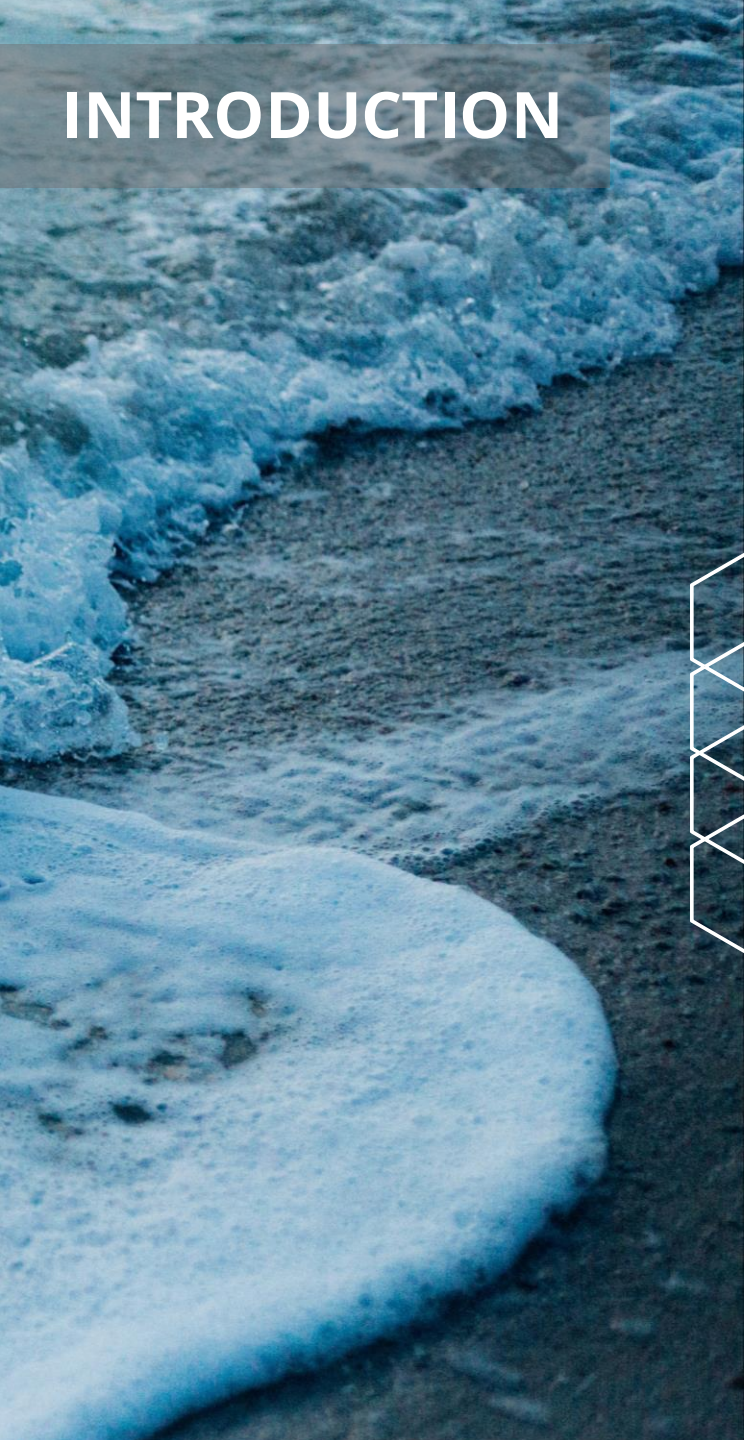
FISER CONSULTING
FINANCIAL SERVICES

CLIMATE RISKS FOR BANKS: Frameworks, Rules and Regulations

June 2023



INTRODUCTION

Climate change is one of the biggest challenges of our time and poses significant risks to **financial institutions** around the world. As temperatures rise, extreme weather events become more frequent, and governments and businesses take action to reduce carbon emissions, banks must adapt to the changing landscape of risks and opportunities.

Climate-related risks can have indirect consequences for banks, as they may result in **loan defaults, lower asset values, and higher credit and operational risks**. For example, if a borrower's property or infrastructure is damaged by a flood or a hurricane, they may be unable to repay their loan, leading to credit losses for the bank. Similarly, if a bank's own property or infrastructure is damaged or destroyed by a climate-related event, it may disrupt its operations and lead to reputational damage.

Furthermore, as governments and businesses take action to reduce carbon emissions and transition to a low-carbon economy, banks may be exposed to **transition risks**. These risks arise from the potential for regulatory changes, technological innovations, and shifts in consumer preferences that may affect the value of certain assets and lead to stranded assets. For instance, a sudden shift away from fossil fuels could lead to a rapid depreciation of oil and gas assets, which could harm the profitability and solvency of banks that have significant exposure to these industries.

Climate change poses significant risks for banks, and these risks are likely to increase over time. To **mitigate these risks**, banks need to understand the nature and extent of their exposure to climate-related risks and take appropriate measures to manage and disclose these risks to their stakeholders.

This information package discusses explores the most relevant **climate risk frameworks, rules and regulations** that are applicable to European banks. It may help banks to better manage climate-related risks and integrate sustainability into their decision-making processes. Join us on this journey to understanding climate risk and learn how **FiSer Consulting** can be your trusted partner in navigating this rapidly evolving regulatory environment.

Content

CLIMATE RISK

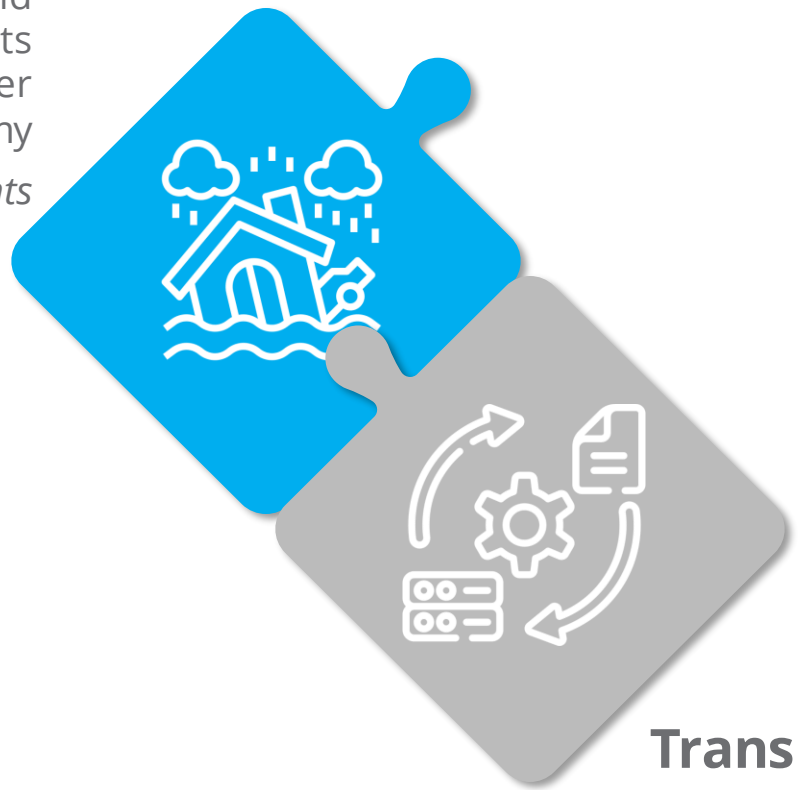
Main Categories

Banks encounter climate risks through **two primary categories:**

Physical Risk

Impact the premises and operations of the bank, its customers, and the wider economy

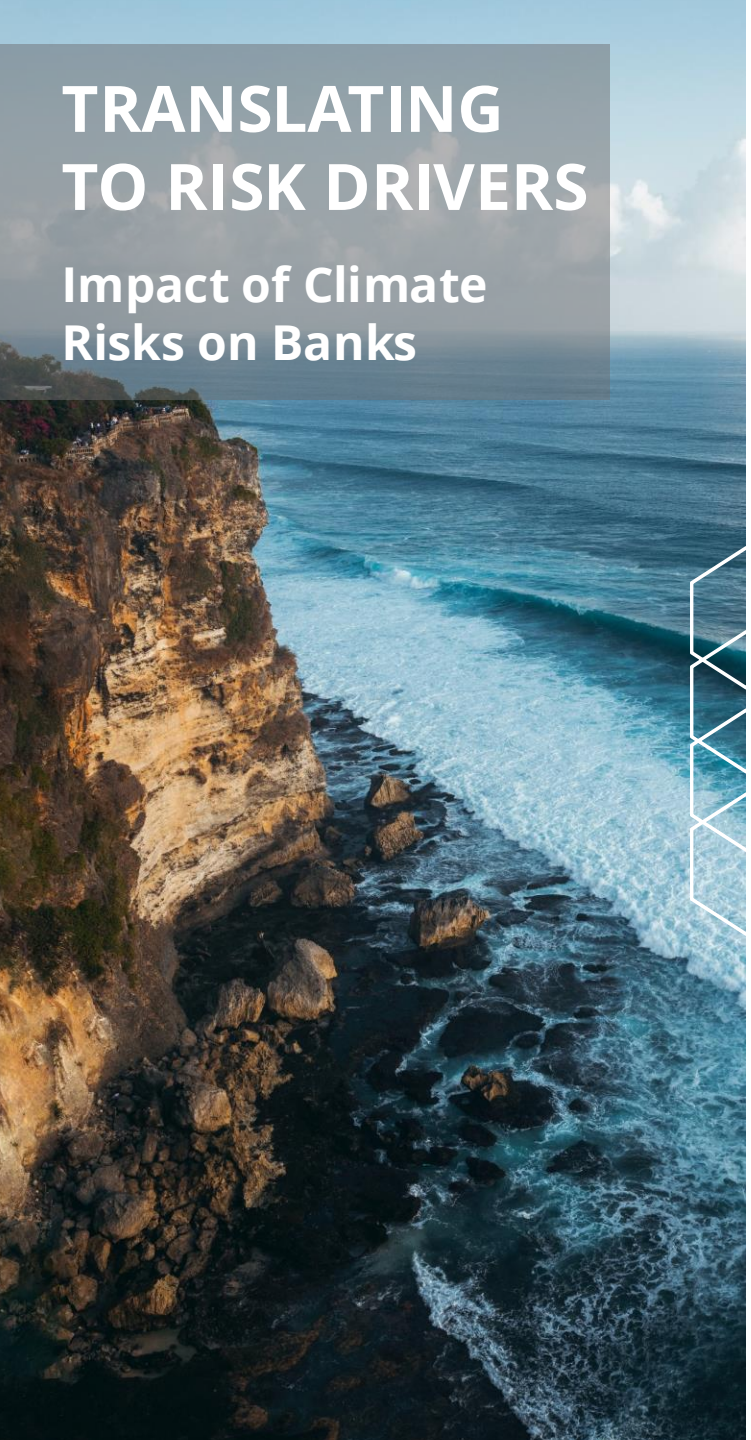
e.g. Extreme weather events



Transitions Risks

Financial losses from **adjustment towards a sustainable economy** triggered by sudden policy changes, technological progress, or shifts in market sentiment

e.g. Nitrogen crisis in the Netherlands



TRANSLATING TO RISK DRIVERS

Impact of Climate Risks on Banks

Climate risks are impacting banks in multiple ways. As the effects of climate change become more pronounced, **banks are increasingly exposed to various risks:**

Physical Risk

Acute
Short-term climate events such as floods, hurricanes, and wildfires that cause immediate damage to physical assets, disrupt supply chains, and lead to business interruptions of a bank's clients

Chronic
Long-term changes in climate patterns such as rising sea levels, droughts, and heatwaves that can cause gradual damage to physical assets, harm human health and well-being, and disrupt economic activity

Impact on Banks

Credit
Deterioration of the credit-worthiness of borrowers leading to defaults or payment delays, especially in highly exposed sectors (e.g. agriculture, forestry) and decline in property values, which can affect the collateral

Market
Assets' prices (e.g equities, bonds) can decline, leading to portfolio losses

Operational
Disrupt business continuity and result in litigation and reputation risks

Liquidity
Affect the ability of banks to access funds or provide services to customers

Transition Risks

Legal
Changes in regulations and policies may affect the value of certain assets, leading to devalue assets and create stranded assets

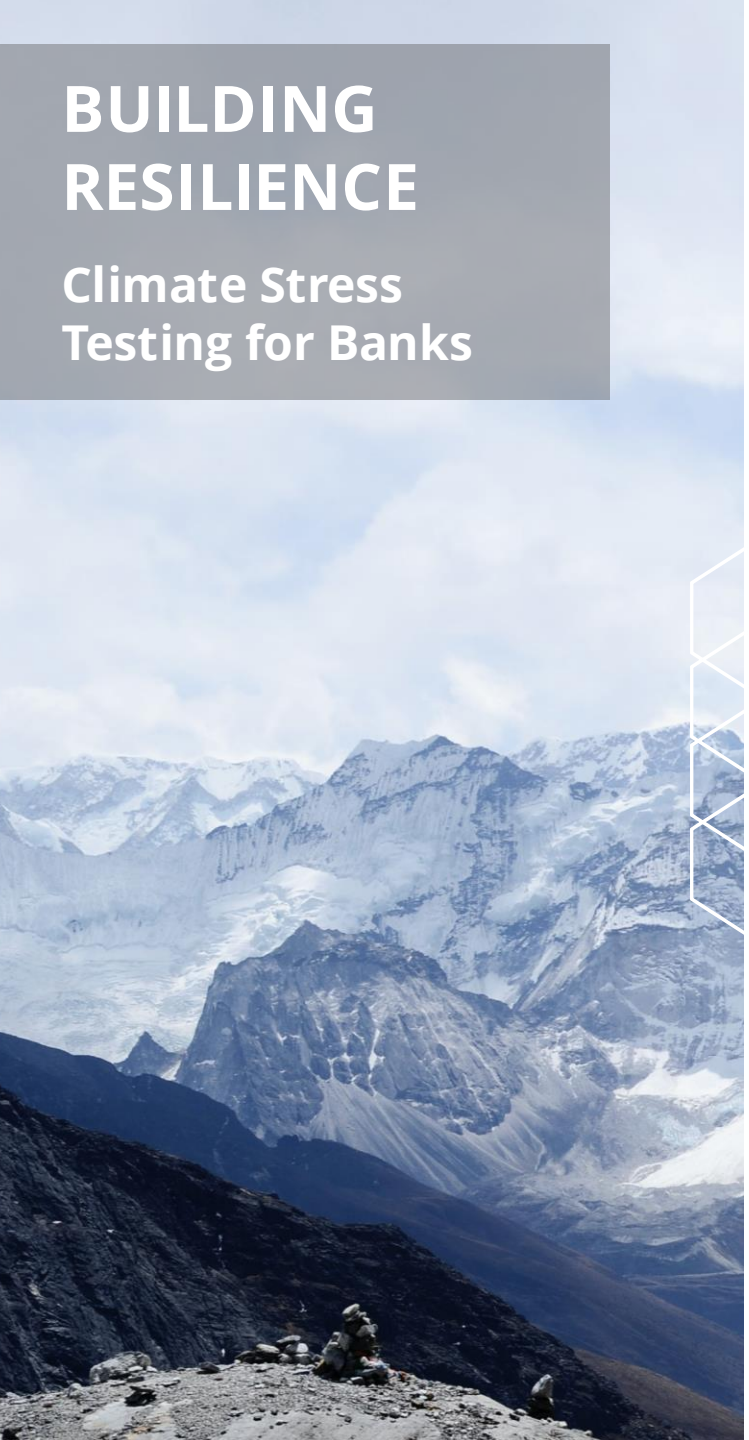
Market
Climate change can impact asset values, prices, and investment returns

Technology
The transition to a low carbon economy may render certain technologies or assets obsolete

Reputation
A bank's reputation may suffer if it is perceived as not taking adequate action to address climate change risks

BUILDING RESILIENCE

Climate Stress Testing for Banks

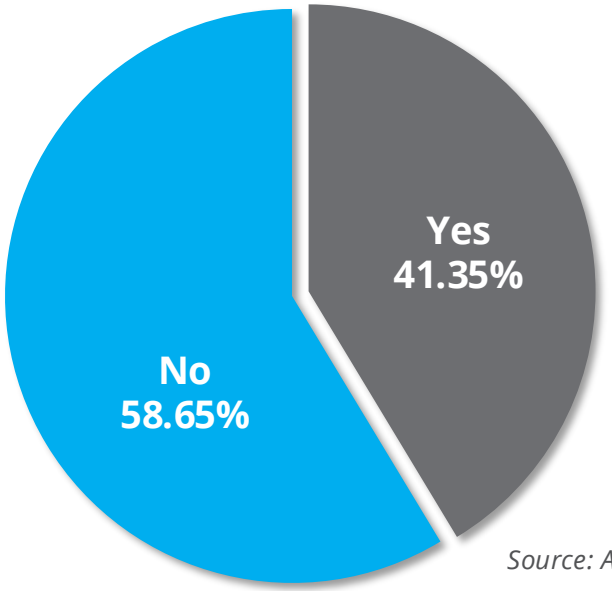


Climate stress tests are a key tool to **assess the future impact on bank balance sheets** and tend to have a long-time horizon of up to 30 years. Many banks use the scenarios from the Network for Greening the Financial System as input, explained in more detail on slide 20.

Climate stress test have **become increasingly important for regulators**, pushing banks to integrate them in their in-risk management frameworks and Internal Capital Adequacy Assessment Process (ICAAP). Stress testing is explicitly mentioned in the ECB guide on climate risks.

The results from the ECB's climate risk stress test in which 104 banks participated showed that that banks do not yet sufficiently incorporate climate risk into their stress-testing frameworks and internal models.

Is climate risk currently included in the institution's stress test framework?



Source: Aggregate results of ECB stress test 2022

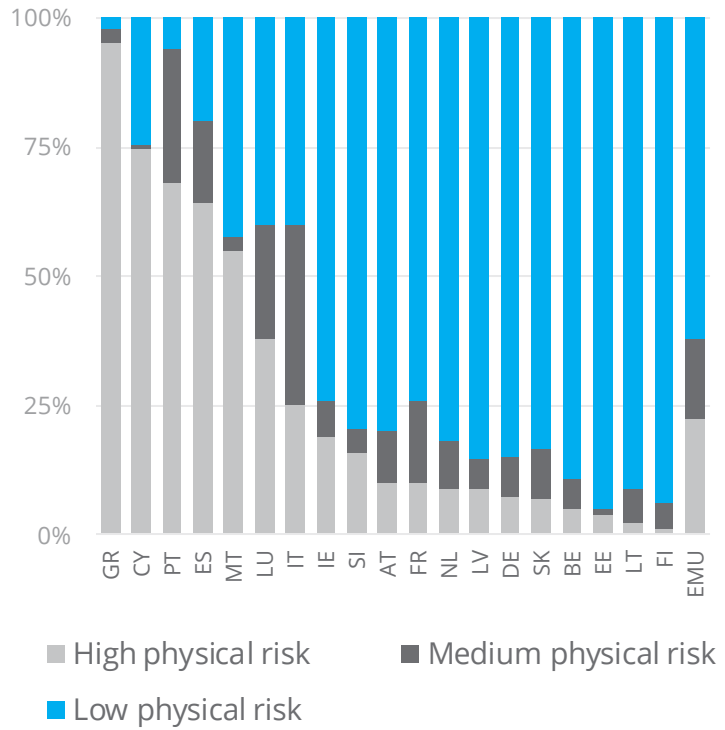
Despite 40% of banks rigorously incorporating climate risk, the majority of financial institutions still lack sufficient preparation for climate stress testing, highlighting the need for regulators and industry bodies to advocate for its broader adoption to ensure financial sector resilience against climate change

ASSESSING THE IMPACT

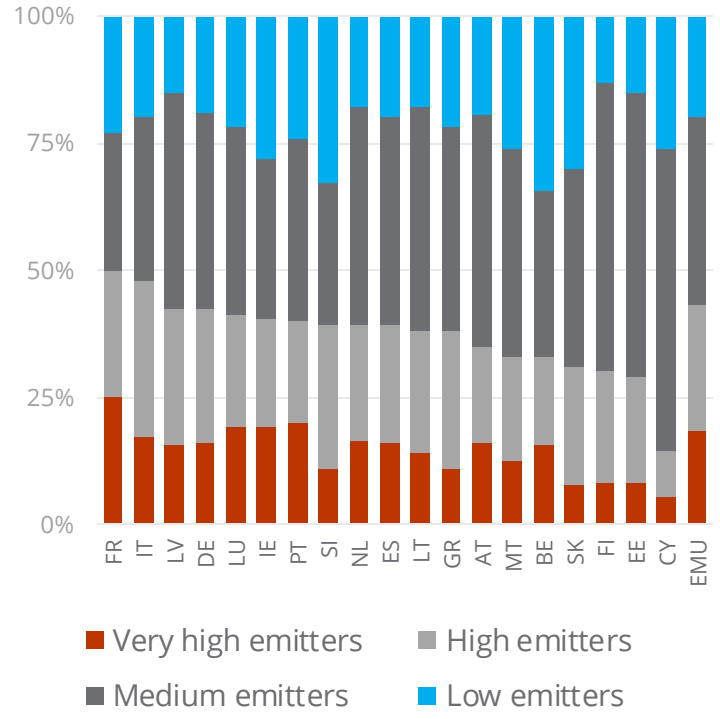
Climate Stress and Risk Exposure

The ECB's stress test assessed the resilience of the banking sector to climate-related risks which analyzed the **potential impact of physical and transition** risks on banks' balance sheets, including their loans to non-financial corporations (NFCs). The results provide insights into the level of exposure to climate risks:

Share of NFC loans which are Exposed to physical risk (in %)



Share of NFC loans which are Exposed to transition risk (in %)



The stress test revealed a significant level of exposure to climate risks in the banking sector, highlighting the need for banks to manage these risks effectively to ensure their resilience in the face of increasing climate-related threats

THE REGULATORY LANDSCAPE

Supervisory Bodies, Frameworks, Rules and Regulations

Climate risk has become one of the top priorities on the agenda of regulators and supervisors, which is demonstrated by the high number of involved supervisory and regulatory bodies and an extensive list of rules and regulations. Regulatory and supervisory entities that hold the most relevance for European banks are:

FSB: Financial Stability Board

ECB: European Central Bank

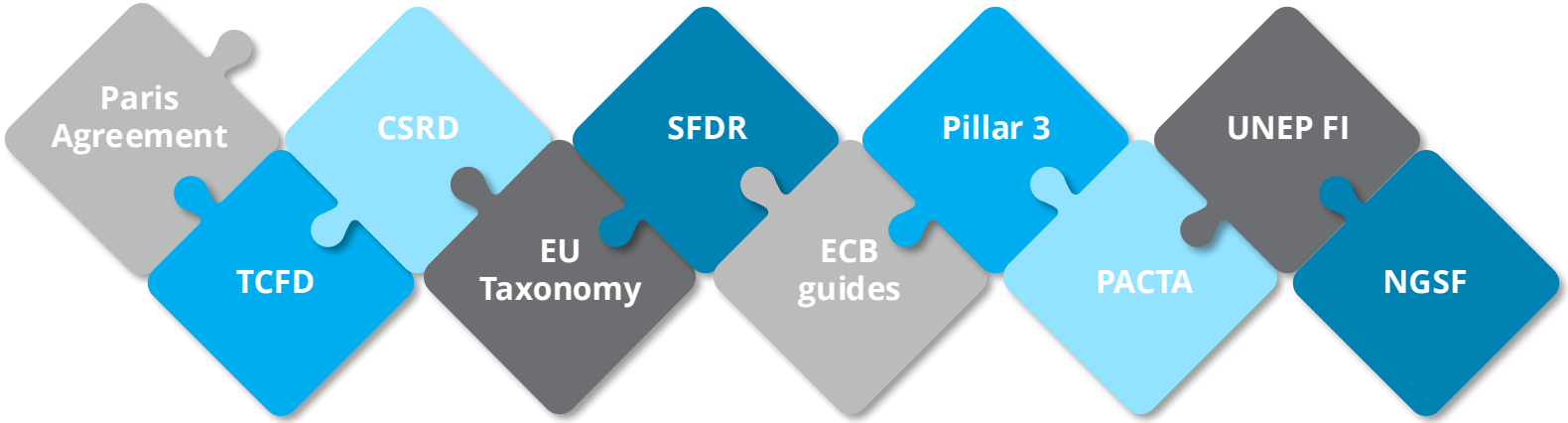
EBA: European Banking Authority

TCFD: Task Force on Climate-related Financial Disclosures

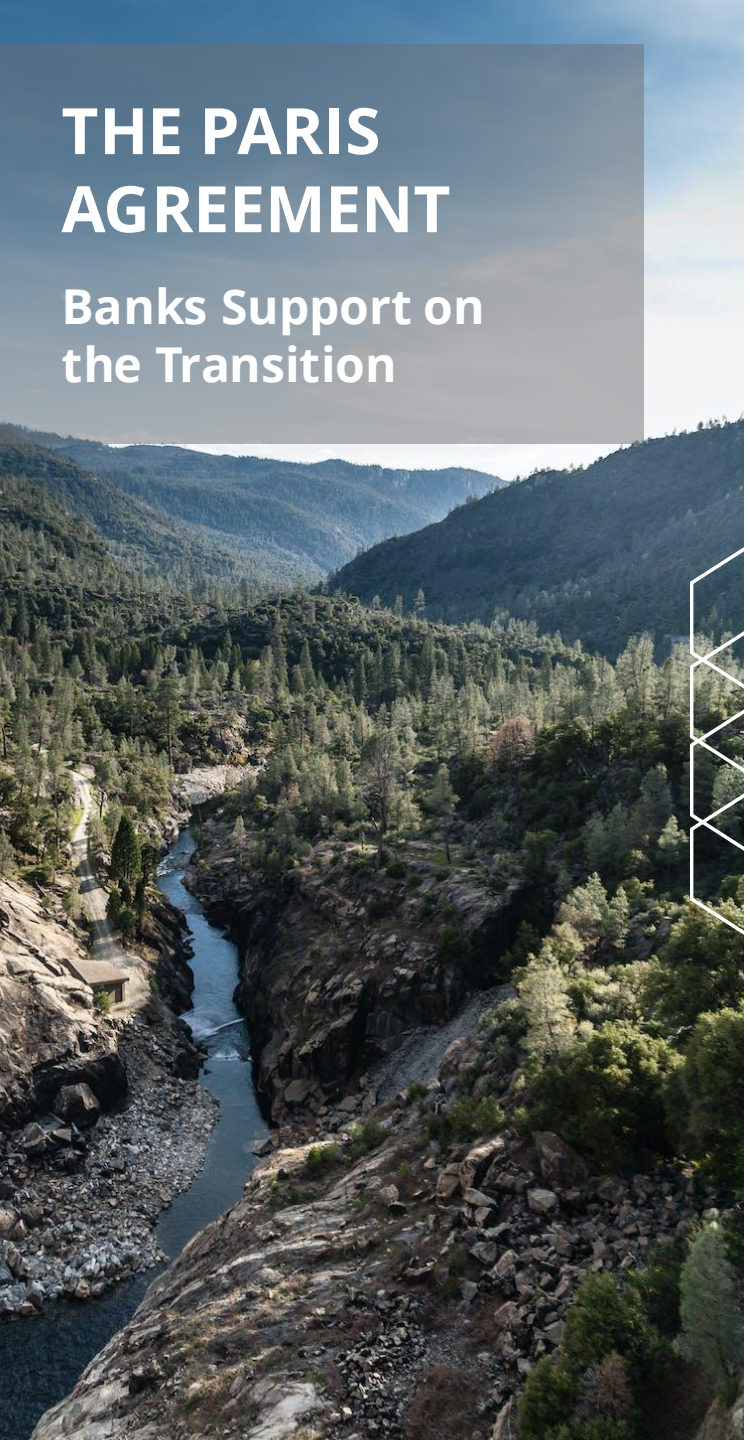
NGFS: Network for Greening the Financial System

BIS: Bank for International Settlements*

Frameworks, rules and regulations constitute the essential guidelines developed by key supervisory bodies, designed to steer financial institutions towards effective management and mitigation of climate-related risks such as the following key areas which we will cover in the coming slides:



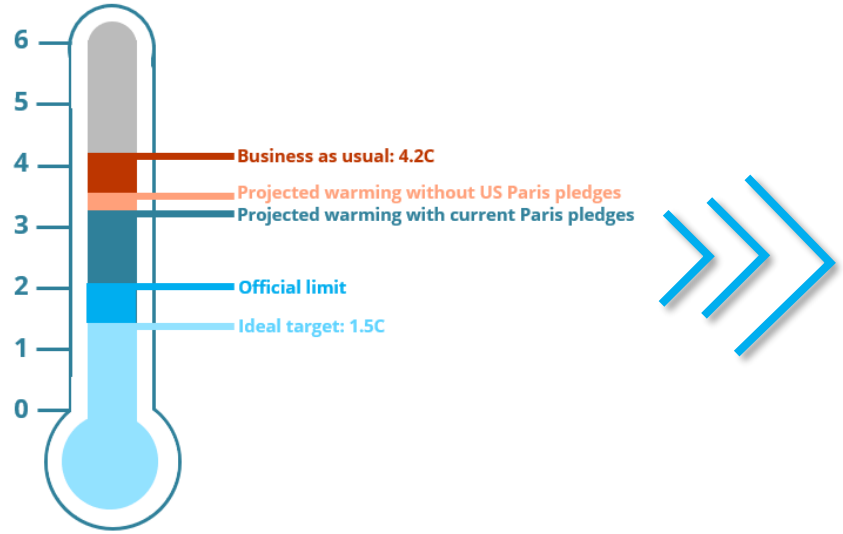
**The BIS includes numerous committees, with the BCBS (Basel Committee on Banking Supervision) being the most significant among them.*



THE PARIS AGREEMENT

Banks Support on the Transition

The Paris Agreement is a global accord signed in 2015 by 197 countries with the main goal to **reduce their greenhouse gas emissions** and to **transition to a low-carbon economy** as the global temperature would increase with 4.2 C degrees until 2100 when no action is taken:



Objective

Limiting global warming to well **below 2 degrees Celsius** above pre-industrial levels

The Paris Agreement has intensified regulatory demands on banks to reveal climate-related risks and opportunities, underscoring the vital **role and commitment** of financial institutions

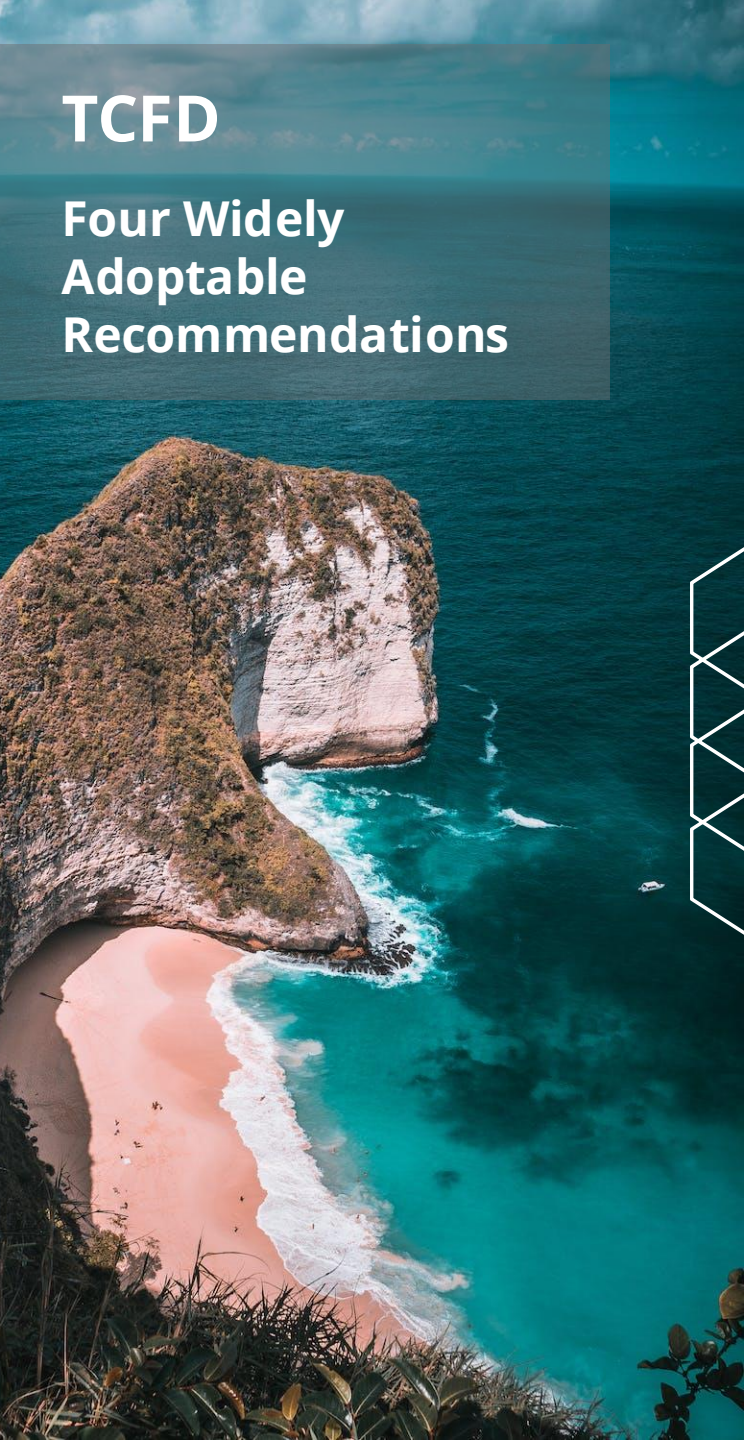
Key Role of Banks

Banks are facing significant impacts from this shift, play a crucial role in **supporting the transition** to a low-carbon economy by financing renewable projects, encouraging energy efficiency, and developing green products, all while aligning their portfolios with the Paris agreement

Commitments

In recent years, numerous banks have **pledged to lower their financed emissions** in accordance with the Paris Agreement, as shown by the surge in Net-Zero Banking Alliance (NZBA) members from 43 to 122 banks, encapsulating 40% of global banking assets, within a year

Banks that fail to address climate risk may face reputational damage, legal liability, and financial losses, but banks that proactively manage climate risks can seize opportunities for growth



TCFD

Four Widely Adoptable Recommendations

The **Task Force on Climate-related Financial Disclosures (TCFD)** was established by the FSB in 2015 to develop **a framework for disclosing climate-related risks and opportunities** which is widely recognized and endorsed by over 2,000 organizations worldwide. The **most relevant recommendations** of the TCFD for banks are:

Governance

Disclose **governance structures and processes** for managing climate-related risks and opportunities, including the role of leadership and oversight

Strategy

Disclose climate-related risks and opportunities and how they are **incorporated into overall business strategy**

Risk Management

Disclose processes for identifying, assessing, and managing **climate-related risks and opportunities**, including integration into existing risk management frameworks

Metrics & Targets

Disclose **key performance indicators** (KPIs) related to climate-related risks and opportunities, as well as any targets set to address these risks

Improving transparency will help to build trust with stakeholders, facilitate risk management, and support the transition to a low-carbon economy

CSRD

Enhancing Transparency in Financial Markets

The **Corporate Sustainability Reporting Directive (CSRD)**, proposed in April 2021, **advances the Non-Financial Reporting Directive (NFRD)** to enforce robust sustainability reporting among large companies, including banks, which mandates **regular, detailed sustainability reports** highlighting the following areas regarding their ESG performance:

Corporate Sustainability Reporting Directive

Expanded Scope and Mandatory Reporting Standards

Broadens the non-financial disclosure mandate to all large and listed companies, introducing uniform EU sustainability reporting standards

Quality Information with Double Materiality

Requires entities to report relevant, verifiable information that captures their impact on sustainability and its reciprocal effect on their performance

Value Chain Assessment and Assurance of Reports

Mandates a comprehensive assessment of entities' value chains and assurance of sustainability reports, akin to financial audits

Time Horizons and Sustainability Due Diligence

Stipulates consideration of sustainability matters over different time horizons and emphasizes proactive sustainability due diligence

Digital Format and Link to Financial Information

Prescribes reporting in digital format for ease of analysis and a clear correlation between sustainability information and financial performance

The CSRD requires transparent and regular sustainability reporting, enabling banks to better manage climate risks and foster a resilient financial system

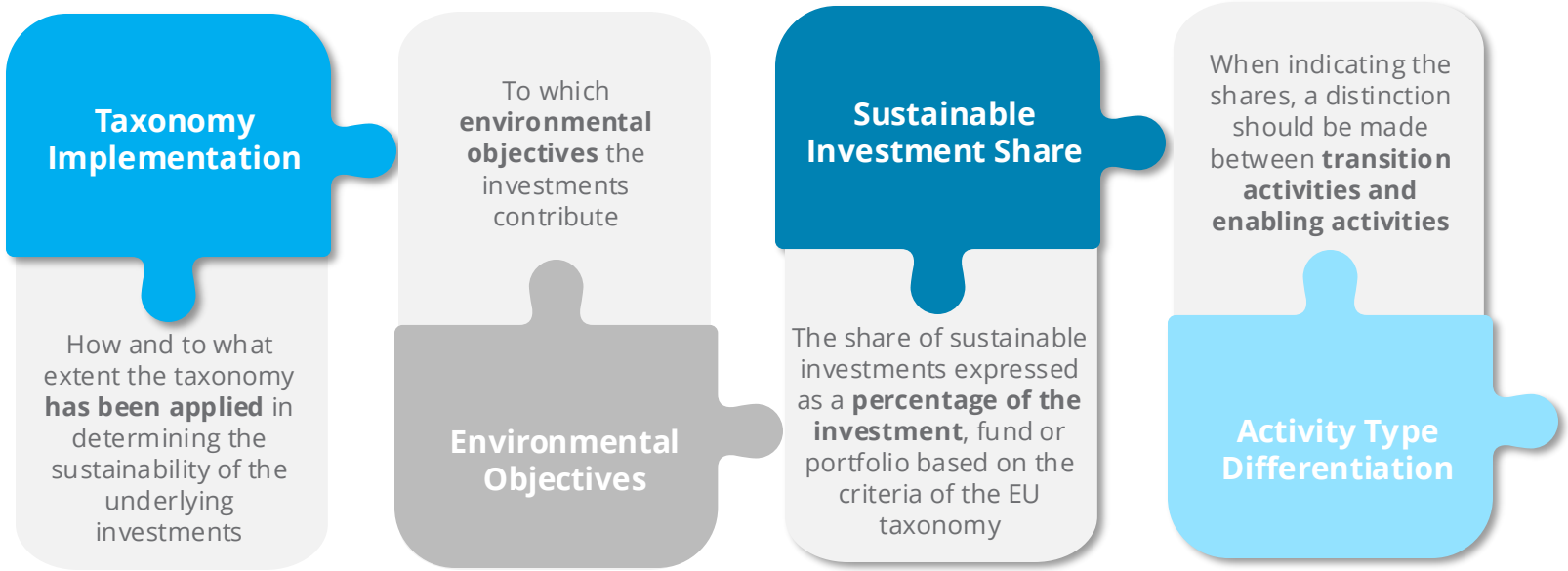
EU TAXONOMY

A Classification System for Sustainable Activities

The EU taxonomy for sustainable activities (i.e. "green taxonomy") is a classification system established to **clarify which investments are environmentally sustainable**, in the context of the European Green Deal. The aim of the taxonomy is to prevent greenwashing and to help investors make greener choices. Investments are judged by **six objectives**:

Climate Change Mitigation | **Pollution** | **Climate Change Adaptation** | **Effect on Water** | **Circular Economy** | **Biodiversity**

For an economic activity to be certified as being **environmentally sustainable** in keeping with respect to the Taxonomy, substantial contribution must be made to at least one of the aforementioned objectives and simultaneously have no significant detrimental impact on the other five. The principle in accordance with this is called **'Do No Significant Harm'** (DNSH). For each relevant product, the following must be **disclosed**:



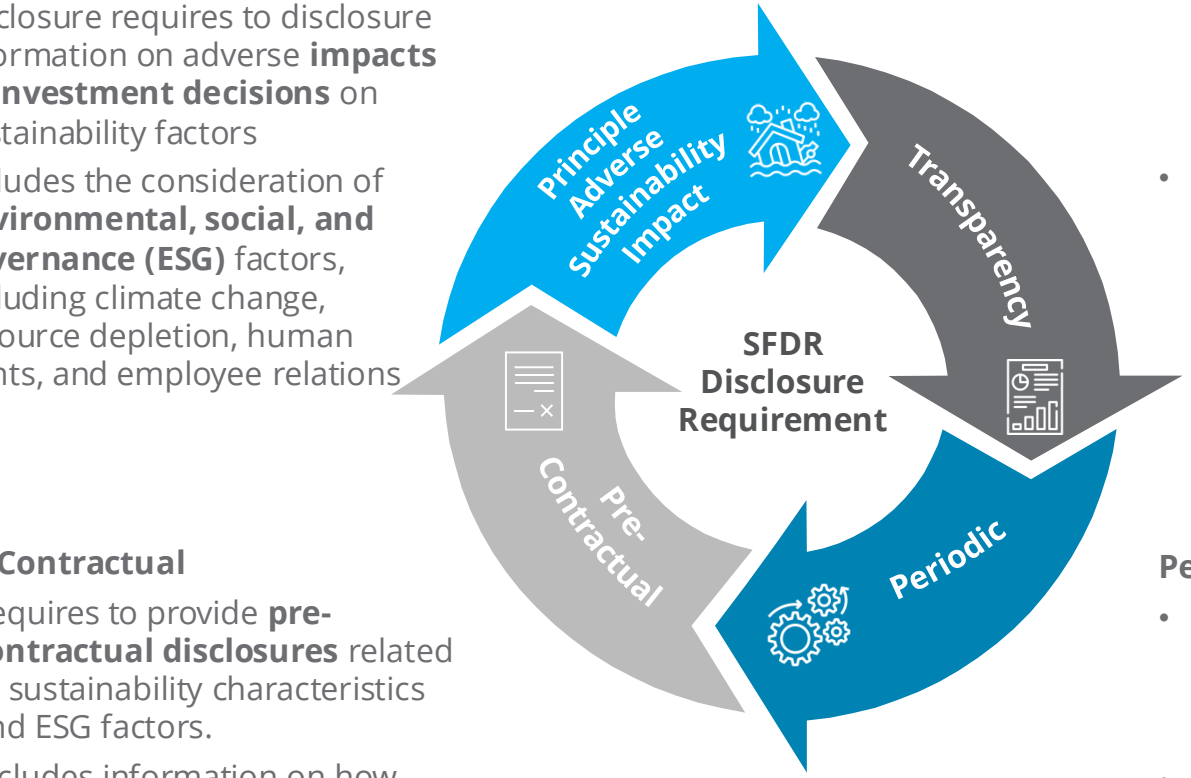
SFDR

Redirecting Investments towards Sustainable Activities

The Sustainable Finance Disclosure Regulation (SFDR) aims to redirect investments towards sustainable activities and affects **all financial market participants**, including banks. It provides transparency by regulating what and how to **disclose sustainability information**. It results in four main disclosure requirements:

PASI

- The Principle Adverse Sustainability Impact (PASI) disclosure requires to disclosure information on adverse **impacts of investment decisions** on sustainability factors
- Includes the consideration of **environmental, social, and governance (ESG)** factors, including climate change, resource depletion, human rights, and employee relations



Product Transparency

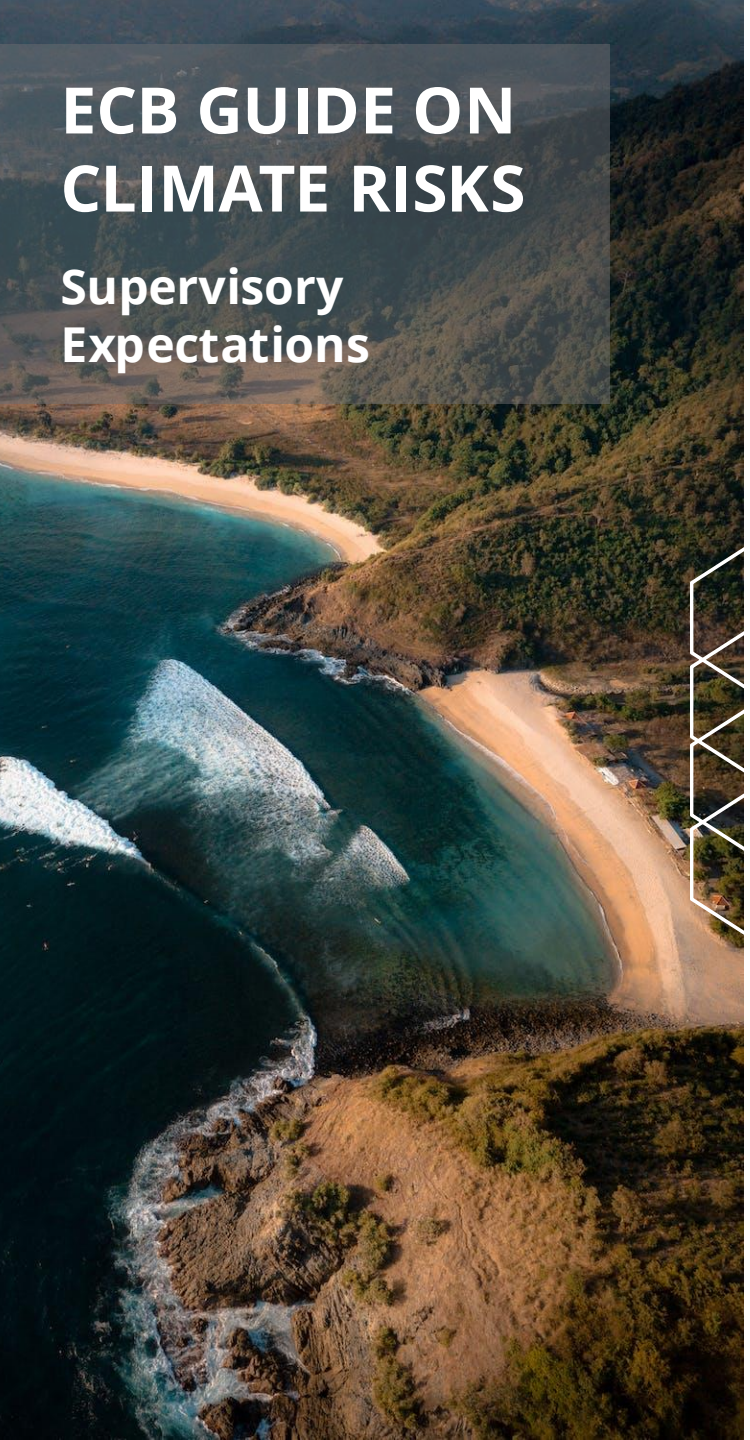
- Requirement to include **clear explanations** on how the product's objectives are achieved and the potential sustainability risks associated with the investment
- Includes information on environmental or social characteristics, **methodologies** used for determining sustainability, and **targets or benchmarks** employed

Pre-Contractual

- Requires to provide **pre-contractual disclosures** related to sustainability characteristics and ESG factors.
- Includes information on how sustainability risks are **integrated into investment decisions**

Periodic Reporting

- **Regular reports** on the integration of sustainability risks and the consideration of adverse sustainability impacts
- Includes updates on sustainability **risk profiles**, progress towards sustainability **targets**, and **changes** in sustainability risk assessments



ECB GUIDE ON CLIMATE RISKS

Supervisory Expectations

In response to the efforts towards a low-carbon and circular economy, the **European Central Bank (ECB)**, recognizing climate-related and environmental risks as a key risk driver for the euro area banking system, promotes a **strategic and comprehensive approach to managing them** which led to the ECB's expectations for financial institutions to integrate **climate-related and environmental risks** into the following 4 key areas:

Business Model & Strategy

Implementing internal processes focusing on the impact of these factors on **business environment**, and to integrate these risks into the **business strategy** and risk appetite frameworks

Governance & Risk Appetite

Assigning **organisational structure** in accordance with the three lines of defense; embed these risks in the governance and **risk appetite frameworks and regular reporting** to the **management body** to ensure proper management

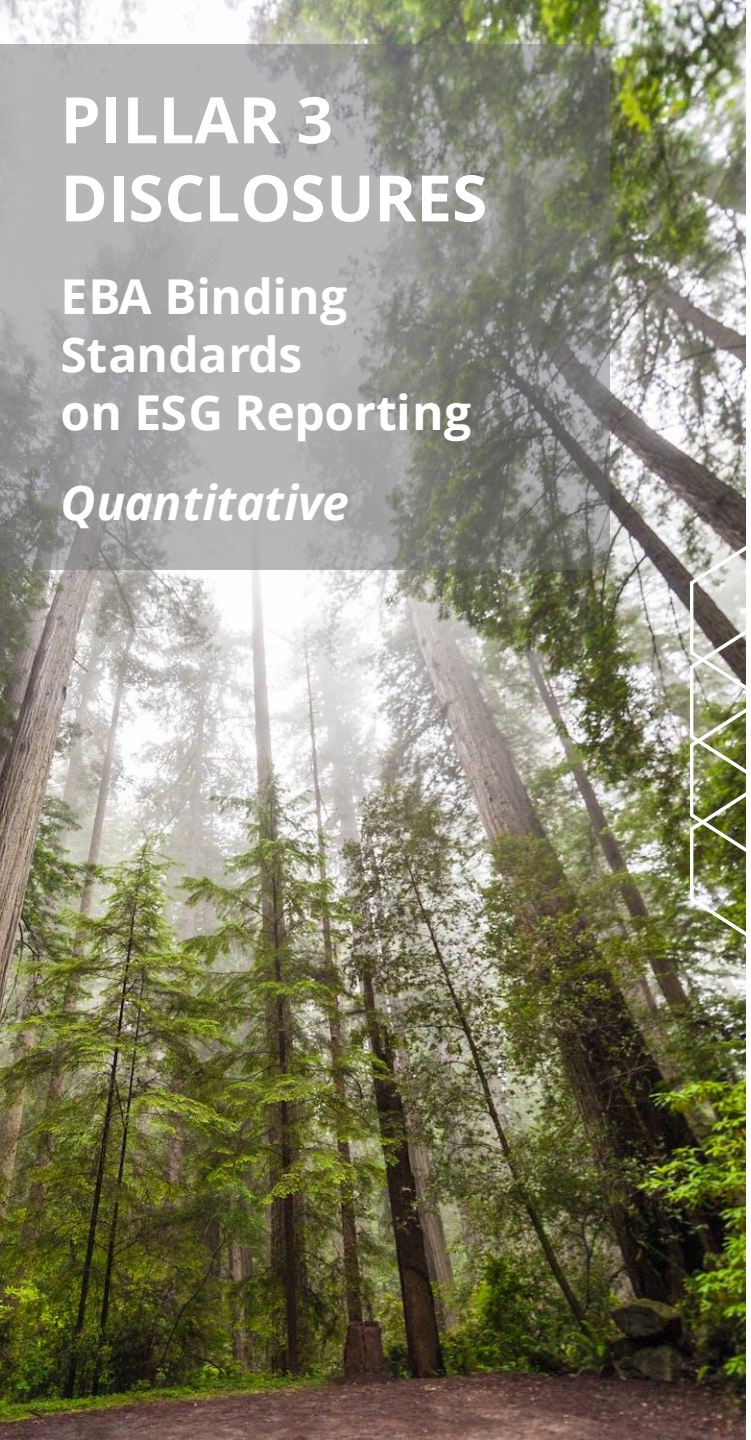
Risk Management

Integrating these risks into the overall **risk framework**, considering these factors in **credit, operational, market, and liquidity management**, and incorporating them in **scenario analysis** and **stress testing**

Disclosures

Publishing meaningful information and **key metrics** on these risks, including **non-financial reporting**, and disclosing financed Scope 3 GHG **emissions**, carbon-related assets, weighted average **carbon intensity**, **exposure** volumes, credit risk exposures, and related **KPIs and KRIs**

Incorporating expectations is a necessary yet challenging task for banks, as they navigate risks and opportunities in the transition towards sustainability and engage in supervisory dialogue to manage and disclose climate-related and environmental risks



PILLAR 3 DISCLOSURES

EBA Binding Standards on ESG Reporting

Quantitative

The EBA released the final draft of its **Implementing Technical Standards (ITS)** on ESG risks under Pillar 3 aiming to provide banks with tools to **better handle ESG-related risks**. The EBA's initiative requires banks to disclose their exposure to ESG-related risks and their mitigation strategies, with a view to fostering a transition towards a **more sustainable economy**.

Ten templates were introduced for **quantitative ESG risk disclosures**, categorized under transition risks, physical risks, and mitigating actions.

Regarding the **transition risks**, there are four highlighted focus areas:

- **Credit quality of exposures, emissions and residual maturity**
- **Energy efficiency of the bank's real estates**
- **Banking Book's alignment in comparison to the 'Net Zero' aims**
- **Exposure to the 20 companies with the highest carbon emissions**

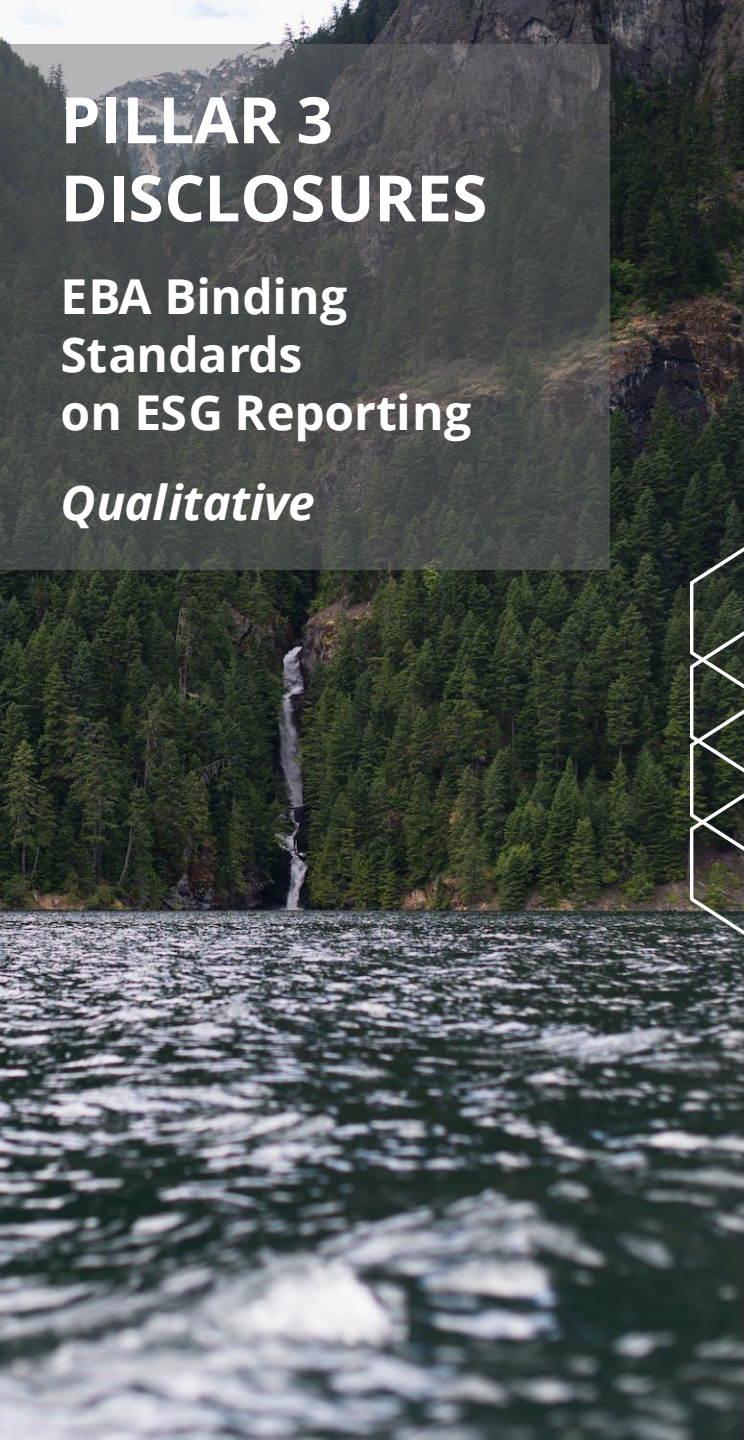
Banks are required to disclose its exposure to **physical risks** within its banking book, detailing these exposures by residual maturity and **NACE sector codes**, and supplementing this data with an explanatory narrative outlining the methodologies used to assess such risks.

Considering **mitigation actions**, banks are required to demonstrate the measures they're implementing to handle or lessen the impacts of climate change risks focusing on:

- **Outstanding exposures to Green Asset Ratio (GAR)**
- **Green Asset Ratio (GAR) calculation, KPIs and coverage**
- **Bank's Taxonomy Alignment Ratio (BTAR) exposures**
- **Other climate change mitigating actions**

The **Green Asset Ratio (GAR)** mandates banks to disclose their exposures to climate change mitigation and adaptation, and the **proportion of their total assets** that are designated as green assets. Banks must report these disclosures by sector, with full alignment to the EU Taxonomy, and the **GAR breakdown by client type and climate change objectives**.

The Bank's Taxonomy Alignment Ratio (BTAR) requires banks to assess **non-financial firms not subject to NFRD-disclosures** on a best effort basis and disclose this ratio.



PILLAR 3 DISCLOSURES

EBA Binding Standards on ESG Reporting

Qualitative

Continuing the ITS on ESG risks under Pillar 3, according to the **qualitative disclosure's** requirements, banks have to provide information by detailing how these ESG considerations **influence strategic planning, decision-making, and risk management**, thereby promoting transparency around the institution's approach to sustainability. The three highlighted areas of the qualitative disclosure's focus on:

Business Strategy and Processes

Incorporating ESG risks and factors into the institution's **business strategy**, setting short, medium, and long-term **objectives and limits** for environmental and social risk assessment, and implementing policies and procedures for **direct and indirect engagement** with customers on their ESG risk strategies, involving risk committees, business lines, and internal control functions

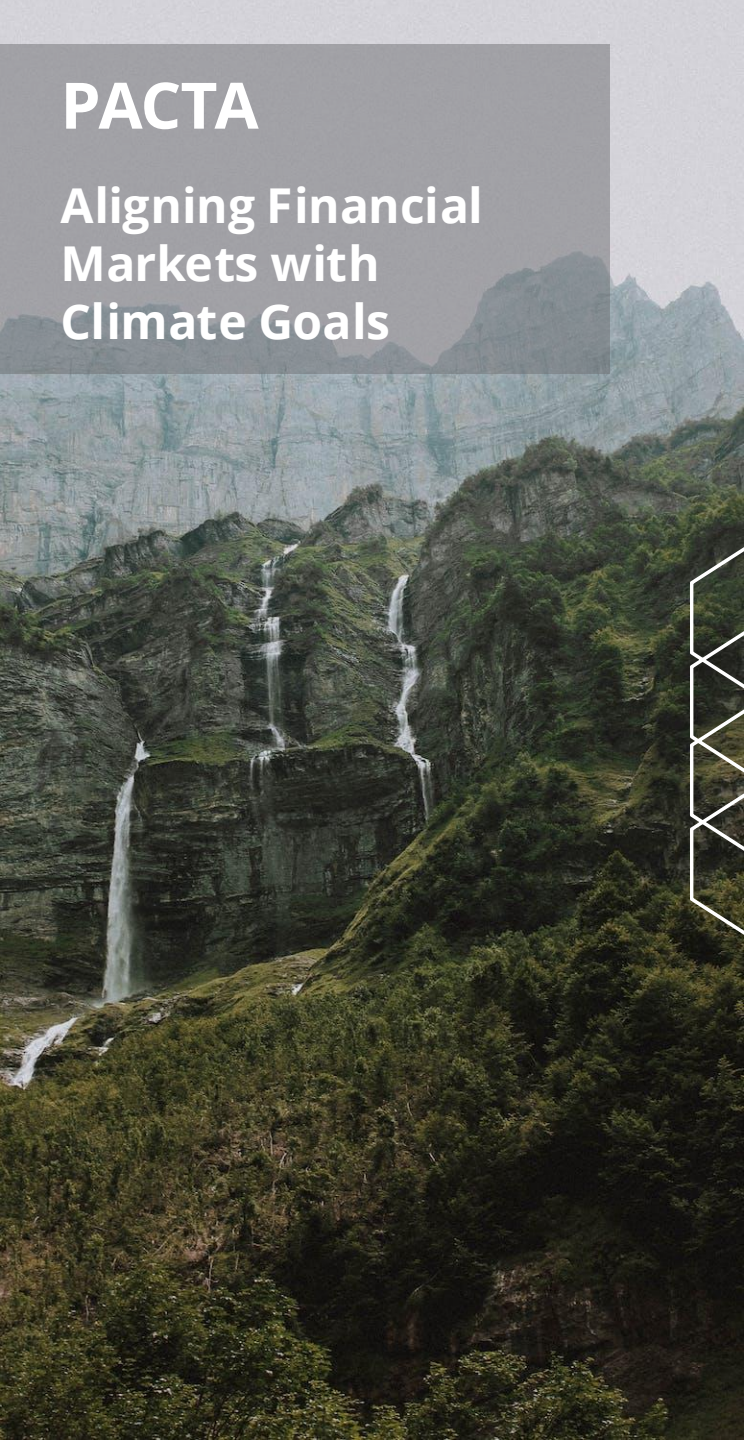
Governance

Assigning **management body** responsibilities for setting, overseeing, and monitoring ESG risk management framework, objectives, strategies, and policies related to clients and counterparties, **integrating ESG risks into existing risk categories**, **establishing governance arrangements** for target setting, escalation procedures, and reporting processes, and aligning **remuneration policies** with ESG risk-related objectives

Risk Management

Developing a comprehensive ESG **risk management framework** with specific methodologies, deploying tools for **managing ESG-risk** activities across credit, market, operational, and liquidity risks, detailing institutions' activities, **commitments, and exposures** to mitigate ESG risks, setting **ESG risk limits** with escalation and exclusion procedures, and **explaining transmission** channels between ESG risks and conventional risk categories

The qualitative standards for ESG reporting are designed to enhance banks' business strategies, governance, and risk management, ultimately enhancing transparency and promoting sustainable practices within the financial sector



PACTA

Aligning Financial Markets with Climate Goals

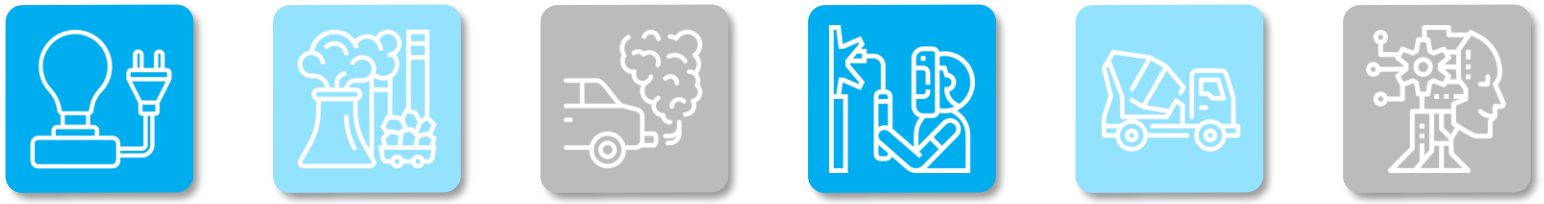
The **Paris Agreement Capital Transition Assessment (PACTA)** was developed in partnership with leading European universities and backed by the UN Principles for Responsible Investment, PACTA was first released in 2018, offering investors a tool to analyze bond and equity portfolios.

The PACTA for Banks methodology is designed to help banks assess the alignment of their corporate lending practices with climate scenarios and **evaluate the effects of climate change** on their assets and loans, analyzing risks ranging from EU regulations of carbon-intensive industries to how inclement weather may threaten loan collateral.

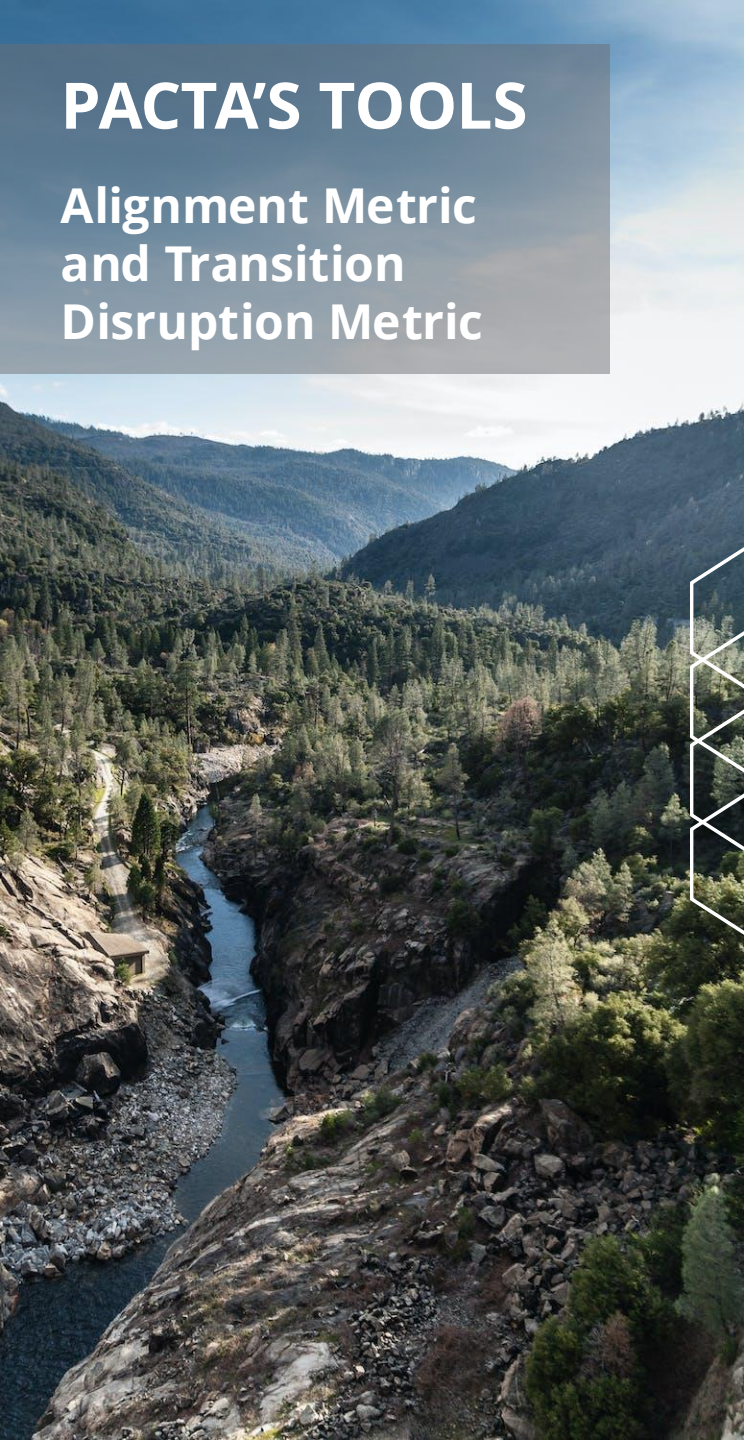
Three core components comprise the PACTA for Banks methodology:

- **Physical Asset-Level Data:** *specific details about the tangible assets, such as power plants or factories, owned or operated by companies in a bank's lending portfolio*
- **Financial Exposures:** *evaluates the risk from lending or investments, based on alignment with climate scenarios and transition to a lower-carbon economy*
- **Climate Scenarios:** *potential conditions to explore the climate impacts and evaluates the extent to which a portfolio is compatible with the transition to a low-carbon economy*

The PACTA methodology measures alignment with the Paris Agreement's **goals per sector** or technology, as each sector requires different changes including the following areas that contribute to about **75% of global greenhouse gas emissions**:



PACTA utilizes asset-based company data for its core analysis and offers **stress-testing modules** for investors and banks, enabling them to measure the potential impact of **various climate scenarios** on their portfolios and loan books respectively.



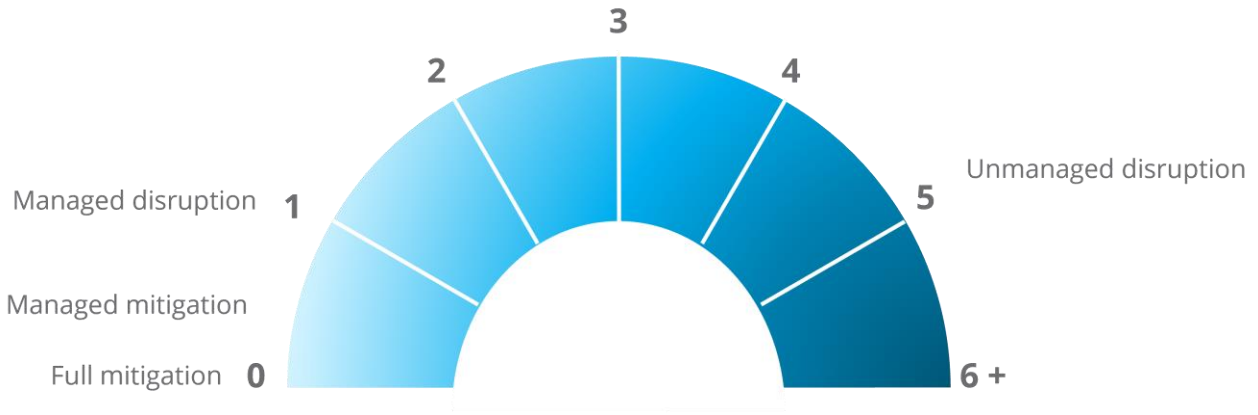
PACTA'S TOOLS

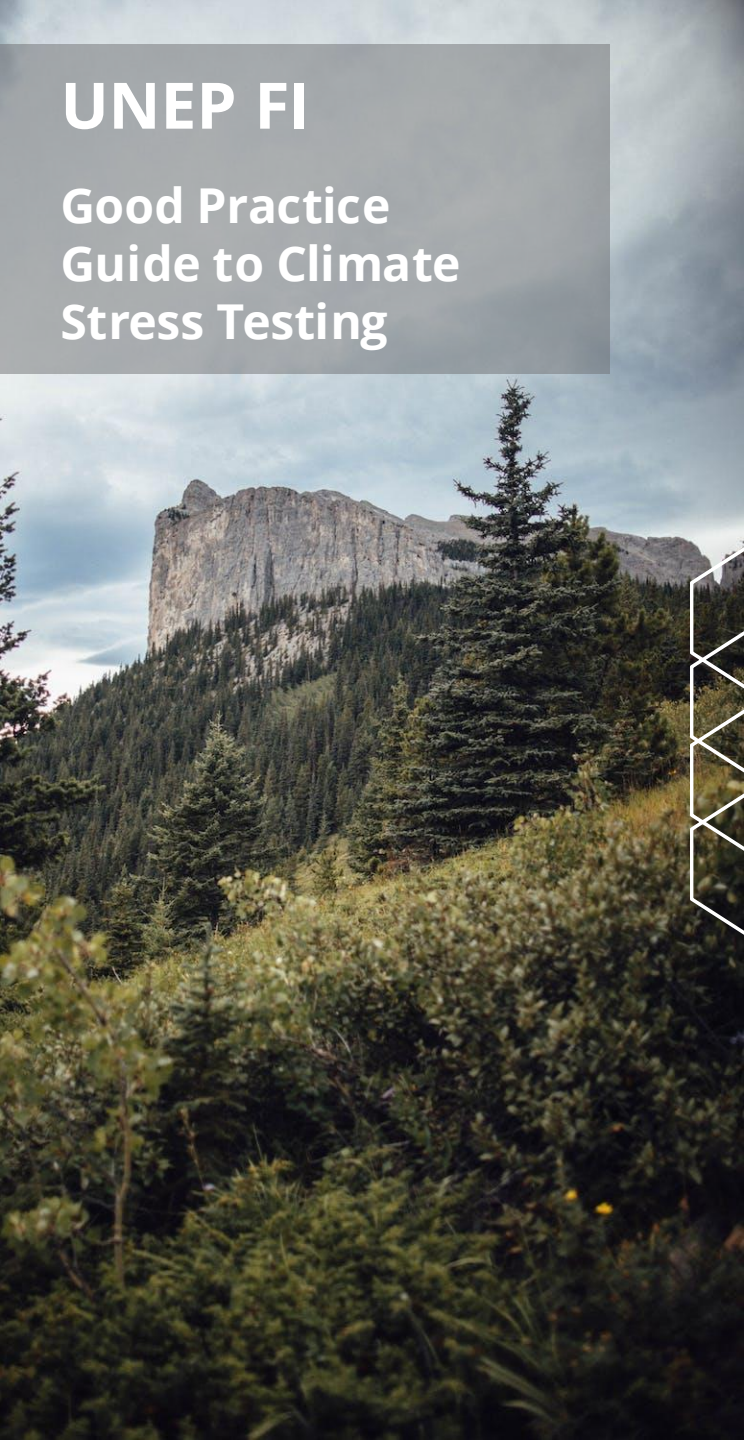
Alignment Metric and Transition Disruption Metric

The Alignment Metric within PACTA empowers financial institutions to **assess portfolio alignment with climate scenarios**, evaluating carbon intensity and alignment with climate targets. It quantifies the level of alignment across different scenarios, enabling informed decisions in support of the transition to a low-carbon economy by assessing sector exposure and carbon intensity. Alignment can also be defined as a **process that requires**:

Measuring	Setting Targets	Steering	Tracking Progress
Drawing links between financial instruments, the clients' activities being financed, and the goals	*Determining the benchmark, long-term target, and trajectory necessary for the goals*	*Capital allocation decisions to ensure the financial instrument indicator remains on-track*	*Ensuring that the portfolio remains on track to meet the end target*

The PACTA portfolio alignment tool introduces the **Transition Disruption Metric (TDM)**, which helps investors anticipate potential portfolio disruption resulting from risks associated with an uncoordinated shift to a low-carbon economy. The TDM quantifies the extent of potential disruption under the **Inevitable Policy Response's (IPR) Forecast Policy Scenario (FPS)** until 2030, enabling investors to evaluate their **portfolios' alignment** and make informed decisions for a smooth transition. TDM scores range from 0 (full mitigation) to over 6 (high disruption), reflecting the portfolio's alignment with the FPS as it shows in the chart:





UNEP FI

Good Practice Guide to Climate Stress Testing

United Nations Environment Programme Finance Initiative (UNEP FI) Comprehensive Good Practice Guide to Climate Stress Testing is a detailed user guide for financial institutions looking to understand **climate stress testing** and develop plans for effectively executing them. It has been created to assist the financial sector in its climate stress testing journey and several useful pieces of information, such as:

Data

Best practices for climate stress testing **data requirements and collection**, such as guidance on identifying appropriate data sources and selecting data that aligns with the specific **risk factors and geographies** relevant to the institution's portfolios

Scenario Development

Guidance on selecting relevant and **plausible climate scenarios** that align with the institution's risk profile or objectives and **best practices** on scenario development, calibration and sensitivity analysis

Capital Allocation

Guidance to identify **capital-intensive assets or sectors** that may be particularly vulnerable to climate risks to align **investment decisions** with long-term sustainability goals and enhance the resilience of portfolios

UNEP FI Report

Risk Assessment

Guidance to identify, measure, and evaluate the potential **physical, transition, and liability risks** associated with climate change and also includes **practical tools** to assess both financial and non-financial risks

Regulatory Requirements

Guidance on incorporating climate stress **testing outputs** into regulatory reporting, such as fulfilling **disclosure obligations** related to climate risk and sustainability factor and includes recommendations on how to enhance **risk management practices** and capitalize on climate-related opportunities

Organization

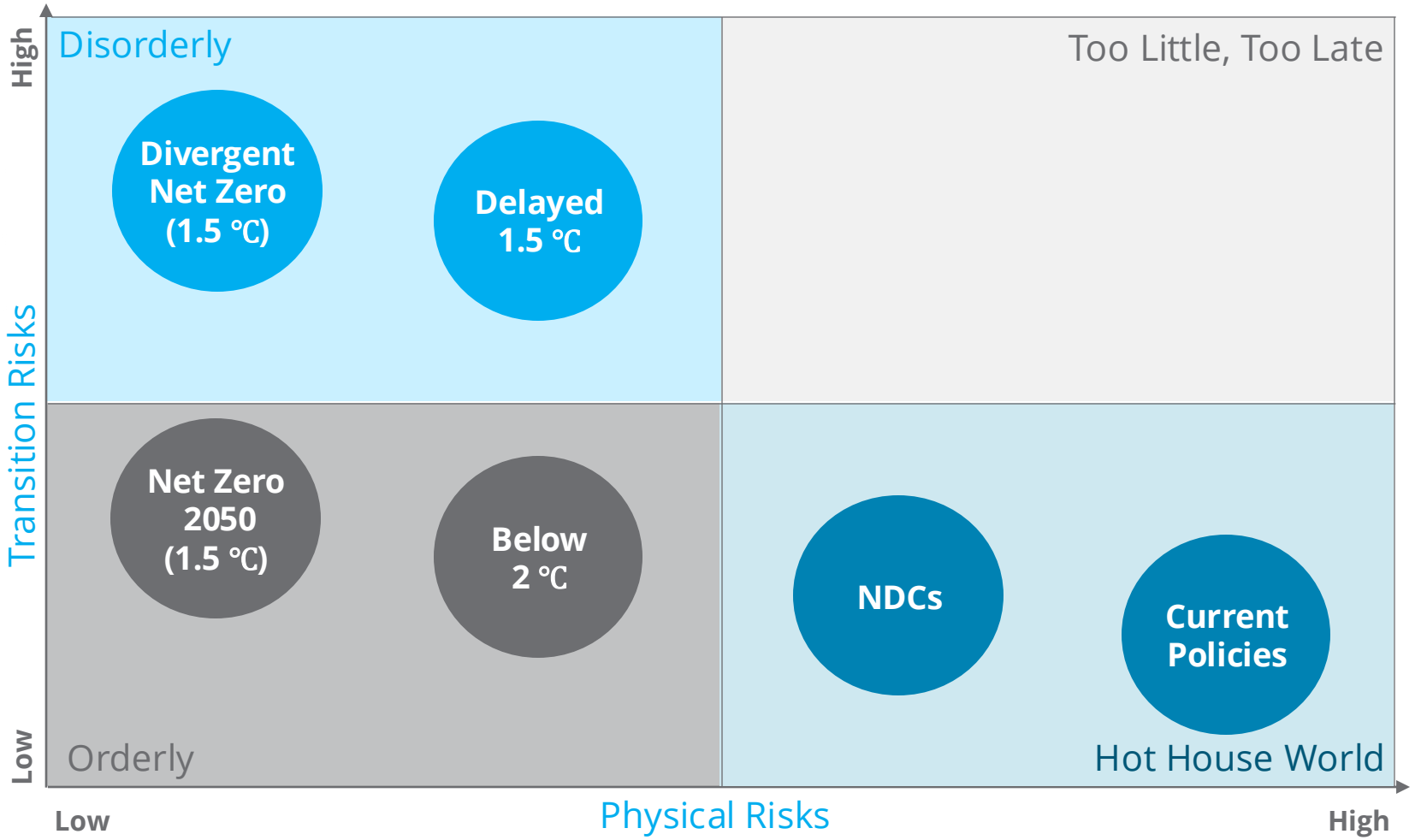
Best practices on **team organization**, cross-functional collaboration and **senior management involvement** that includes the description of **key skills and expertise** required for effective climate stress testing

NGFS

Guide to Climate Scenario Analysis

The **Network for Greening the Financial System (NGFS)** developed six climate scenarios to illustrate the potential impact of climate change on economy and finance. These tools aid in **understanding risks, guiding policy, and promoting a greener economy.**

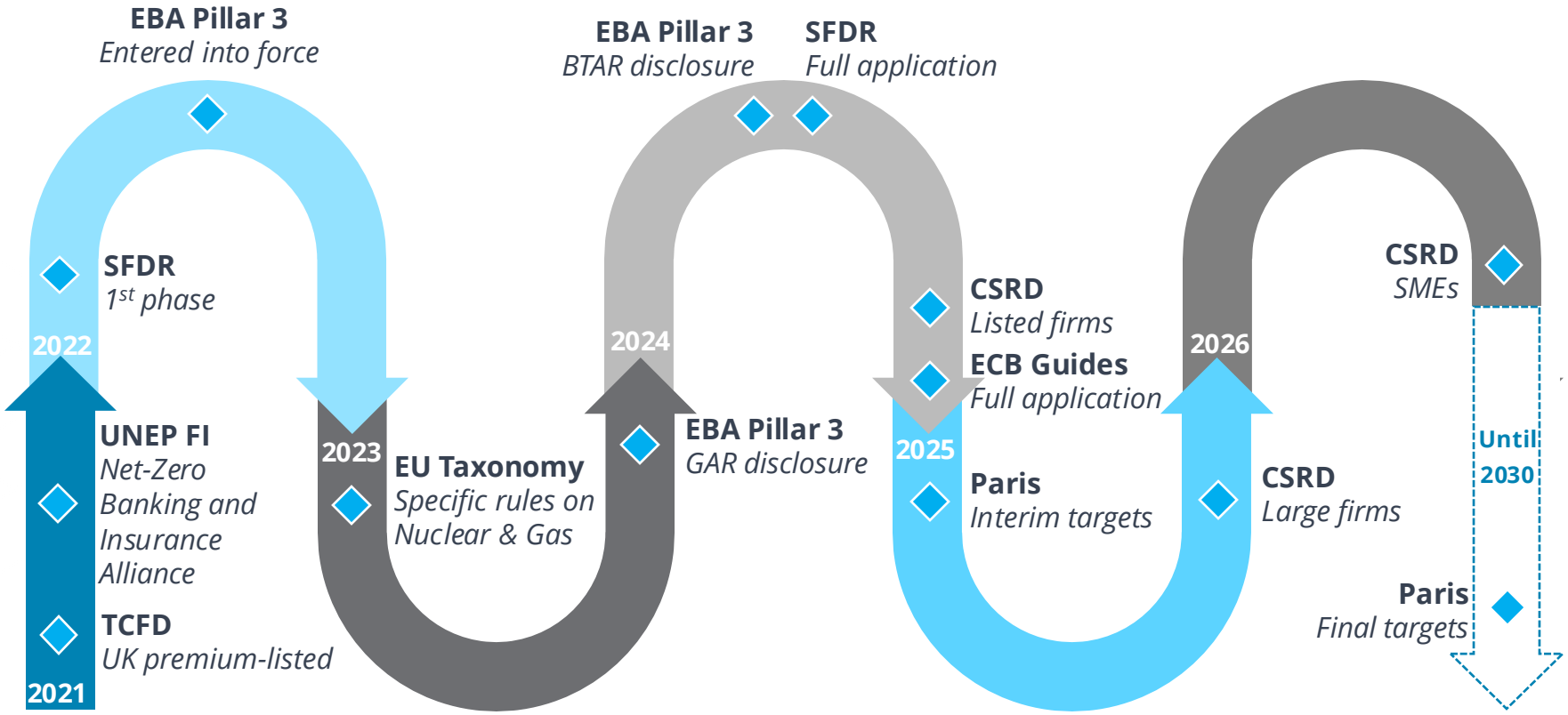
NGFS scenarios help estimate necessary investments for climate goals and assist in fine-tuning climate policies. They equip stakeholders to understand the potential climate change effects on the economy, enabling **risk mitigation and opportunity identification in a low-carbon economy transition.** The following chart shows the positioning of the six scenarios to 2100:



TIMELINE

Guide to the Key Milestones

In the following roadmap, we will be charting the course of critical climate-related regulations and initiatives shaping the banking sector which will illustrate **key implementation dates, deadlines, and milestones** of ten previously presented frameworks and their impact on advancing climate risk management and sustainable finance:



Banks are facing with a difficult challenge to comply with all these complex climate-risk regulations, and they need to invest heavily for preparation to drive towards a low-carbon economy, and manage climate risks transparently

GET IN TOUCH

Comply with the Regulations with the Help of FiSer Consulting

Our team of experts at **FiSer Consulting** boasts a profound understanding of climate risk regulation, its complexity, and the **necessary strategies required for successful compliance**. By seamlessly combining regulatory, technical, and environmental expertise, we provide comprehensive guidance and support to address the unique needs of your business. Meet our dedicated colleagues who can help you with navigating your business to be more sustainable and ensuring your business meets all the previously mentioned regulatory requirements:

Jeroen Wiggers – Banking Practice Lead

Jeroen is a banking professional with more than ten years of experience, starting in the consultancy sector at Capgemini Consulting and EY Advisory, where he worked on large-scale regulatory and transformation projects. He was a senior supervisor within the ECB's Single Supervisory Mechanism (SSM). As such, he worked in two of the ECB's Joint Supervisory Teams (JSTs) and supervised implementation of the ECB guide on climate change risks. He has performed several regulatory gap assessments at banks.

j.wiggers@fiser.consulting

Gabor Lorincz – Consultant

Gabor is a consultant in the Banking practice, focusing on risk advisory services for banks. His proficiency in model development and validation was acquired through previous roles at Zanders and OTP Bank, where he held strategic and analytical positions. He also has valuable experience in energy and climate financial models. He excelled in business case competitions including delivering various sustainable solutions, furthermore, attended Sustainable Finance and Sustainable Entrepreneurship courses.

g.lorincz@fiser.consulting

FiSer Consulting Website

info@fiser.consulting

Follow us on Linkedin