Strategic Framework for Paris Alignment

A global landscape overview of resources for financial institutions, from measuring financed emissions to taking action

PCAF
Partnership for Carbon Accounting Financials

PCAF: Enabling financial institutions to assess and disclose greenhouse gas emissions of loans and investments

The Partnership for Carbon Accounting Financials (PCAF) is an industry-led initiative which enables financial institutions to consistently measure and disclose the absolute greenhouse gas (GHG) emissions associated with their loan and investment portfolios through GHG accounting. Currently, over 100 financial institutions (FIs) from more than 35 countries globally have joined the initiative.

PCAF developed the Global GHG Accounting and Reporting Standard for the Financial Industry ("the Standard") as a response to industry demand for a global, standardized approach to measure and report financed emissions. Written by a diverse, global team of financial institutions for financial institutions, the Standard combines deep industry insight with the rigor of the GHG Protocol, the supplier of the world's most widely used GHG accounting standards.

The Standard has been reviewed by the GHG Protocol and is in conformance with the requirements set forth in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, for Category 15 investment activities.

Measuring financed emissions is crucial in providing an understanding of climate-related transition risks to a portfolio. It also helps FIs to set an emissions baseline, develop science-based targets, act to reduce their portfolio climate impact, and disclose progress.

PCAF was created in 2015 by Dutch financial institutions. It extended to North America in 2018 and scaled up globally in 2019. Its two objectives are to develop the Global GHG Accounting and Reporting Standard for the Financial Industry, and to increase the number of financial institutions that use the Standard to measure and disclose their financed emissions to over 250 institutions worldwide by 2022.

PCAF Partnership for Carbon Accounting Financials

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Guidehouse

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More and more financial institutions (FIs) are committing to align their portfolio with the Paris Agreement and setting net-zero emissions targets. This growing momentum is matched by the fast-rising number of initiatives, projects, methods and tools to enable financial institutions to achieve Paris alignment. In this growing and complex landscape of climate finance activities, FIs need a standardized language to define common terms and need more clarity on how these activities relate to each other.

Financial institutions of all sizes, regions and levels of progress must be able to understand this landscape of activities and use commonly accepted, agreed-upon language to effectively scale and communicate their climate efforts and identify the most efficient support available to do so.

This Strategic Framework intends to provide clarity to financial institutions seeking alignment with the Paris Agreement through three main components:

1. A clear explanation of the technical elements of Paris alignment for financial institutions,
2. The definition of consistent terminologies as used in the process of Paris alignment, and
3. A map of existing initiatives, projects, methods and tools to identify the possible synergies in the process of Paris alignment for financial institutions.

1. Paris Agreement Goals to Achieve Net Zero by 2050

The Paris Agreement was reached in 2015 with the express aim of pursuing efforts to limit global temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.[1] Achieving this goal requires global emissions to decline by about 50% relative to 2010 levels by 2030, and to reach net zero by 2050.[2]

Level of ambition

The level of ambition to achieve the goals of the Paris Agreement and steer global emissions towards net zero in 2050 is enormous and differs per sector. Financial institutions play a crucial role in facilitating this transition by steering their financed emissions towards net-zero goals: one of the three key goals of the Paris Agreement is to direct the scale and speed of global financial flows to match the required path to very low-emission, climate-resilient development.[3] Buy-in from the financial industry is of critical importance because its power to reallocate capital and finance the transition can catalyse rapid decarbonization across all sectors. Monitoring an FIs' financed emissions plays an essential role in holding FIs accountable in a consistent and transparent way, ensuring that the actions taken by the financial sector result in real impact.

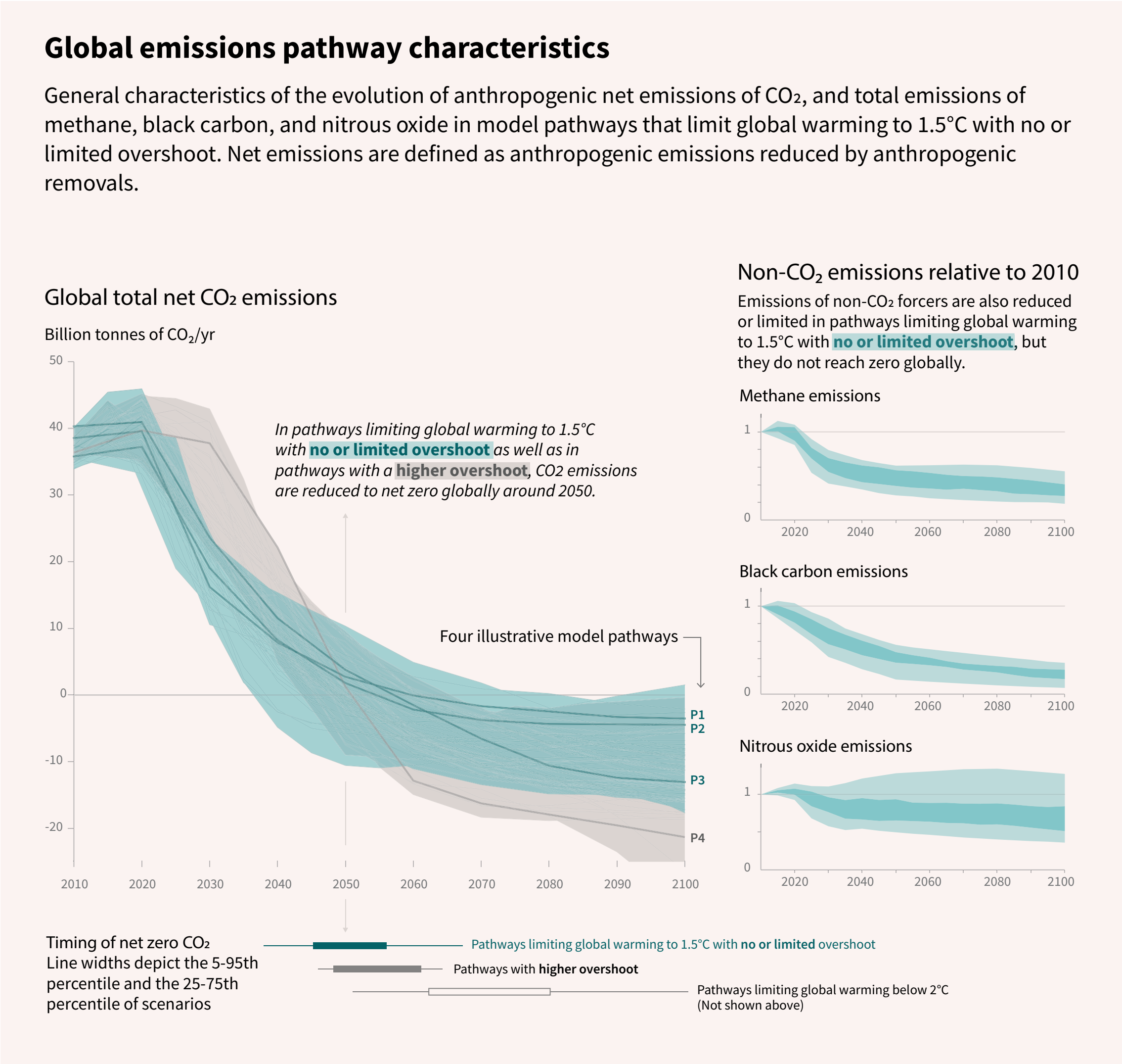
1 UNFCCC, The Paris Agreement, 2015.

2 IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

3 Ibid

A clear signal of the growing acknowledgement within the financial industry to pursue efforts to reach net-zero emissions by 2050 is set by the UN-convened Net-Zero Asset Owner Alliance (NZAOA), which in January 2021 published its Inaugural 2025 Target Setting Protocol for its members. The Protocol puts forward a target range of -16% to -29% of absolute emissions reductions in line with IPCC 1.5°C scenarios across members' portfolios (see Figure 1).[4]

Figure 1. Global emissions pathway characteristics, IPCC Special Report on Global Warming of 1.5°C



IPCC Special Report on Global Warming of 1.5°C

4 UN-convened Net-Zero Asset Owner Alliance, Inaugural 2025 Target Setting Protocol, 2021

Technical Elements of Paris Alignment for Financial Institutions

2. Technical Elements of Paris Alignment for Financial Institutions

The process of aligning a financial portfolio with these emissions reductions set forth by the Paris Agreement consists of seven discrete technical elements which combined are referred to as the Strategic Framework for Paris Alignment.

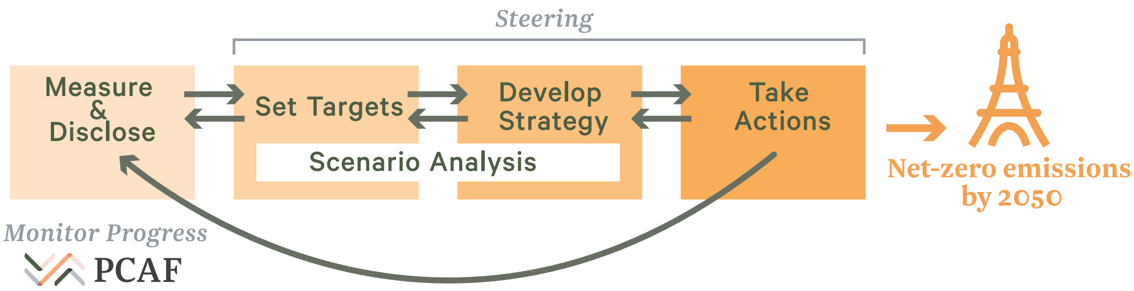


Figure 2. Non-linear flow of elements of Paris alignment

Following a detailed review of existing definitions from established sources, these technical elements and related terms are defined as:

Aligning with Paris	**The process by which financial institutions reorient their financial flows away from activities inconsistent with the Paris Agreement and scale up consistent decarbonization activities in line with the required speed and volume established by climate science.**[5] Key steps to achieve alignment include: High-level commitment to action, Target Setting, Scenario Analysis, Strategy Development and Taking Actions, including through Measuring (through KPIs) and Disclosing.
Measuring Emissions	**"Emissions" refer to Scope 3, Category 15 emissions as defined by the Greenhouse Gas Protocol[6] and the PCAF Global GHG Accounting and Reporting Standard for the Financial Industry.[7]** **At portfolio level:** The process of determining the absolute greenhouse gas emissions that financial institutions finance through their loans and investments and monitoring the trajectory of these emissions over time. **At sector level:** The process of determining the absolute greenhouse gas emissions and/or emissions intensity (CO_2e/physical output) that financial institutions finance through their loans and investments and monitoring the trajectory of these emissions over time. **At action level:** The process of determining the absolute greenhouse gas emissions reduction and/or emissions intensity reduction that financial institutions finance through their specific actions, products and services focused on emissions reductions.
Steering	The process of orienting a financial portfolio or instrument so that it adheres to an established trajectory [for Paris alignment].[8]

5 Katowice Banks & 2 Degrees Investing Initiative, Credit Portfolio Alignment: An application of the PACTA methodology by Katowice Banks in partnership with the 2 Degrees Investing Initiative, 2020.

6 Greenhouse Gas Protocol, Technical Guidance for Calculating Scope 3 Emissions - Category 15: Investments, 2013.

7 The Partnership for Carbon Accounting Financials (PCAF), The Global GHG Accounting and Reporting Standard for the Financial Industry, 2020.

8 Katowice Banks & 2 Degrees Investing Initiative, Credit Portfolio Alignment: An application of the PACTA methodology by Katowice Banks in partnership with the 2 Degrees Investing Initiative, 2020.

Target Setting	A strategic process to establish goals that are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement.[9] A net zero commitment is an example of a high-level, long-term target that financial institutions may translate into interim targets and timelines relevant for executing financial decisions today, and which can also be broken down by financial asset class and/or sectors. Targets may also be set independent of a net zero commitment.
Scenario Analysis	A process for identifying and assessing a potential range of outcomes of future decarbonization pathways under conditions of uncertainty, using forward-looking data.[10] Scenario analysis informs the level of the target ambition during Target Setting and the degree of alignment with scientific net-zero trajectories. It can also provide insight into the performance and ambition of companies in a portfolio of a financial institution and thus provide input for the development of a climate transition strategy at company level.
Taking Actions	To deliberately implement measures designed to align a financial portfolio or investment decision with the goals of the Paris Agreement. Actions should be proactive whenever possible. Examples include engaging the world's emitters to set science-based emissions reduction targets and financing and enabling the technologies and business models of the future through new types of financial products and services. While recognizing the value of "passive" sustainable finance strategies, such as disclosure of climate-related financial risks and portfolio restructuring (by e.g., increasing investment in sustainable activities and divesting from unsustainable activities), actions should go beyond to include active interventions that result in actual emissions reductions in the real economy.
Disclosing	The process of formal reporting of [measurements and results], including the quality of data used to achieve them and verifications or lack thereof, according to predetermined formats and according to established standard.[11]

9 Science-Based Targets initiative, Science-Based Target Setting Manual v4.1, 2020.

10 Financial Stability Board Task Force on Climate-related Financial Disclosures, Recommendations of the Task Force on Climate-related Financial Disclosures, Appendix 5: Glossary and Abbreviations, 2017.

11 IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

Synergies within the Process of Paris Alignment

3. Synergies within the Process of Paris Alignment

Mapping of existing Initiatives, Methodologies and Tools

There is a rapidly growing number of global climate-related initiatives, methodologies and tools for the financial sector. Figure 3 and its accompanying table provide an overview of existing global, collaborative climate-related initiatives that enable financial institutions to align their portfolio with the Paris Agreement, mapped against the interactive technical elements in this Strategic Framework for Paris Alignment. The Appendix contains a full overview of global, collaborative climate-related methodologies and tools. These overviews illustrate the vast landscape of initiatives, methodologies and tools available for financial institutions to support their journey along the technical elements of Paris alignment.

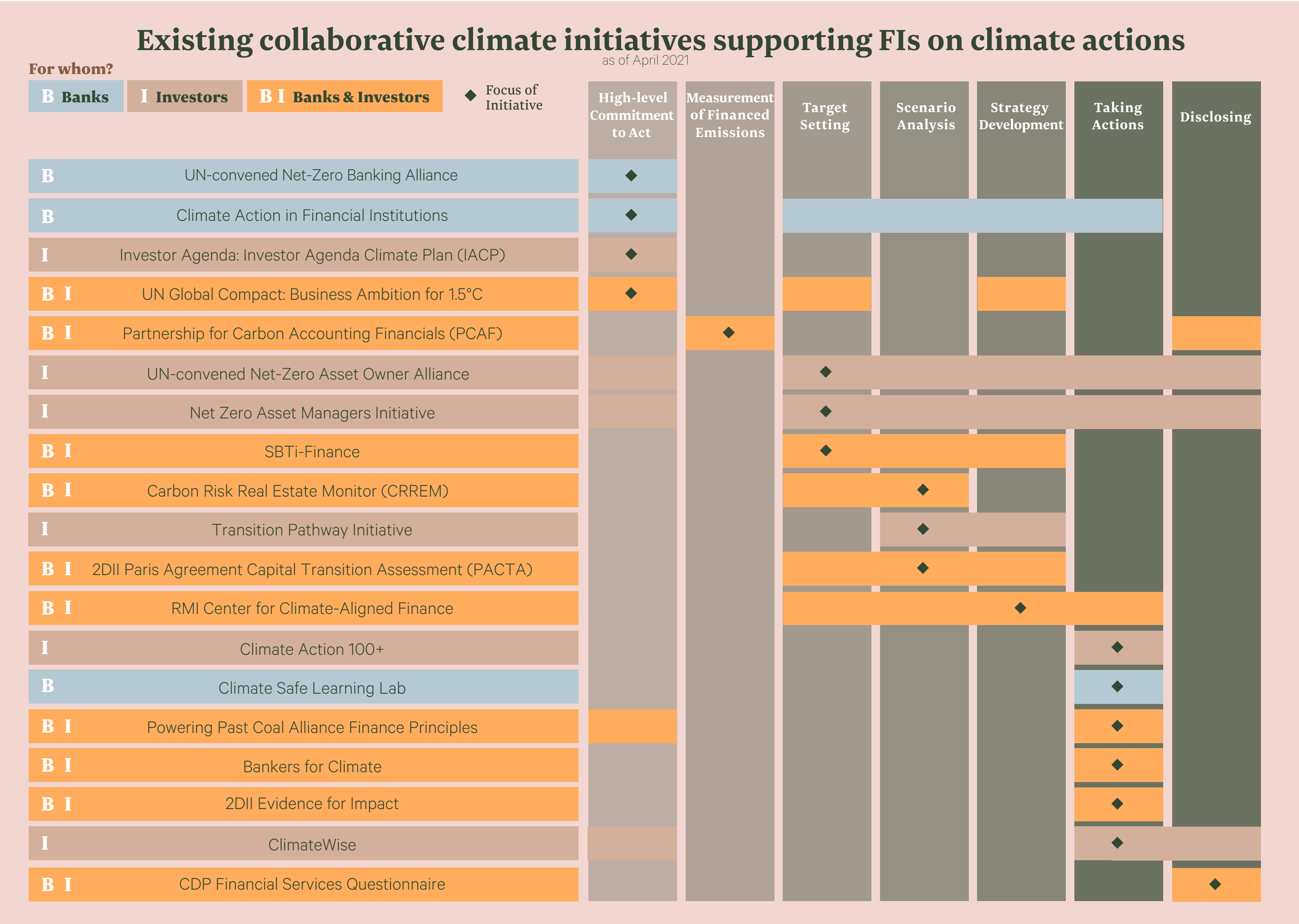


Figure 3. Cluster of climate initiatives

Overview of existing global, collaborative climate initiatives for financial institutions

B Banks **I** Investors

	Initiative	Coordinator	Classification	What it is about	Current status (last updated April 2021)
B	UN-convened Net-Zero Banking Alliance	UNEP FI PRB, co-launched by the Sustainable Markets Initiative Financial Services Taskforce	High-level Commitment to Act	An industry-led alliance committed to aligning lending and investment portfolios with net-zero emissions by 2050. Combining near-term action with accountability, this ambitious commitment sees banks setting an intermediate target for 2030 or sooner, using robust, science-based guidelines. Provides an internationally coherent framework and guidelines in which to operate, supported by peer-learning from pioneering banks.	43 signatory banks from 23 countries with US$28.5 trillion in assets have joined the Alliance.
B	Climate Action in Financial Institutions	Secretariat: The Institute for Climate Economics (I4CE)	**High-level Commitment to Act,** Target Setting, Scenario Analysis, Strategy Development, Taking Actions	A platform for financial institutions to implement the Five Voluntary Principles for Mainstreaming Climate Action, share best practices, and collaborate on innovative approaches.	52 institutions around the globe have joined the Initiative and endorsed the Five Voluntary Principles for Mainstreaming Climate Action.
I	Investor Agenda	UNEP FI, PRI	High-level Commitment to Act	An NGO-led initiative to provide investors a set of climate actions in investment, corporate engagement, investor disclosure, and policy advocacy with the aim of keeping global warming within 1.5°C.	Developed by 7 founding partners with nearly 1,200 investors managing over US$35 trillion in assets.
B I	UN Global Compact: Business Ambition for 1.5C	Secretariat: Caring for Climate	**High-level Commitment to Act**, Target Setting, Strategy Development	A campaign for large corporations to align ambitions with keeping warming to 1.5°C through either 1.5°C science-based emissions reduction targets or a net-zero commitment and interim science-based emissions reduction targets, or both.	494 signatories to the Business Ambition for 1.5°C commitment.
B I	Partnership for Carbon Accounting Financials (PCAF)	Secretariat: Guidehouse	**Measurement of financed emissions**, Disclosing	An open and industry-led collaboration to measure and disclose GHG emissions of loans and investments.*	110+ participating financial institutions with US$29+ trillion in total financial assets.
I	UN-convened Net-Zero Asset Owner Alliance	UNEP FI, PRI	High-level Commitment to Act, **Target Setting**, Scenario Analysis, Strategy Development, Taking Actions, Disclosing	A climate leadership group of institutional investors that has made a commitment to transitioning investment portfolios to net zero greenhouse gas emissions by 2050.	33 members representing US$5.1 trillion in AUM.
I	Net Zero Asset Managers Initiative	Asia Investor Group on Climate Change (AIGCC), CDP, Ceres, Investor Group on Climate Change (IGCC), IIGCC and UN PRI	High-level Commitment to Act, **Target Setting**, Scenario Analysis, Strategy Development, Taking Actions, Disclosing	An international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius; and to supporting investing aligned with net zero emissions by 2050 or sooner. Signatories can implement IIGCC's Net Zero Investment Framework to fulfill their commitments to the initiative.	73 signatories representing $32 trillion in assets under management.
B I	Science Based Targets for Financial Institutions	WRI, WWF, CDP, UN Global Compact	**Target Setting**, Scenario Analysis, Strategy Development	A project launched under the SBTi framework to help financial institutions align their lending and investment portfolios with the ambition of the Paris Agreement.	More than 55 financial institutions have publicly committed to set targets through the SBTi.
B I	Carbon Risk Real Estate Monitor (CRREM)	IIÖ Institute for Real Estate Economics, University of Alicante, Ulster University, GRESB and Tilburg University's TIAS Business School	Target Setting, **Scenario Analysis**,	A research and innovation project that defines science-based decarbonization pathways for the commercial and residential real estate sectors in order to manage transition risks and align with Paris targets.	CRREM's scope now covers the majority of global real estate markets, and residential as well as commercial real estate. These pathways are finalized and publicly available.
I	Transition Pathway Initiative (TPI)	Grantham Research Institute, LSE, FTSE Russell	**Scenario Analysis**, Strategy Development	A global, asset-owner led initiative that assesses companies' preparedness for the transition to a low carbon economy, based on publicly available information: management quality and carbon performance.	The TPI is supported globally by over 100 investors with more than US$25 trillion in combined AUM.
B I	Paris Agreement Capital Transition Assessment (PACTA)	2 Degrees Investing Initiative	Target Setting, **Scenario Analysis**, Strategy Development	A framework to measure alignment of financial markets with climate goals and scenarios with a 5-year time horizon. A target setting tool will be developed and added to PACTA with the reference from InvECAT.	Over 1,500 financial institutions with more than US$106 trillion in total AUM have used the methodology.
B I	Center for Climate-Aligned Finance	RMI	Target Setting, Scenario Analysis, **Strategy Development,** Taking Actions	An independent Center helping financial institutions overcome barriers to climate alignment by supporting institutions at the firm level, engage in collective action for decarbonizing sectors, and shape their operating environment at the system level.	RMI launched the Center in July 2020. 7 North American investment banks and financial service companies are founding and strategic partners.
I	Climate Action 100+	PRI, IIGCC, Ceres, AIGCC	Taking Actions	An investor initiative to ensure the world's largest corporate GHG emitters take necessary action on climate change. Signatories commit to engaging with focus companies strategically important to the net-zero emissions transition and seek commitments on the initiative's key asks.	575 global investors with more than US$54 trillion in AUM across 33 markets are signatories to the initiative, engaging with 167 companies estimated to cover 80%+ of global industrial emissions.
B	Climate Safe Learning Lab	Climate Safe Lending Network	Taking Actions	A confidential peer-learning space for banking professionals to explore the organisational barriers and enablers to implementing climate finance strategies.	Supported and advised by an international group of climate finance practitioners and sustainable innovation experts.
B I	Powering Past Coal Alliance Finance Principles	Powering Past Coal Alliance	High-level Commitment to Act, **Taking Actions**	A set of principles to which financial institutions commit when joining the Powering Past Coal Alliance. The principles represent a clear and comprehensive statement of how to fully align coal power-related financial services and investments with the goals of the Paris Agreement.	16 signatories.
B I	Bankers for Climate	Bankers for Climate	High-level Commitment to Act, **Taking Actions**	A climate change movement for employees in the global financial industry with the purpose of driving change from within the industry and uniting bankers for a good cause.	Current membership of 66.4 million professionals in the financial industry.
B I	Evidence for Impact	2 Degrees Investing Initiative	Taking Actions	A Working Group launched in March 2020 to develop and test new methodologies for impact and target setting.	Collaboration of 2DII with 30 financial institutions and 10 NGOs and academic institutions.
I	ClimateWise	University of Cambridge Institute for Sustainability Leadership	High-level Commitment to Act, **Taking Actions,** Disclosing	A network of insurance industry organisations committed to responding to climate change's risks and opportunities. Members integrate the ClimateWise Principles across their business activities and participate in research projects to explore the net-zero emissions transition.	30+ members worldwide.
B I	CDP Financial Services Sector Disclosures	CDP	Disclosing	A not-for-profit charity running the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. In 2020, CDP launched its questionnaire focusing on financial institutions.	Responding to over 590 investor signatories with more than US$110 trillion of assets, in 2020 over 9,600 companies with 50% of global market capitalization disclosed environmental data through CDP, including 332 financial institutions.

* 33 banks have committed to PCAF through the Climate Change Commitment (3C initiative) of the Global Alliance for Banking on Values

Other resources to support FI climate actions

For more solutions and guidance throughout their climate journey beyond these initiatives, financial institutions may also refer to several resources available such as standards and frameworks, projects and tools, and upcoming policies and regulations.

Standards and frameworks

Various standards and frameworks support FIs to report on climate actions. Acting on the need for more harmonisation, major reporting standards and frameworks including CDP, Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC) and Sustainability Accounting Standards Board (SASB) have jointly released a statement of intent to work together towards comprehensive corporate reporting.[12] Of these, IIRC and SASB have announced plans to merge in 2021 to form the Value Reporting Foundation,[13] with CDSB signalling interest in joining. Regarding the measurement of emissions, all signatories of this joint statement refer to the Greenhouse Gas Protocol, on which PCAF's Global GHG Accounting and Reporting Standard for the Financial Industry is built.

Acknowledging the urgent need to improve the consistency and comparability in sustainability reporting and calling for a set of comparable and consistent standards, the IFRS Foundation in September 2020 published its Consultation Paper on Sustainability Reporting. Feedback to this consultation indicated an urgent need for global sustainability standards and strong support for the IFRS Foundation to play a role in their development. In response, the IFRS Foundation Trustees announced in March 2021 the formation of a working group dedicated to the technical preparation for a potential international sustainability reporting standards board.[14]

Finally, the ISO 14097 standard currently under development aims to provide a framework for assessing the impact of financiers' actions.

Projects and tools

Many projects and tools provide data and analytical capability to support FIs on their climate journey to Paris alignment. For example, the Transition Pathway Initiative and Investor Energy-Climate Action Toolkit (InvECAT) help FIs to perform scenario analysis, set targets and monitor climate actions taken by non-state actors. Other platforms such as OS-Climate and SENSES Project provide analytics and visualisation for climate scenario analysis.

An increased interest in using implied temperature rise (ITR) metrics to express alignment with the Paris Agreement has given rise to several methods and tools based on this principle and even a TCFD consultation on whether to include it as a forward-looking metric.[15] ITR metrics attempt to estimate a global temperature rise associated with the climate impact of individual entities or portfolios. The result is expressed as a numeric degree representing the projected increase in global average temperatures above preindustrial levels.

12 CDP, CDSB, GRI, IIRC & SASB; Statement of Intent to Work Together Towards Comprehensive Corporate Reporting, 2020.

13 Integrated Reporting, "IIRC and SASB announce intent to merge in major step towards simplifying the corporate reporting system", 2020.

14 IFRS, IFRS Foundation Trustees announce working group to accelerate convergence in global sustainability reporting standards focused on enterprise value, 2021

15 Task Force on Climate-related Financial Disclosures, Forward-Looking Financial Sector Metrics Consultation, 2020

Recent publications by the Institut Lous Bachelier[16] and the Portfolio Alignment Team[17] reviewed ITR methods and tools, concluding that ITR methods and tools are still in their infancy and come with limitations due to their complexity. Challenges in comparability of ITR ratings results also remain due to the large set of varied methods and tools developed by market actors. The relative immaturity of ITR methods means that they should be used as part of a larger forward-looking strategy and not in isolation.[18] Standardization of climate scenarios used and the pathways on which these are based would vastly increase the value added of this metric. The Annex provides a full overview of global projects, methodologies and tools across asset classes.

Risk management

Key players in the global financial system are beginning to understand that climate change poses a material risk to financial stability. Physical risks arising from changing climate patterns could result in consequences such as direct damage from extreme weather events and devaluation of assets in high-risk locations. Transition risks arising from market or technology developments or policy and legal regulations, such as carbon prices, could vastly and suddenly decrease companies' profit and value.

Importantly, understanding and acting on climate risk is directly linked to aligning with the Paris Agreement. A financial institution that understands where its risks lie in its portfolio can act on that information to mitigate these risks by steering financial flows towards low-risk and low-emission investments.

The creation of the Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures (TCFD) made managing climate-related risk a fundamental element of an FI's climate journey. In its latest report (2020),[19] the FSB highlights the progress at the international level to establish voluntary frameworks for disclosure of climate-related risks and the possible contribution to global financial stability. Support for TCFD's risk disclosure framework has spread around the world, with pathways for mandatory disclosure soon entering into force in New Zealand,[20] the UK,[21] and Hong Kong.[22] In Japan, companies of all types have signed up to the TCFD recommendations at a faster rate than those in any other country, and Tokyo hosted the first ever TCFD Summit in 2019.[23]

A range of climate-related methods and metrics are available to financial institutions on the topic of transition and physical risks,[24] including Moody's Investors Service, MSCI's Carbon Delta, Four Twenty Seven, S&P Global/Trucost, Sustainalytics, Oliver Wyman, CLIMAFIN and Ortec Finance. A full overview of current climate-related financial risk assessment methodologies is available in a report by UNEP-FI, published in April 2021.[25]

16 Institut Lous Bachelier et. al (2020). The Alignment Cookbook: A Technical Review of Methodologies Assessing a Portfolio's Alignment with Low-Carbon Trajectories or a Temperature Goal

17 Portfolio Alignment Team, Measuring Portfolio Alignment: Assessing the position of companies and portfolios on the path to net zero, 2020

18 Ibid

19 Financial Stability Board, "The Implications of Climate Change for Financial Stability", 2020.

20 New Zealand Ministry for the Environment, "Mandatory climate-related financial disclosures", 2021.

21 HM Treasury, UK joint regulator and government TCFD Taskforce: Interim Report and Roadmap, 2020.

22 Hong Kong Monetary Authority, "Cross-Agency Steering Group Launches its Strategic Plan to Strengthen Hong Kong's Financial Ecosystem to Support a Greener and More Sustainable Future", 2020.

23 Grantham Research Institute on Climate Change and the Environment, The London School of Economics and Political Science, "Why Japan is leading the TCFD wave", Commentary, 2020.

24 Center of Economic Research at ETH Zurich, "Taming the Green Swan: How to improve climate-related financial risk assessments", 2020.

25 UNEP-FI, "The Climate Risk Landscape: Mapping Climate-related Financial Risk Assessment Methodologies", 2021.

Policies and regulations

In the wake of COVID-19, momentum is growing among national governments to reinvigorate economies through a green recovery, such as through the European Green Deal , the US's American Jobs Plan[26] and China's goal to reach net-zero emissions in 2060.[27] In addition to showing support towards a green recovery for the post-COVID-19 global economy, in late 2020 Japan and South Korea also pledged to reach net-zero carbon emissions by 2050,[28] shortly after China's announcement of its net-zero goal.

Financial institutions have a role to play to finance this economic recovery while ensuring adherence to Paris alignment. Although many of the policies and measures to achieve these green recovery and carbon neutrality goals are still under development, FIs should be conscious of the growing movement towards climate neutrality. In addition to countries, global financial centres are also working towards improving their climate and SDG alignment. Membership of the UN-convened Financial Centres for Sustainability (FC4S) has almost tripled in the last two years to 35 global centres managing more than 80% of the global equity market. Furthermore, financial centres are increasingly undergoing an evaluation to better understand their alignment with the Paris Agreement and the UN SDGs.

Policies on sustainable finance are developing globally. The EU Green Finance Agenda leads with its Action Plan on Sustainable Finance, the EU Taxonomy, the EU Green Bond Standard and the methodologies for EU climate benchmarks and benchmark ESG disclosures. Through the International Platform on Sustainable Finance (IPSF) these policies will be shared internationally and scaled up to mobilize private capital towards sustainable investments. Development of sustainable finance policies is also scaling up with strong momentum in Asia, where Chinese regulators are expected to implement mandatory ESG disclosures for listed companies and bond issuers in 2021.[29] In Japan, the Financial Services Agency, an integrated financial regulator, added climate change measures to its bank guidance policy and will request that companies disclose information related to climate change.[30] In addition, the U.S. Securities and Exchange Commission (SEC) has begun to seek public input on climate-related financial disclosures.[31]

Policymakers and regulators are also signalling their growing focus on resilience and thus climate risk disclosure for financial institutions. In the EU the European Banking Authority (EBA) is exploring the possibility of including sustainability risks in capital requirements for banks[32] and is proposing draft technical standards which would require banks to measure and disclose their financed emissions no later than June 2024.[33] In the United States, the Federal Reserve has formally identified climate change as a potential threat to the financial system[34] and in March 2021 announced the formation of a Financial Stability Climate Committee focused on financial stability risks.[35] Moreover, the UK

26 The White House, Fact Sheet: The American Jobs Plan, 2021

27 Ministry of Foreign Affairs of the People's Republic of China, Statement by H.E. Xi Jinping President of the People's Republic of China At the General Debate of the 75th Session of The United Nations General Assembly, 2020.

28 IISD, "Japan, Republic of Korea Pledge to Go Carbon Neutral by 2050", 2020.

29 World Economic Forum, "A green wave is poised to break over China", 2020.

30 Nikkei Asia, "Japan finance watchdog to oversee banks' climate change policies", 2021.

31 U.S. Securities and Exchange Commission, Public Input Welcomed on Climate Change Disclosures, 2021

32 European Banking Authority, "The EBA launches consultation to incorporate ESG risks into the governance, risk management and supervision of credit institutions and investment firms", 2020.

33 European Banking Authority, Consultation paper on draft ITS on Pillar 3 disclosures on ESG risks, 2021

34 Board of Governors of the Federal Reserve System, "Financial Stability Report", 2020.

35 U.S. Securities and Exchange Commission, Public Input Welcomed on Climate Change Disclosures, 2021

and China have joined forces with UN PRI (Principles for Responsible Investment) to establish a government-backed pilot on climate-related and environmental risk disclosure.[36] On a global level, supervisors and regulators request and provide guidance to stress test the financial sector on climate-related risks through the Network for Greening the Financial System (NGFS). As of March 19th, 2021, the NGFS consists of 89 regulatory members and 13 observers.

36 UN Principles for Responsible Investment, "UK-China pilot on climate and environmental risk disclosure: 2nd year progress report", 2020.

Glossary

The following terms are used in this publication.

Asset class	A group of financial instruments that have similar financial characteristics.[37]
Carbon intensity	The amount of emissions of carbon dioxide (CO_2) released per unit of another variable such as gross domestic product (GDP), output energy use or transport.[38]
Climate neutrality	Concept of a state in which human activities result in no net effect on the climate system. Achieving such a state would require balancing of residual emissions with emission removal as well as accounting for regional or local biogeophysical effects of human activities that, for example, affect local climate.[38] See also Net zero emissions.
Climate-related risk–Physical Risk	Climate-related risks associated with the potential negative physical impacts of climate change on an organization. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g., sea level rise).[39]
Climate-related risk – Transition Risk	Climate-related risks associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations.[39]
Decarbonization	The process by which countries, individuals, financial institutions or other entities achieve zero fossil carbon emissions. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.[38]
Financed emissions	Absolute greenhouse gas (GHG) emissions attributed to a financial institution's lending and investing activity, expressed in metric tonnes of CO_2 equivalent (tCO_2e).
Framework	In reporting, a set of principles and guidance detailing the coverage of topics and the way in which reported information is structured and prepared.
Greenhouse gas (GHG) emissions	The seven gases covered by the United Nations Framework Convention on Climate Change (UNFCCC)—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[37]
Initiative	A(n) (international) collaboration between financial institutions aimed at encouraging improved Paris alignment and which is open for new members to join; sustainable finance/ESG initiatives as those to which financial institutions could adhere.
Investment	The term investment is broadly defined as "putting money into activities or organizations with the expectation of making a profit." Most forms of investment involve some form of risk taking, such as investment in equities, debt, property, projects, and even fixed interest securities, which are subject to inflation risk, among other risks.[37]
Method	A set of pre-defined systematic approaches.

37 Science-Based Targets initiative, Financial Sector Science-Based Targets Guidance, Pilot Version, 2020

38 IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

39 Financial Stability Board Task Force on Climate-related Financial Disclosures, Recommendations of the Task Force on Climate-related Financial Disclosures, Appendix 5: Glossary and Abbreviations, 2017.

Net zero emissions	Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. Where multiple greenhouse gases are involved, the quantification of net zero emissions depends on the climate metric chosen to compare emissions of different gases (such as global warming potential, global temperature change potential, and others, as well as the chosen time horizon).[40]
Pathway	The temporal evolution of natural and/or human systems towards a future state. Pathway concepts range from sets of quantitative and qualitative scenarios or narratives of potential futures to solution-oriented decision-making processes to achieve desirable societal goals. Pathway approaches typically focus on biophysical, techno-economic, and/or socio-behavioural trajectories and involve various dynamics, goals and actors across different scales.[40]
Policies (for climate change mitigation and adaptation)	Policies are taken and/or mandated by a government – often in conjunction with business and industry within a single country, or collectively with other countries – to accelerate mitigation and adaptation measures. Examples of policies are support mechanisms for renewable energy supplies.[40]
Project	A specific, finite activity that produces an observable and measurable result under pre-set requirements, usually involving a limited number of participants; an individual or collaborative effort between established partners planned to contribute to an overall aim.
Resilience	The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation.[40]
Risk management	Refers to a set of processes that are carried out by an organization’s board and management to support the achievement of the organization’s objectives by addressing its risks and managing the combined potential impact of those risks.[41]
Science-based reduction targets	Targets adopted by financial institutions or companies to reduce GHG emissions are considered “science-based” if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement—to limit global warming to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C.[42]
Standard	A set of formalised guiding principles accepted by an authority and by general consent as a basis of comparison; an approved model; initiatives which have their own technical frameworks to define, identify, disclose, and report sustainable finance. (FC4S)
Tool	An IT product that provides data and analytical support.
Transition	The process of changing from one state or condition to another in a given period of time. Transition can be in individuals, firms, cities, regions and nations, and can be based on incremental or transformative change.[40]

40 IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

41 Financial Stability Board Task Force on Climate-related Financial Disclosures, Recommendations of the Task Force on Climate-related Financial Disclosures, Appendix 5: Glossary and Abbreviations, 2017.

42 Science-Based Targets initiative, Financial Sector Science-Based Targets Guidance, Pilot Version, 2020

Annex: Overview of methodologies and tools for Paris alignment for financial institutions

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Frameworks, Standards and Benchmarks

UN-convened Net-Zero Asset Owner Alliance (NZAOA)
UN-convened Net-Zero Asset Owner Alliance (NZAOA) Target Setting Protocol

Initiative/ Organisation Name	UN-convened Net-Zero Asset Owner Alliance (NZAOA)
Methodology	UN-convened Net-Zero Asset Owner Alliance (NZAOA) Target Setting Protocol
Coordinator	UNEP-FI and UNPRI, in collaboration with WWF and Global Optimism
Classification	Target Setting
Description	A holistic set of science-based approaches for financial institutions set GHG reduction portfolio targets necessary to stay within a 1.5°C temperature rise as well as utilize their financing and ownership to catalyze real economy change.
Tools attached	N/A
Scope	Global
Asset class	Listed equity, Corporate Bonds, and real estate (additional asset classes under development expected Q4 2021)
Sector	Energy including oil and gas, and coal, Transportation including shipping, aviation and road, steel and cement (additional sectors under development expected Q4 2021)
Metrics/data	GHG emissions, GHG emissions intensity
Current Status Last updated April 2021	35 Financial Institutions, 16 targets issued, US$5.6 trillion AUM

IIGCC Paris Aligned Investment Initiative (PAII)
Net Zero Investment Framework

Initiative/ Organisation Name	IIGCC Paris Aligned Investment Initiative (PAII)
Methodology	Net Zero Investment Framework
Coordinator	IIGCC, Ceres, Asia Investment Group on Climate Change, Investor Group on Climate Change
Classification	Target Setting
Description	Proposes key components of a net zero investment strategy, focusing on achieving two alignment objectives: Decarbonise investment portfolios in a way that is consistent with achieving global net zero GHG emissions by 2050, and increase investment in the range of 'climate solutions' needed to meet that goal.
Tools attached	N/A
Scope	Global
Asset class	Sovereign bonds, listed equity, corporate fixed income, & real estate
Sector	Cross-sectoral
Metrics/data	GHG emissions, GHG emissions intensity
Current Status Last updated April 2021	22 asset owners, with US$1.2 trillion in assets, have used publication of the Framework to commit to achieve net zero alignment by 2050 or sooner. 38 investors, managing US$8.5 trillion in assets – including both asset owners and asset managers – are already putting the Framework to practical use.

Partnership for Carbon Accounting Financials (PCAF)
Global GHG Accounting and Reporting Standard

Initiative/ Organisation Name	Partnership for Carbon Accounting Financials (PCAF)
Methodology	Global GHG Accounting and Reporting Standard
Coordinator	Guidehouse acts as the PCAF Secretariat
Classification	Measuring at Portfolio-level
Description	An open and industry-led collaboration to measure and disclose GHG emissions of loans and investments.
Tools attached	N/A
Scope	Global
Asset class	Listed equity and corporate bonds, business loans and unlisted equity, project finance, commercial real estate, mortgages and motor vehicle loans
Sector	Cross-sectoral
Metrics/data	GHG emissions (financed)
Current Status Last updated April 2021	110+ financial institutions joined worldwide. The Global GHG Accounting and Reporting Standard was launched in November 2020.

TEG Climate Transition Benchmarks and Paris-Aligned Benchmarks
EU CTB & EU PAB

Initiative/ Organisation Name	TEG Climate Transition Benchmarks and Paris-Aligned Benchmarks
Methodology	EU CTB & EU PAB
Coordinator	EU High-level group on Sustainable Finance
Classification	Target Setting
Description	A benchmark report that sets a list of criteria for newly-created climate benchmarks based on two levels of ambition: Climate-aligned and Paris-aligned benchmarks.
Tools attached	N/A
Scope	EU
Asset class	All asset classes, except interest-rate and currency benchmarks
Sector	Cross-sectoral
Metrics/data	GHG emissions, no forward-looking data
Current Status Last updated April 2021	On 3 December 2020, three delegated acts supplementing Regulation (EU) 2019/2089 of 27 November 2019 amending Regulation (EU) 2016/1011 (“Benchmark regulation”) as regards EU climate transition benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks were published in the EU Official Journal.

Implied Temperature Rating

Arabesque Sustainable Intelligence
S-Ray

Initiative/ Organisation Name	Arabesque Sustainable Intelligence
Methodology	S-Ray
Coordinator	The Arabesque Group
Classification	Measuring at Portfolio-level
Description	A quantitative data tool that analyses the sustainability performance of over 7,000 of the world's largest listed corporations using self-learning quantitative models and data scores.
Tools attached	S-Ray
Scope	Global
Asset class	Listed equity
Sector	Multi-sector: power, industry, transport, other
Metrics/data	GHG emissions intensity
Current Status Last updated April 2021	Arabesque S-Ray GmbH operates as a subsidiary of Arabesque Asset Management Holding Ltd.

Carbon 4 Finance
Carbon Impact Analytics

Initiative/ Organisation Name	Carbon 4 Finance
Methodology	Carbon Impact Analytics
Coordinator	Carbone 4
Classification	Measuring at Portfolio-level
Description	A methodology for assessing the full climate impact of portfolios through bottom-up measurement of GHG emissions directly and indirectly induced and saved.
Tools attached	N/A
Scope	Global
Asset class	Multi-asset investment portfolios (stocks, corporate and sovereign bonds)
Sector	Low stakes and High Stakes sectors: - Energy sectors i.e. electricity production - Suppliers of equipment with a low carbon potential i.e. transport, building, energy, industry & IT - Carbon intensive sectors i.e. heavy industry, forest & paper, agriculture & agribusiness
Metrics/data	GHG emissions
Current Status Last updated April 2021	HSBC Global Asset Management announced to collaborate with Carbon4 Finance to refine its analysis of the climate impact of issuers.

EcoAct
EcoAct ClimFIT Temperature

Initiative/ Organisation Name	EcoAct
Methodology	EcoAct ClimFIT Temperature
Coordinator	EcoAct
Classification	Measuring at Portfolio-level
Description	A methodology that measures the Implied Temperature Rise associated with declared company targets. EcoAct derives various alignment and Implied Temperature Rise metrics for companies and portfolios.
Tools attached	N/A
Scope	Global
Asset class	Listed equity, corporate bonds, commercial loans and notes (corporate level assessment)
Sector	GICS sectors: Energy, materials, industrials, consumer discretionary, consumer staples, healthcare, financials, information technology, communication services, utilities, real estate
Metrics/data	GHG emissions, Corporate reporting, IPCC scenario, EcoAct database
Current Status Last updated April 2021	EcoAct launched an open-source carbon calculation to overcome remote working emissions gap October 2020.

ISS ESG solutions
Climate Scenario Analysis for Investments

Initiative/ Organisation Name	ISS ESG solutions
Methodology	Climate Scenario Analysis for Investments
Coordinator	Institutional Shareholder Services (ISS)
Classification	Scenario analysis
Description	A methodology which offers a range of qualitative and quantitative approaches for investors to align their portfolios in accordance with the latest IEA WEO scenarios.
Tools attached	ISS Datadesk
Scope	Global
Asset class	Listed equity and corporate bonds; bespoke methodologies for other asset classes
Sector	Cross-sectoral (all IEA sectors)
Metrics/data	GHG emissions (Scope 1&2 and 3)
Current Status Last updated April 2021	Coverage includes 9,700 issuers of ESG corporate ratings, ESG fund ratings of 2,000 fund managers and 25,700 funds, and more.

MSCI Climate Data & Metrics
Warming Potentials Metrics

Initiative/ Organisation Name	MSCI Climate Data & Metrics
Methodology	Warming Potentials Metrics
Coordinator	MSCI
Classification	Measuring at Sector-level
Description	A metric which computes the contribution of a company's activities towards climate change. It delivers an exact temperature value that signifies which warming scenario the company's activities are currently aligned with.
Tools attached	Tools for climate portfolio analysis, climate change indexes and risk analytics.
Scope	Global
Asset class	Companies (equities), real-estate assets
Sector	Cross-sectoral
Metrics/data	GHG emissions, GHG emissions intensity
Current Status Last updated April 2021	Coverage includes more than 9,600 companies and emerging market equities.

Science-Based Targets initiative
Temperature Rating

Initiative/ Organisation Name	Science-Based Targets initiative
Methodology	Temperature Rating
Coordinator	CDP, WWF
Classification	Target Setting
Description	A project launched in 2018 to develop a framework for financial institutions to set targets for their investment and lending portfolios.
Tools attached	N/A
Scope	Global
Asset class	Corporate instruments (listed and non-listed equities and corporate bonds)
Sector	All sectors (including heavy industry sectors such as cement & concrete, steel & iron, aluminium, power and transportation services)
Metrics/data	GHG emissions, forward-looking data based on targets
Current Status Last updated April 2021	1,346 companies are taking science-based climate action and 663 companies have approved science-based targets. 495 companies have committed to 1.5°C.

Trucost ESG Analysis
SDA-GEVA Model

Initiative/ Organisation Name	Trucost ESG Analysis
Methodology	SDA-GEVA Model
Coordinator	S&P Global/Trucost
Classification	Measuring at Portfolio-level
Description	An approach that measures portfolio alignment at investee company-level, based on their realized and future climate performance and how it compares to sector-specific decarbonization pathways (SDA) or to sector agnostic pathways (GEVA).
Tools attached	Eboard
Scope	Global
Asset class	Listed equity, corporate bonds and corporate loans
Sector	SDA: electric utilities; steel; aluminium; cement; automobile manufacturers; passenger transport operators; freight operators; oil & gas GEVA: All others (and classified by GICS sub-industry/industry group)
Metrics/data	GHG emissions, sub-industry historical trends in value-add
Current Status Last updated April 2021	The Eboard portfolio analytics tool is populated with validated and standardised environmental disclosures for over 13,000 companies.

Portfolio Measurement

Beyond Ratings
CLAIM

Initiative/ Organisation Name	Beyond Ratings
Methodology	CLAIM
Coordinator	Beyond-ratings
Classification	Measuring at Portfolio-level
Description	A methodology that determines the national GHG budgets compliant with any average temperature target and time horizon.
Tools attached	N/A
Scope	Global
Asset class	Sovereign bonds portfolio
Sector	Cross-sectoral
Metrics/data	GHG emissions
Current Status Last updated April 2021	Database & Research covers 175+ countries and 10,000+ stocks; €370 billion AUM assessed by Beyond Ratings.

Element6
Climate Risk Platform

Initiative/ Organisation Name	Element6
Methodology	Climate Risk Platform
Coordinator	Urgentem (previously Engaged Tracking)
Classification	Risk Management + Target Setting + Scenario Analysis
Description	A platform that provides a holistic vantage point on company emissions with portfolio and company level scenario analysis, forward-looking metrics, and an array of tools and analytics which integrate climate risk into forecasted investment projections.
Tools attached	Element 6 Climate Risk Platform
Scope	Global
Asset class	Listed equities, fixed income and sovereign bonds
Sector	Cross sectoral: Utilities, real estate, IT, industrials, healthcare, financials, consumer staples
Metrics/data	GHG emissions
Current Status Last updated April 2021	Urgentem's data and methodology were used in the European Central Bank's 2021 climate stress tests for banks and companies.

FMO Entrepreneurial Development Bank

FMO: Deriving a 1.5°C Pathway for a Financial Institution

Initiative/ Organisation Name	FMO Entrepreneurial Development Bank
Methodology	FMO: Deriving a 1.5°C Pathway for a Financial Institution
Coordinator	FMO
Classification	Measuring at Portfolio-level
Description	A methodology developed to assess a financial institution's alignment with 1.5°C. FMO seeks to not only assess its financed emissions (in absolute terms) but also to judge its performance against an externally set goal (i.e. Paris Agreement).
Tools attached	N/A
Scope	Global
Asset class	Homogeneous sectors (e.g. power generation, real estate, mortgage, production of agricultural commodities); listed equities, indirect investment via local financial institutions
Sector	Cross-sectoral
Metrics/data	GHG emissions; no forward-looking data as it is a method to derive a trajectory rather than measure alignment
Current Status Last updated April 2021	FMO became Signatory of the Global Principles for Responsible Banking in April 2021.

Global Impact Investing Network

IRIS+ System | Standards

Initiative/ Organisation Name	Global Impact Investing Network
Methodology	IRIS+ System | Standards
Coordinator	GIIN
Classification	Measuring at Portfolio-level
Description	An impact accounting system used by impact investors to measure, manage, and optimise their impact. Use of the IRIS+ system ensures a minimum level of consistency in a users' impact claims and performance.
Tools attached	IRIS Catalog of Metrics
Scope	Global
Asset class	N/A
Sector	Cross-sectoral
Metrics/data	IRIS core metrics sets and IRIS catalog of metrics
Current Status Last updated April 2021	Over 23,000 subscribers have registered to use the IRIS+ materials.

NEC Initiative
NEC Environmental Contribution metric

Initiative/ Organisation Name	NEC Initiative
Methodology	Net Environmental Contribution (NEC) metric
Coordinator	Sycomore AM, I Care & Consult and Quantis
Classification	Measuring at Portfolio-level
Description	NEC measures the extent to which a given business model is aligned with the energy and environmental transition. It does not measure the proximity between climate performance and a decarbonization pathway.
Tools attached	NEC Measurement Tool
Scope	Global
Asset class	Corporates
Sector	Cross-sectoral
Metrics/data	GHG emissions (bottom-up approach) wider than climate environmental performance covering 5 issues (climate, water, resources and waste, air quality and biodiversity)
Current Status Last updated April 2021	Currently seeking partners: all stakeholders operating in the financial sector or interacting with the financial sector can join.

Trucost ESG Analysis
Climate analytics: Carbon metrics, Natural capital metrics

Initiative/ Organisation Name	Trucost ESG Analysis
Methodology	Climate analytics: Carbon metrics, Natural capital metrics
Coordinator	S&P Global/Trucost
Classification	Measuring at Portfolio-level
Description	Provides the 'gold standard investment metrics' that FIs need to assess the risks and opportunities posed by climate change - helps FIs to align with the TCFD recommendations.
Tools attached	Eboard
Scope	Global
Asset class	Corporate lending, equities, fixed income, project finance, real-assets
Sector	Financial Institutions (Asset managers, Asset owners, Banks, Development Finance Institutions, Endowments and foundations, Insurance)
Metrics/data	Carbon metrics and natural capital metrics based on emission data and performance data on water use, pollution impact and waste disposal
Current Status Last updated April 2021	The Eboard portfolio analytics tool is populated with validated and standardised environmental disclosures for over 13,000 companies.

Sectoral Focus

2° Investing Initiative
Paris Agreement Capital Transition Assessment (PACTA)

Initiative/ Organisation Name	2° Investing Initiative
Methodology	Paris Agreement Capital Transition Assessment (PACTA)
Coordinator	2° Investing Initiative, UNPRI
Classification	Measuring at Sector-level
Description	A tool that aggregates global forward-looking asset-level data up to parent company level and then produces an output report, which allows investors to assess the overall alignment of their portfolios with the Paris Agreement.
Tools attached	PACTA for Investors Tool
Scope	Global
Asset class	Equities & corporate bonds
Sector	Sector exposure in scenarios: electric power, automobile, oil & gas, coal production and GHG intensity for cement, steel, shipping and aviation
Metrics/data	Global forward-looking asset-level data, GHG intensity for some sectors
Current Status Last updated April 2021	Over 1,500 FIs with more than US$106 trillion in total AUM have used the methodology.

2° Investing Initiative
Paris Agreement Capital Transition Assessment (PACTA) for Banks

Initiative/ Organisation Name	2° Investing Initiative
Methodology	Paris Agreement Capital Transition Assessment (PACTA) for Banks
Coordinator	2° Investing Initiative
Classification	Scenario analysis
Description	A free, open-source climate scenario analysis toolkit for corporate lending portfolios. It enables users to measure the alignment of their corporate lending portfolios with climate scenarios across key climate-relevant sectors and technologies.
Tools attached	PACTA for Banks Tool
Scope	Global
Asset class	Loans (including credit facilities) to listed and unlisted companies
Sector	Segment of the value chain in: oil & gas, coal, power, automotive, steel, cement, shipping and aviation
Metrics/data	Global forward-looking asset-level data, GHG intensity for some sectors
Current Status Last updated April 2021	Launched in September 2020 and has been road-tested by 17 leading global banks from Europe, North America & South America.

ACT Initiative
Assessing Low Carbon Transition

Initiative/ Organisation Name	ACT Initiative
Methodology	Assessing Low Carbon Transition
Coordinator	CDP, ADEME
Classification	Measuring at Sector-level
Description	An initiative developed to assess corporates' climate strategy of various size and activities in the face of the required low-carbon transition and associated sector-specific decarbonization trajectories.
Tools attached	N/A
Scope	Global
Asset class	Corporates
Sector	Electricity generation, retail, automobile manufacturing, transport, building and food. Underway to develop additional sectors (O&G, cement, transport, agriculture, agro-industry, steel, chemicals, glass and paper)
Metrics/data	GHG emissions, forward-looking data based on targets
Current Status Last updated April 2021	271 companies are engaged. Pilot test of methodologies underway.

Carbon Risk Real Estate Monitor (CRREM)
Stranding Risk & Carbon: Science-based decarbonising of the EU commercial real estate sector

Initiative/ Organisation Name	Carbon Risk Real Estate Monitor (CRREM)
Methodology	Stranding Risk & Carbon: Science-based decarbonising of the EU commercial real estate sector
Coordinator	CRREM
Classification	Risk management
Description	The CRREM tool helps to identify which properties will be at risk of stranding due to the expected increase in the stringent building codes, regulation, and carbon prices. It also enables an analysis of the effects of refurbishing single properties on the total carbon performance of a company.
Tools attached	EU CRREM Risk Assessment Tool
Scope	Global
Asset class	Mortgages, commercial real estate; Commercial asset classes include: Office, Retail, Warehouse, Hotel, Health, Lodges & Leisure, Data Centers, among others
Sector	Residential and commercial real estate
Metrics/data	GHG emissions, GHG emissions intensity
Current Status Last updated April 2021	The second phase of the CRREM project is an expansion of the initial CRREM tool and includes derived pathways and the corresponding carbon budgets on a global level. Further countries are included from North America and Asia for the residential and commercial real estate sector. CRREM's scope now covers the majority of global real estate markets, and residential as well as commercial real estate. These pathways are finalized and publicly available.

GRESB
The Global ESG Benchmark for Real Assets

Initiative/ Organisation Name	GRESB
Methodology	The Global ESG Benchmark for Real Assets
Coordinator	GRESB
Classification	Measuring at Portfolio-level
Description	Assessments that capture information regarding ESG performance of real assets, providing standardised and validated data to the capital markets.
Tools attached	Portfolio Analysis Tool; Data Exporter
Scope	Global
Asset class	Listed and non-listed real estate, Listed and non-listed infrastructure
Sector	Real estate and infrastructure
Metrics/data	ESG performance data
Current Status Last updated April 2021	2020 GRESB real estate benchmark covers more than 1,200 property companies, real estate investment trusts (REITs), funds, and developers. Coverage for infrastructure includes more than 540 infrastructure funds and assets. Combined, GRESB represents US $5.3 trillion in real asset value. More than 100 institutional and financial investors use GRESB data and benchmarks.

Poseidon Principles
Poseidon Principles

Initiative/ Organisation Name	Poseidon Principles
Methodology	Poseidon Principles
Coordinator	Poseidon Principles Association, supported by RMI
Classification	Measuring at Sector-level
Description	An assessment and disclosure framework for climate alignment for ship finance portfolios.
Tools attached	N/A
Scope	Global
Asset class	Any lenders, lessors, and financial guarantors with shipping portfolios
Sector	Shipping sector
Metrics/data	GHG emissions
Current Status Last updated April 2021	26 leading banks jointly representing approx. US$185 billion in shipping finance have come together to commit to the Poseidon Principles.

Science-Based Targets initiative
Sector Decarbonisation Approach (SDA)

Initiative/ Organisation Name	Science-Based Targets initiative
Methodology	Sector Decarbonisation Approach (SDA)
Coordinator	WRI, WWF, CDP, UN Global Compact
Classification	Target Setting
Description	A scientifically-informed method for companies to set GHG reduction targets necessary to stay within a 2°C temperature rise above preindustrial levels. The method is based on the 2°C scenario (IEA).
Tools attached	N/A
Scope	Global
Asset class	Mortgages, real estate, electricity generation project finance, corporate equity, bonds and loans
Sector	Buildings (services/commercial buildings); Transport (Aviation, Rail passenger, Heavy and Light road passenger transport); Industry (Cement, Aluminium, Iron and Steel, Pulp and paper and others); Electricity (power generation)
Metrics/data	Activities and sectors, activity levels, commitment period, annual activity growth rate, electricity use, GHG emissions
Current Status Last updated April 2021	1,346 companies are taking science-based climate action and 663 companies have approved science-based targets. 495 companies have committed to 1.5°C.

Transition Pathway Initiative
Transition Pathway Initiative

Initiative/ Organisation Name	Transition Pathway Initiative
Methodology	Transition Pathway Initiative
Coordinator	Grantham Research Institute, LSE, FTSE Russell
Classification	Measuring at Sector-level
Description	A global, asset-owner led initiative that assesses companies' preparedness for the transition to a low carbon economy. The initiative assesses companies on two dimensions: management quality and carbon performance.
Tools attached	TPI tool
Scope	Global
Asset class	Investors
Sector	Electricity utilities, oil & gas, aluminium, cement, paper, steel, airlines, autos, shipping
Metrics/data	GHG emissions, relevant value-chain scope and forward-looking data
Current Status Last updated April 2021	The TPI is supported globally by 100+ investors with more than US$25 trillion combined AUM.

PCAF

Partnership for
Carbon Accounting
Financials

Website:

carbonaccountingfinancials.com

E-mail:

info@carbonaccountingfinancials.com