clients to raise awareness for the need to act in the transformation. This involves providing information on the changes to the sector and the downsides of inaction.
- **Defining relevant metrics for the bank's corporate advisory services:** a bank's Paris-aligned financial advisory can benefit from the definition of environmental financial business metrics that may be taken up and integrated into business operations of corporate clients. Examples of such metrics can include relative revenue growth rate of environment-related product categories compared to the rest of a company's product portfolio, or cost-savings resulting from saving Scope 1 & Scope 2 emissions.
- **Promoting internal capacity building:** employees need to be empowered and enabled to promote climate action in advisory processes across the entire bank. Employee empowerment can be achieved through internal capacity building. The sustainable finance advisory team can play an important role in this effort. Additionally, banks should hire new expert staff and/or educate existing staff to become dedicated financial advisors on climate-related issues.

Overview of relevant methodologies for Paris-aligned advisory

Questionnaires for client advisory needs assessment: banks may introduce assessment tools to analyze advisory needs of their corporate clients. For example, this can be done through collecting information via questionnaires that focus on sustainability-related issues. Such questionnaires can include standardized questions for comparability along with questions specific to the client's business and industry.

Offering reporting services on clients' climate and ESG performance: banks may provide a dedicated reporting service for internal and external use, looking into the climate-related or, more broadly, the ESG performance of their corporate clients. This reporting may inform and guide climate-related financial advisory, offering client feedback and potential reference to benchmark examples.

Setting up a dedicated sustainable finance advisory team: to support the building up of internal bank expertise on climate-related financial advisory, banks may establish a dedicated sustainable finance advisory team to bundle expertise and act as a service provider across the bank and to advise the bank's clients on climate-related risks and opportunities. For instance, UniCredit announced the launch of a Sustainable Finance Advisory Team in September 2019[2]. The team is part of the UniCredit Corporate & Investment Banking and advises clients on brown to green transition strategies whilst supporting the origination of ESG finance mandates with corporates, financials and SSA clients across the entire value chain. Next to Unicredit, also HSBC and LBBW have instituted sustainability specific teams and are working towards integrating ESG issues in their advisory role.

1 https://www.fsb-tcfd.org/recommendations/#scenario-analysis
2 https://www.unicreditgroup.eu/en/press-media/press-releases/2019/unicredit-costituisce-il-sustainable-finance-advisory-team.html

Status quo and gaps in Paris-aligned advisory in Europe

The majority of the banks in the 3fP-Banks status quo analysis did not establish concrete frameworks and tools for Paris-aligned financial advisory yet. The following gaps remain:

- **Absence of specific team or department:** there is a clear gap in assignment of responsibility to a particular sustainable finance advisory team. Most banks do not have those teams build up to the degree necessary to cover demand from the market. Banks tend to benefit from appointing a separate sustainable finance advisory team to support the corporate finance division in decision-making.
- **Lack of advisory tools and methodologies for Paris-aligned financial advisory:** banks won't be able to build a sustainable advisory basis without a strong framework for climate and environment-related assessment of their clients' business, guiding the climate financial advisory process. Developing, testing, and gaining experience in climate and environment-related advisory tools, e.g. questionnaires or reporting services, to identify potential climate risks and climate-related business opportunities will open up additional business opportunities for the bank in its advisory role.

Good practice LBBW: supporting its clients in their transition towards greater sustainability

LBBW's Sustainable Finance Advisory[1] team supports companies in using their sustainability approaches for the financing sphere. For many years, LBBW has had an advisory unit in the Corporate Finance department that provides the company with comprehensive, product-independent advice. The sustainability experts support the advisory service on all questions relating to sustainable corporate finance. They support companies both in selecting the right financial products for their individual sustainability strategy and business model and in implementing them as part of an integrated corporate finance dialogue.

LBBW pursues a three-step process during the advisory:
Step 1: the advisory team, consisting of sector experts, analyzes the customer's business model in a neutral and product-independent manner and identifies possible financing solutions.

Step 2: sustainability Advisory examines the result and the planned investments from the point of view of the corporate sustainability strategy and then suggests and develops a tailor-made product recommendation with a view to upcoming financing.

Step 3: applying an integrated corporate finance approach to optimally implement the customer's requirements: The corporate finance team, consisting of sustainability advisory and product experts, accompanies the implementation of ESG-linked financing or dedicated green or social financing. The result is a financing solution that is tailored to the requirements of the respective company.

1 https://www.lbbw.de/artikelseite/finanzierung/sustainability-advisory_abg3mt24fz_d.html

COMMITMENT & COMMUNICATION

This chapter is intended to improve banks' communication of climate targets and their Paris alignment, and show the way towards climate commitments. As such, it is relevant for C-level management, sustainability departments, corporate strategy, and, to a certain degree, portfolio management.

Committing to the Paris Agreement and communicating the commitment is in an effective way for raising awareness for climate action in the banking sector. Commitments can lead to transformative actions and can change both internal bank culture and external cultural aspects vis-a-vis the bank's clients. The bank's image, brand, and reputation are important factors for investor relations, regulatory communication, acquisition of new clients, maintaining existing clients, and attraction of qualified employees. Therefore, climate action and the open communication of targets, progress and achievements will increasingly become a competitive factor. Commitments are a key piece of communication that is currently used more frequently.

As of mid-2019, half of major global banks (as measured in numbers) had issued a sustainable finance commitment and more banks followed thereafter. Commitments vary in the level of detail of their goals and targets, and in the way climate action and sustainability are framed. Overview of most relevant climate commitments in Europe:

- ***The Katowice commitment:*** five leading banks, namely BBVA, BNP Paribas, Société Générale, Standard Chartered and ING, have issued a commitment to the global climate goals for COP24 in 2018. The banks commit to "*measure the climate alignment of our lending portfolio, and to explore ways to progressively steer financial flows through our core lending towards the goals of the Paris Agreement*" and support Article 2.1c) of the Paris Agreement.
- **The German climate self-commitment** by the financial sector: On 30 June 2020, 16 German financial institutions signed the commitment in which they aim to keep global heating at 1.5°C. "In concrete terms, this means that by the end of 2022 each signatory will develop and implement mutually accepted methods for measuring the climate impact of its credit and investment portfolios and then manage them in line with national and international climate targets.".
- During COP25, the main Spanish banks signed the **Spanish Commitment** to reduce the carbon footprint in their credit portfolios, in a way that can be measured with internationally approved criteria and in line with the objectives set out in the Paris Agreement. The commitment represents more than 95% of the Spanish banking sector. Under this agreement, the signatory banks included a milestone in relation to establishing and publishing specific objectives of the sector, based on scenarios for the portfolios' alignment with the objectives of the Paris Agreement within a maximum period of three years.
- The **commitment by the Dutch financial industry** to the Dutch climate agreement (Klimaatakkoord) foresees a decrease of carbon emissions in the economy by 49% in 2030 from 1990 levels. Banks have committed to decrease their carbon emissions along the goals of the commitment.
- The **Principles for Responsible Banking** by UNEP FI: The PRB are a framework for a sustainable banking system and ensure that the strategy and action of a signatory bank is aligned with the Paris Agreement and the UN SDGs. By signing the PRB, the bank commits to set targets, report its impact and provide information on the implementation of the PRB in the annual report or other public reporting.

Key considerations and methodologies of Paris-aligned commitment and communication

Make and join climate commitments as a first step to aligning with the Paris Agreement: The trend to banks' climate commitments will not only change the way the banking sector is operating but will have a major impact for the climate itself. Climate commitments can act as a starting point and a catalyst for Paris-aligned communication.

Features of a Paris aligned commitment

- **Commitment to the text of the Paris Agreement:** all commitments should at least use the level of ambition in the text of the Paris Agreement as the frame of reference for its ambition.
- **Preferably, set global heating target at 1.5°C:** the IPCC special report on Global Warming of 1.5°C shows that even the climate effects between 1.5°C global heating and 2°C global heating will have severe consequences for millions of people and the nature on earth[1]. Therefore, commitments should preferably reference a 1.5°C global heating target.
- **Target setting based on stock and flow:** global heating results from the stock of emissions in the atmosphere. By producing a positive flow of emissions, anthropogenic activities increase the stock of emissions every day. This worsens the climate crisis. To minimise the effects of the climate crisis, it is important to minimise the stock of emission in the atmosphere. Hence, a net-zero target for a specific year alone, i.e. a flow target, does not ensure the Paris climate goals. Targets need to include the path to net-zero, i.e. setting a target for the stock of emissions.
- **Up to date on science:** science-based targets should be set along the most recent academic findings on achieving Paris alignment.
- **Derivation of SMART targets:** overarching targets need to be broken down in SMART targets within an organisation. This could mean setting yearly targets for each department and in addition to long-term commitments.
- **Very limited use of carbon offsets:** climate targets should be achieved with the lowest amount of (voluntary) carbon offsets possible, as the literature does not suggest strong additionality of this instrument.
- **Transparent monitoring and evaluation:** harmonised and agreed methods in combination with a comprehensive disclosure should allow various stakeholders to understand the progress towards the targets of commitments.

Use targeted and various channels for climate communication: beyond singing up to a climate commitment, banks should communicate their climate actions, ambitions, targets, and needs in a variety of settings. This will allow customers and clients, regulators, policy makers, and the market to move together more efficiently. It is important to identify the different information needs of targeted stakeholders, including corporate clients, supervisory authorities and central banks, politics (governments) and public institutions, civil society, academia, and NGOs. The identification will allow banks to engage in consultation processes, collaborate with stakeholders, and publish joint ambition statements. This approach may lead to innovative Paris-aligned products, regulation that can be easily operationalised or the development of joint disclosure approaches within the banking sector.

1 See https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/

Principles of a Paris-aligned communication

- **Transparency:** the communication should be accessible, where possible, to all stakeholders and clearly state assumptions, frame of reference, etc..
- **Comprehensive presentation of content:** all relevant information should be communicated.
- **Relative not absolute:** information and particularly data should be communicated in relation to a reference value. For example, the statement: "bank X supports 200 renewable energy projects" does not provide a reference value while the statement "bank Y has dedicated 73% of its energy portfolio to low-carbon technologies" allows the recipient of the message to get a better understanding of the overall business situation at the bank.
- **Routed in science:** communication around climate action and sustainability should build on science-based information and should have scientific significance. "Our bank only sends digital Christmas cards to increase our sustainability" is not a scientific approach to climate action. "We aim to reduce our portfolio emission by 50% until 2030" is routed in science.
- **Decision-useful:** the information communicated should help other stakeholders to make informed decisions about the bank.

Stakeholders involved in a Paris-aligned communication

- **Policy makers:** banks should communicate needs for policy changes, propose solutions to the implementation of policies, and actively participate in public policy processes.
- **Competitors:** banks should exchange views with competitors, collaborate on a pre-competitive basis, and actively deploy peer pressure to move the market.
- **Regulators and supervisors:** banks should enter into an open dialogue with regulators on climate-related systems stability, adjustments to validated risk models to account for climate-related risks, and to establish working relationships for supervisory processes in relation to climate-related risks.
- **Real economy:** banks should openly communicate the effects of their own targets to the real economy, develop joint methods to overcome data barriers, and highlight benefits of sustainable finance to the real economy.
- **Civil society and NGOs:** banks should engage with civil society to show efforts, align action, and allow for monitoring of progress.
- **Clients and customers:** banks should inform clients and customers about climate-related products and services, educate about benefits and challenges in Paris-aligning profiles, and understand the needs of clients and customers.
- **Other financial institutions:** banks should cooperate with other parts of the financial system to join efforts and action, align methodologies, and develop a holistic financial sector strategy.
- **Associations:** banks should use its associations for collaboration on developing methods and tools, the development of joint statements, and aligned cooperation with other actors.
- **Academia:** banks should seek input from academia for training of employees / education of future employees, jointly develop and validate methods and tools, and align targets with climate science.
- **Employees:** banks should communicate internally efforts in all 3fP-Banks areas of action and collect input.

Status quo and gaps on commitment and communication in Europe

Most interviewed banks have signed a commitment. The signature of commitments and regulatory requirements is likely to lead to an increased quantity and quality of reported information. Long-term climate targets of commitments are not fully reflected in SMART targets. Most banks openly communicate their efforts on climate action. However, the quality of the content of this communication varies to a large degree. From most communication, a clear alignment with the Paris Agreement is not observable. In order to achieve a Paris-aligned communication, at least the following four gaps still need to be closed:

- **Full transparency on Paris alignment:** banks should clearly communicate how far portfolios and operations are aligned with the goals of the Paris Agreement.
- **Less focus on operations:** while operations of banks surely have a climate footprint, the largest effect of a bank on the transformation lies in changes to its portfolio. Communication should pay tribute to that fact.
- **Long-term strategy for commitments or short-term translation missing:** banks will need to inform other stakeholders about long-term strategies on how to translate commitments into action. In the meantime, clear short-term targets will be necessary.
- **Science-based approach:** claims in communication should be checked and benchmarked against the latest scientific findings.

Good practice Triodos Bank: committing to international initiatives and raising awareness of financial markets participants

Triodos Bank has been a sustainable bank since 1980 and is an active member of different initiatives. The bank is actively contributing to the development of the United Nations Principles for Responsible Banking and signed the climate self-commitments in the Netherlands, Spain and Germany. Above that, Triodos Bank publishes frequent articles on its blog on sustainable economy[1]. The topics are sustainable banking, environment, social issues and culture topics. Triodos acknowledges the latest scientific findings and has developed a high level of transparency in its communication with a broad range of stakeholders.

1 *Triodos: Die Farbe des Geldes (https://diefarbedesgeldes.de).*

DISCLOSURE

This chapter is intended to inform employees involved in preparing disclosures by banks.

Banks are exposed to climate-related risks and opportunities through their lending and other financial intermediary activities as well as through their own operations. As financial intermediaries, banks may assume exposure to material climate-related risks through their borrowers, customers, or counterparties. It is thus critical for them and their investors to be informed about climate-related risk exposure and the climate impact of the bank.

The lack of information on climate impact of assets and their exposure to climate related risks limits banks in disclosing relevant information to a certain degree at the moment. Increasing and enhancing climate-related disclosure of relevant and decision-useful information will lead to an improved transparency and could stimulate behavioural change in the financial system as well as in the bank itself. Improving disclosure of climate-related information is crucial for commercial banks as the regulatory requirements in the EU become stricter, e.g. through the upcoming NFRD revision in 2021. Better disclosure of climate-related information can benefit banks through:

- **Pressure to improve internal information flows:** the pressure to publish information to external parties might increase awareness and understanding of climate-related risks and opportunities within the bank. This could result in better risk management, informed decision-making and strategic planning within the bank.
- **Driver of a good reputation:** good and relevant climate-related disclosure might lead to an improved corporate reputation and the maintenance of its social licence to operate. Both aspects can be linked to a potential competitive advantage and improved market valuation. Demand for sustainable investments is on a rise[1] and disclosing climate-related information can help in attracting new sustainability-driven investors.
- **Pre-empt and help design regulation:** pro-active alignment with the changing European regulatory landscape related to non-financial disclosure will help to be perceived as a frontrunner. By testing approaches, advanced banks in the field will be able to support regulators in designing regulation and guidance.

1 *McKinsey&Company: From 'why' to 'why not': Sustainable investing as the new normal*

Key considerations on Paris-aligned disclosure

The following aspects are central for improving banks' climate-related disclosure:

- **Developing a disclosure policy and setting up disclosure processes:** banks should establish a disclosure policy for climate-related financial and non-financial information. Numerous frameworks exist that may guide a bank policy for climate-related disclosures, such as the frameworks of the Global Reporting Initiative (GRI), the NFRD with its 2019 non-binding Guidelines on reporting climate-related information, as well as the final recommendations by the TCFD, among others. Based on the disclosure policy, the bank should set up and provide its employees with guidance for a detailed step-by-step process implementing the disclosure framework.
- **Collaborating between disclosure and risk management units:** the bank's disclosure and risk management divisions should work in close collaboration and dialogue to develop and enhance climate-related disclosures.
- **Building on mandatory and voluntary client company disclosures:** the bank's client management and advisory services for climate-related disclosure should build on regulatory requirements for company disclosure, based on existing disclosure regulation and bank's supervisory requirements. This should be complemented by asking for voluntary disclosure from clients, e.g. along the TCFD, which would help in identifying opportunities for the bank such as to better manage its climate exposure and better steer its portfolio.
- **Making climate disclosure transparent and getting third party verified:** climate disclosure is part of the bank's external communication (e.g. Annual Report, ESG and Sustainability reports) which is transparent and standardised. Readers should be put in a position to easily follow and understand the climate -related financial and non-financial reporting. Any such climate-related communication should be verified by an authorised third-party and/or an ESG rating agency.
- **Disclose portfolio information and information on the bank's climate risk management:** banks should disclose information on climate-related portfolio matters, climate integration into investment decision processes, Paris-aligned products within the portfolios (e.g. green bonds or other green financial products) and the Paris alignment of its own operations. Additionally, banks should disclose the description and assessment of current and expected exposure of their portfolio to physical and transition risks and the climate impact of their portfolio, together with a description how these risks are addressed and managed as part of the bank's overall risk management.
- **Promoting capacity building on climate disclosure in the bank:** the bank should ensure regular capacity building and offer training with a focus on climate-related disclosure practices and standards for its employees to raise awareness and create expertise in this field.

Climate-related disclosure frameworks

A variety of methodological frameworks for climate-related disclosure is available to market participants and are on the way to become binding regulatory requirements in Europe. The main frameworks are:

1. **Recommendations by the TCFD**
   - The TCFD structured its recommendations around four thematic areas that represent **core elements of how organizations operate: governance, strategy, risk management, and metrics & targets.** These thematic areas are designed to interlink and inform one another.
   - Examples of recommended disclosures: board's oversight of climate-related risks and opportunities, different climate-related risks and opportunities the bank has identified over different time horizons, processes for identifying and assessing climate-related risks, the metrics used by the bank to assess climate-related risks and opportunities in line with its strategy and risk management process, etc.
   - For banks specifically, the TCFD's implementation report provides supplementary recommendations to implement its recommendations across the four thematic areas[1].
2. **NFRD (2014/95/EU):** the NFRD applies to European companies with more than 500 employees and that are capital market oriented. It requires banks, who fulfill those criteria, to disclose non-financial information including how environmental and social matters are managed. In June 2019, the EU published non-binding guidelines on reporting climate-related information, as a supplement to the directive, and directly referring to the disclosure guidance with the TCFD approach. The NFRD is currently under review, with a revised directive expected in 2021. The NFRD takes a double-materiality perspective:
   - Disclosure is to be made on climate-related information material for the value of the bank. Climate-related information should be reported if it is necessary for an understanding of the development, performance, and position of the bank. This perspective is typically the most relevant for investors and represents the cornerstone of the TCFD recommendations.
   - Climate-related information should be reported if it is necessary for an understanding of the external impacts of the company (environmental and social materiality). This perspective is typically of most interest to citizens, consumers, employees, business partners, and civil society organisations. However, an increasing number of investors also requires information about the climate impacts of business operations.
3. **Risk disclosure metrics - recommendations by the Climate Financial Risk Forum (CFRF):** in its 2020 guide, the British-based CFRF recommends disclosure metrics for the bank's debt and equity underwriting activities, with the recommended extension to the bank's banking and trading books, see Figure 7.

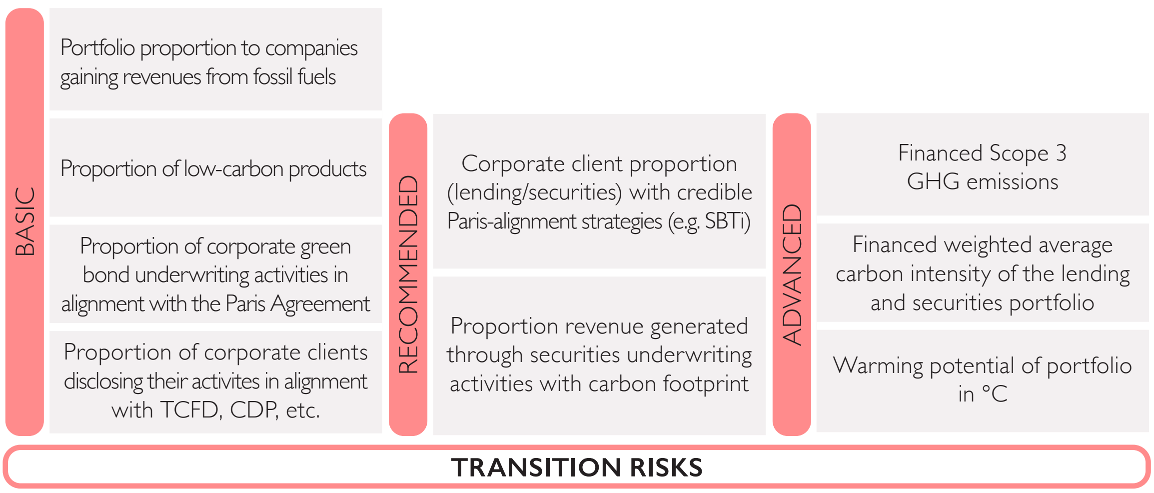

Figure 7: Recommendations on lending and securities portfolio and risk disclosure metrics

1 See https://assets.bbhub.io/company/sites/60/2020/10/FINAL-TCFD-Annex-Amended-121517.pdf

Status quo and gaps in climate-related disclosure in Europe

Only few banks in the 3fP-Banks status quo analysis have established or adopted a climate-related disclosure framework. Most banks don't disclose sufficient information on their exposure to climate-related risks and on the climate impact of their portfolio. The following gaps stand out:

- **Lack of climate-related disclosure frameworks:** most banks do not have fully established a climate-related disclosure framework that will provide decision-useful information on portfolios and operations of the bank. Establishing a disclosure framework regarding climate information will help banks in streamlining their policies and actions in accordance with market standards.
- **Absence of a guide for employees and synergies between departments:** the interviews with European banks has shown that guidance documents on climate-related disclosures are not existent or still under development in banks. A step-by-step guide for employees in different departments will help to standardize climate information according to the set framework, eg. the TCFD recommendations, and improve comparability of climate-related information.
- **Lack of disclosure of climate-related information:** disclosure on climate risk exposure to the banks' portfolios and climate impact of their portfolios is missing from ESG, Sustainability and Annual reports of most banks. Such information is important for various stakeholders to make decisions and evaluate the climate-related risks in their portfolios triggered by the bank.

Good practice ING: reporting the carbon intensity of its portfolio in most critical sectors

ING has a loan book of about EUR 600 bn spread across many sectors, which they have begun steering towards meeting the Paris climate goal under the Terra approach. ING is focusing on sectors that are responsible for most GHG emissions: power generation, automotive, etc. The Terra approach looks at the technology shift needed to keep the rise of global temperatures aligned with the Paris goals. Terra measures the needed shift in technology against the current and planned technology mix of a client. Terra is built around the PACTA methodology for corporate lending.

In October 2020, ING released its second Terra progress report[1]. It is publicly available and provides details of ING's progress and targets on Paris alignment in the nine sectors most responsible for global heating. The Terra dashboard shows each sector's carbon intensity and whether it (i) outperforms or is on track with the respective climate scenario, (ii) is not on track with the climate scenario but outperforms the market, or (iii) performs below the market or a two-degree pathway. For example, ING's power generation portfolio is outperforming both the market and the two-degree pathway, while the automotive portfolio is expected to transition more slowly than the scenario prescribes in the coming five years, with signs of a rapid transition in the longer term.

1 https://www.ing.com/MediaEditPage/2020-ING-Terra-progress-report.htm

THE WAY FORWARD

The momentum for climate action at European banks is prevalent. Commitments from sectors at the country-level and single organisations are increasingly observable while regulators are increasingly active as well. In the next step, commitments and regulatory requirements will need to become operationalised. In order to ensure efficiency in the operationalisation, the banking sector should:

- **Utilise existing knowledge:** methodological approaches and first mover action exists already for many of the challenges that banks face today. Banks should build upon this knowledge when operationalizing commitments and regulatory requirements.
- **Close methodological gaps:** in the technical translation, methodological gaps such as effective climate risk reporting by SMEs or joint measurement of progress towards targets of commitments are still existing. Banks should cooperate on closing these gaps in order to utilise resources more efficiently and start building harmonised industry views.
- **Engage in peer learning:** results of the interviews for the 3fP-Banks handbook show that different banks have built leading knowledge on different challenges. Banks should engage in pre-competitive peer learning to ensure knowledge is applied effectively and that further industry harmonisation is reached.

We hope to contribute to moving the banking sector forward in aligning with the Paris Agreement and to enable knowledge sharing, methodological progress, and peer learning.

ANNEX I: METHODOLOGY

The aim of the 3fP-Banks Handbook is to provide an overview of action required for Paris-aligning banks, existing methods, the ongoing operationalisation of Paris-aligning of banks in Europe, and a gap analysis. This framing is particularly geared at translating the banking commitments into measurable actions and to make the case further commitments by showing that technical solutions exist already.
The 3fP-Banks methodology has a focus on banking activities with a high proximity to the real economy. This implies a strong bias towards lending activities to corporate clients. This focus was chosen to maximise the impact on the transformation of the real economy. While other banking activities will most certainly have an impact on the real economy as well, lending activities seem to have the largest coverage as it includes the SMEs most strongly. Please see the envisaged mechanism for impact depicted in Figure 8.

Figure 8 - Approach of 3fP-Banks

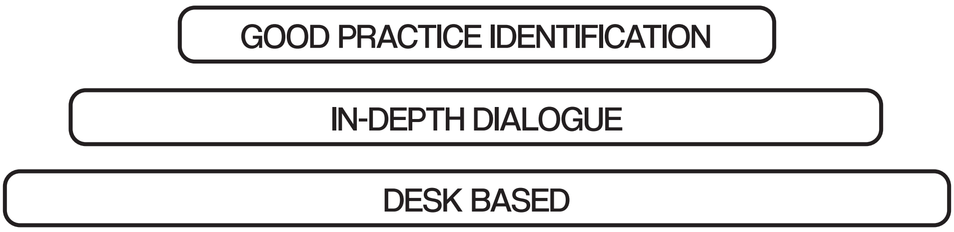

Figure 9 - Three phase approach of the 3fP - Bank handbook's development

The methodology to develop the 3fP-Banks assessment report follows a three-phase approach, see Figure 9.

1. Desk research: in the beginning of the development, all relevant existing literature and publicly available information was collected. From this research, the ten 3fP-Banks areas for action were derived and a preliminary assessment of the status quo Paris-aligning banks in Europe was conducted. The assessment is based on a questionnaire containing 100 questions in relation to aligning a bank with the Paris Agreement. The questionnaire was pre-filled using desk research and finalised in collaboration with the banks. The unfilled questionnaire will be provided upon request.

2. In-depth dialogue: an in-depth dialogue with European commercial banks was conducted to confirm the preliminary assessment, close knowledge gaps, and ensure needs by banks are sufficiently captured in the handbook and the assessment report.

3. Identification of good practices: through the research on European banks, good practice case studies are identified. Those are presented in this 3fP-Banks Handbook to show practical steps towards operationalising Paris alignment at banks. Good practice case studies are jointly developed with respective banks.

The development of the 3fP-Banks Handbook and the questionnaire is built on prior work in the field of aligning banks with the Paris climate goals. Special credit goes to:

- Cambridge Institute for Sustainable Leadership. (2020). Bank 2030: Accelerating the transition to a low carbon economy. Available at: https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/bank-2030-accelerating-the-transition-to-a-low-carbon-economy

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ANNEX II: LIST OF ABBREVIATIONS

3fP	Finance fit for Paris
CBI	Climate Bond Initiative
CFRF	Climate Financial Risk Forum
CO2	Carbon Dioxide
COP24	24th Conference of the Parties
CSR	Corporate Social Responsibility
DNB	De Nederlandsche Bank
DNHS	Do No Significant Harm
ECB	European Central Bank
EBA	European Banking Authority
EIB	European Investment Bank
ESG	Environmental, Social, and Governance
ESMA	European Securities and Market Authority
EU	European Union
GHG	Greenhouse gas
GRI Standards	Global Reporting Initiative Sustainability-Reporting Standards
ICMA	International Capital Market Association
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
KfW	Kreditanstalt für Wiederaufbau
KPIs	Key Performance Indicators
NGFS	Greening the Financial System
NACD	National Association of Corporate Directors
NAP	National Adaptation Plans
NDC	Nationally Determined Contributions
NFRD	Non-Financial Reporting Directive
NGFS	Network for Greening the Financial System
OECD	Organisation for Economic Co-operation and Development
PACTA	Paris Agreement Capital Transition-Assessment
PCAF	Partnership on Carbon Accounting-Financials
RTS	Regulatory Technical Standards
PRB	Principles for Responsible Banking
SB2A	Science Based 2°C Alignment
SBTi	Science-Based Target initiative
SDG	Sustainable Development Goals
SFRD	Sustainable Finance Disclosure Regulation
SMART	Specific Measurable Achievable Reasonable-Time Bound
SMEs	Small and Medium-sized Enterprises
TCFD	Task Force on Climate-related Financial-Disclosures
TEG	Technical Expert Group on Sustainable Finance
TPI	Transition Pathway Initiative
UN	United Nations
UN PRB	UN Principles for Responsible Banking
UN SDGs	United Nations Sustainable Development Goals
UNEP FI	UNEP Finance Initiative

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Athénaïs Gamba

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