

Alignment

EU Taxonomy

**THE
DISCLOSURE
PUZZLE:
The role of PACTA**

**Adverse
impacts**

Exposure

Risk


PACTA
Paris Agreement Capital
Transition Assessment

1 An increasing range of disclosure requirements

The financial sector is increasingly facing societal expectations and legal requirements on incorporating climate-related considerations into investment decisions. The first set of recommendations published by the Taskforce on Climate-related Financial Disclosures (TCFD) in 2017 were a pivotal moment in helping financial institutions act on climate-related financial risk. Since its publication, more than 1,700 companies, supervisors, ministries, and others have supported its uptake.

On 10 March 2021, EU financial institutions saw another milestone when Regulation 2019/2088, better known as the Sustainable Finance Disclosure Regulation (SFDR), enters into application. This Regulation lays down far-reaching disclosure requirements in terms of both adverse sustainability impact (the impact your investments have on, for example, the climate) and sustainability risks (the impact sustainability factors may have on your investments).

PACTA as an alignment metric and linked to a stress-test module can provide information on risks, alignment and impact considerations. At the same time, under the new EU Taxonomy Regulation, many financial institutions will be required as of 2022 to disclose whether and to what extent the financial products they offer invest into green climate-related economic activities. The delegated act that defines “green activities” will be finalized soon.

Financial institutions thus face a variety of climate-related requirements and expectations. Climate considerations will need to be integrated into the entire investment chain, and there is no one-size-fits-all solution nor a one-stop shop. Financial institutions will need to engage and work with a variety for metrics to begin to get a holistic picture. Each metric and tool can play a part and help solve pieces of the puzzle. This document gives a brief explanation of how the open source and free online tool PACTA (www.transitionmonitor.com) can help you meet some of the soft and hard law climate requirements for financial institutions.



The rise of climate law

A TIMELINE



2 What is PACTA?

PACTA stands for Paris Agreement Capital Transition Assessment and has been developed by 2 Degrees Investing Initiative in conjunction with a wide range of partners. It is an open source and free online tool that assesses the alignment of corporate bonds, loans, and listed equities with international climate objectives such as the Paris Agreement. The tool compares what needs to happen in sectoral climate transition pathways with financial actors' exposures to companies in these sectors. PACTA is able to compare the technology mix and 5-year production plans of underlying companies in the portfolio with the sectoral pathways (also known as technology roadmaps), allowing for a dynamic, scenario-based and forward-looking approach. The tool is extended by a stress-testing module which assesses the influence on assets' prices of various climate scenarios.

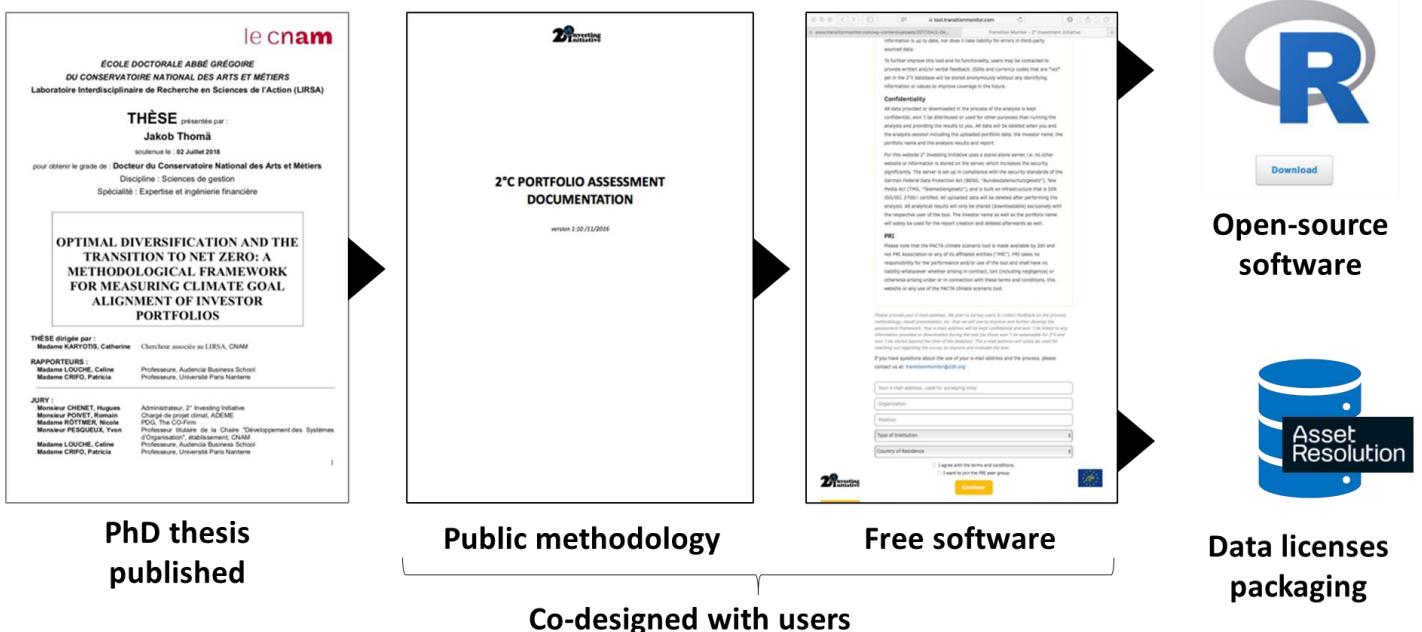
PACTA can measure the alignment of your investments into eight economic sectors with various climate change mitigation scenarios, including a Paris-aligned scenario. The climate-relevant sectors are power, coal mining, oil & gas upstream sectors, auto manufacturing, cement, steel, aviation and shipping. They collectively account for about ~75% of global greenhouse gas emissions.

The methodology measures the alignment per sector or per technology. The reason is that what needs to happen to meet the goals of Paris Agreement is different per sector. Some sectors need to move faster than others, and some sectors need to reform (power generation) while others need to phase out (fossil fuels).

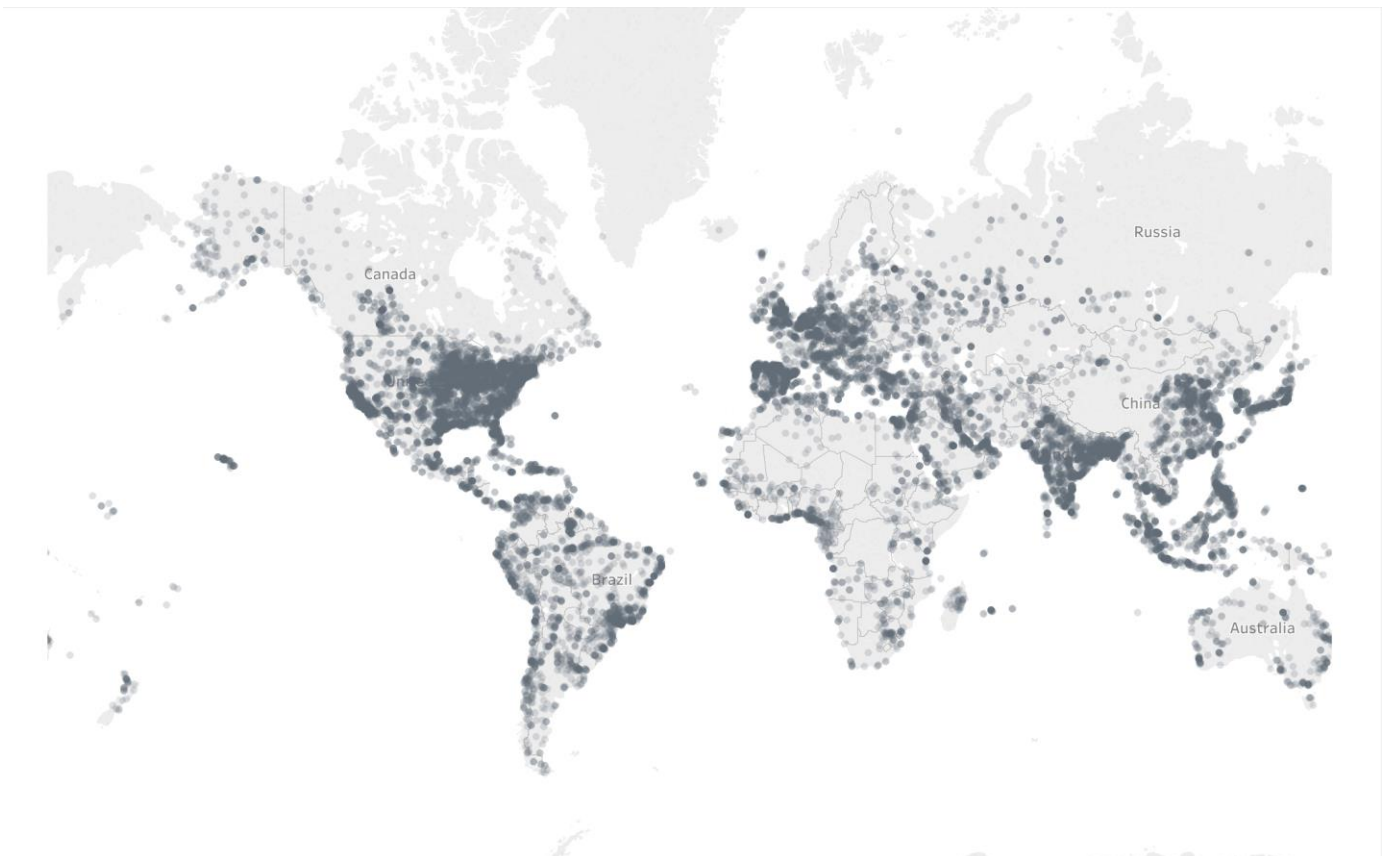
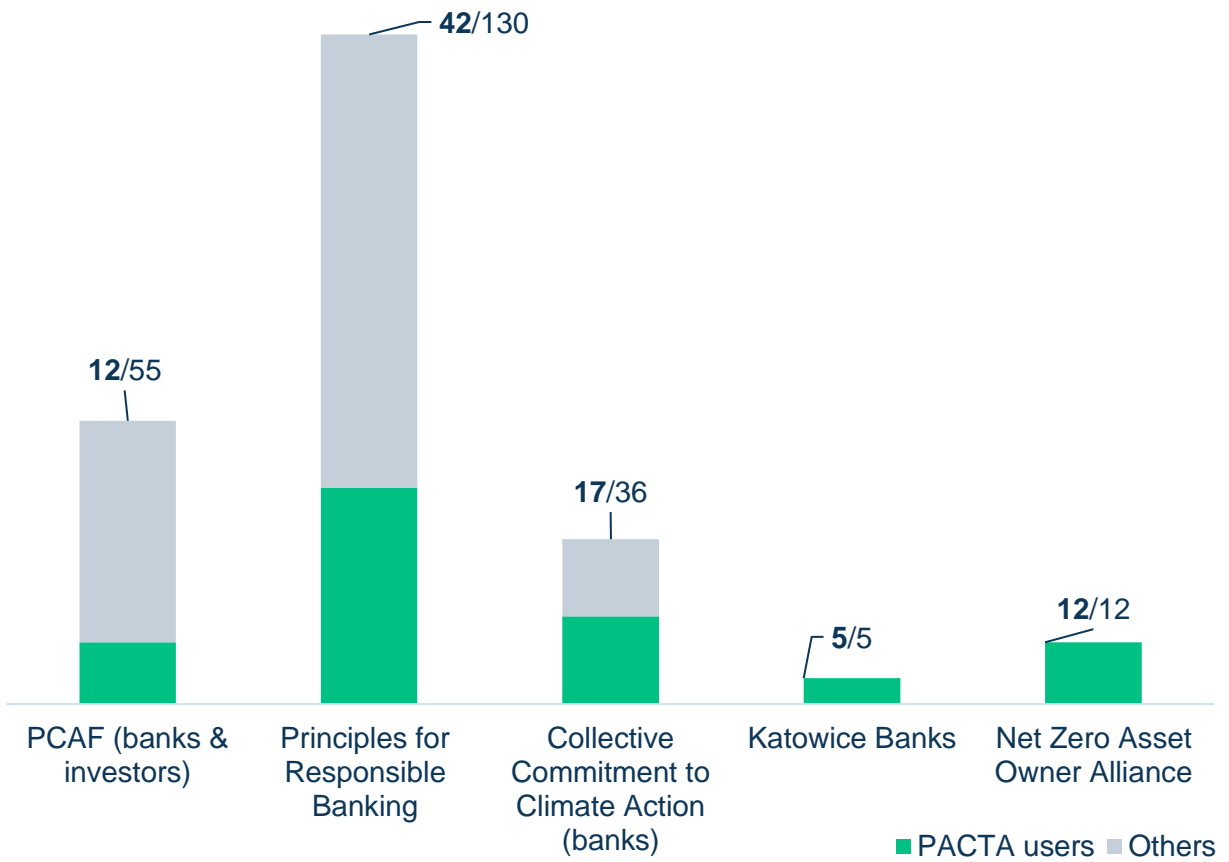
A critical feature of PACTA is its reliance on global physical asset-level data as the core analytical concept, providing for granular, regional, sector-specific, forward-looking production pathways that can be compared to scenarios.

From the perspective of both mandatory and soft climate disclosure, PACTA is unique in being entirely open-source and IP-rights free. Financial institutions can use and apply the PACTA methodology free of charge. Concretely, this means the following:

- 2DII has made the PACTA methodology publicly available including calculation rules;
- The software is publicly available online for corporate bonds, listed equity, and corporate loans portfolios.
- The software is linked to a dataset provided by Asset Resolution. PACTA can however be applied using other data sources.



Adoption of PACTA by signatories of climate-related pledges



2 Sustainable Finance Disclosure Regulation & PACTA

What are the requirements under the SFDR?

The SFDR aims at providing greater transparency on the degree of sustainability and sustainability risks of investment products and processes. It is aimed at non-banking financial institutions such as asset managers, asset owners (pension funds, insurers), investment firms, referred to as “financial markets participants” in the SFDR, and financial advisers (defined as intermediaries providing investment advice, including insurance advices).

First, the SFDR requires financial markets participants and financial advisers to disclose sustainability-related information at entity level. Financial markets participants must provide, on their website, information on their policies regarding

- the “identification and prioritisation of principal adverse sustainability impacts and indicators” (Article 4(2a));
- a description of such adverse impact (Article 4(2b)); and
- information regarding alignment with international climate objectives (Article 4(2d)).

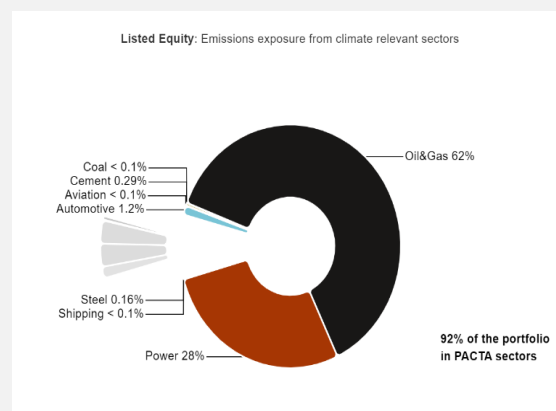
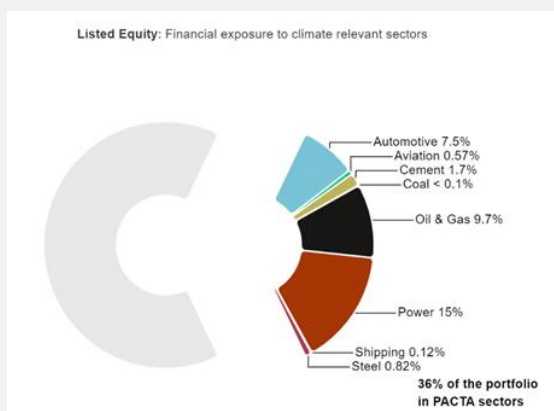
Second, the SFDR requires financial markets participants and financial advisers to disclose sustainability-related information at product level. Financial markets participants are required, as per article 7(1) of the SFDR to provide a “clear and reasoned explanation of whether, and, if so, how a financial product considers principal adverse impacts on sustainability factors” as well as information regarding adverse impacts on sustainability factors (article 7(1)). Periodic reports associated to financial products are required to include information regarding how promoted environmental characteristics are met (article 11(1a)). Article 9(2) and Article 9(3) of the SFDR require financial products which target sustainability or a reduction in carbon emissions to be associated with an explanation regarding how such objectives will be achieved.

Third, the SFDR requires financial market participants and financial advisers to be transparent about sustainability risks. They shall publish information on their websites about how they integrate sustainability risks in their investment decisions or advices (article 3). This information should also be included in pre-contractual disclosures (article 6).

SFDR - HOW CAN PACTA HELP?

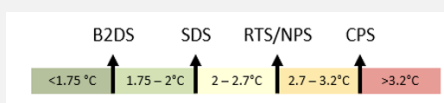
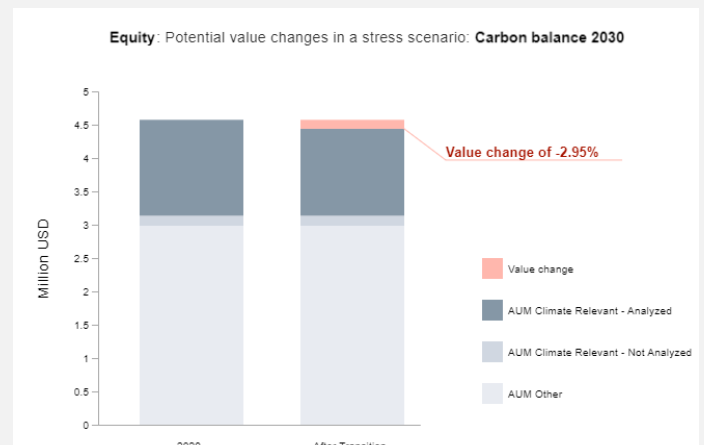
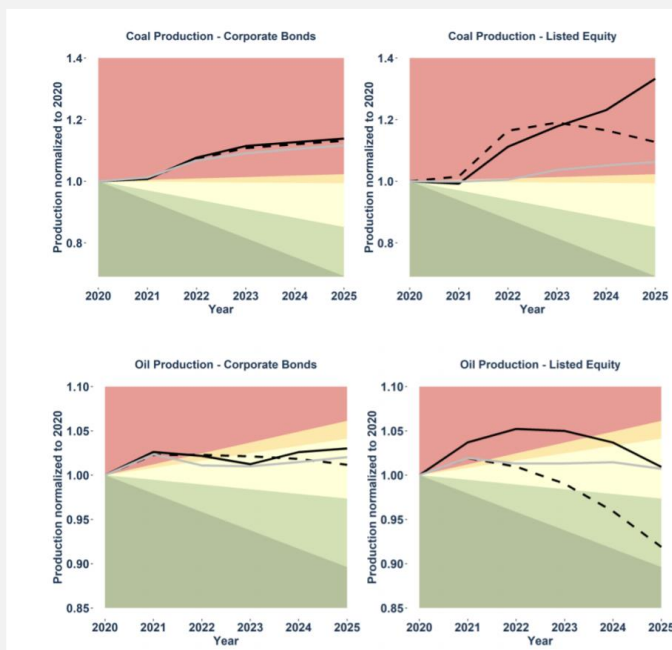
PACTA allows you to get a granular view of your exposures and alignments in 8 climate-critical sectors and can therefore help you both manage and be transparent about your adverse sustainability impact and sustainability risks.

Comparing the graphs below emphasizes the importance of the 8 sectors in terms of climate relevance. While making up 36% of a random portfolio’s value, they are responsible for the 92% the equity portfolio’s estimated CO2 emissions (*Note, numbers not to scale*).



SFDR - HOW CAN PACTA HELP? (cont.)

- PACTA provides alignment and temperature indications per sector or technology.** The analysis tells you how exposed you are to various polluting sectors, and whether you are increasing your exposure to polluting technologies in the coming 5 years - such as to coal and oil production - and whether you are therefore increasing your adverse sustainability impact. Similarly, the analysis informs you that if the companies you are exposed to, such as car manufacturers, are not aligned with the Paris Agreement, that these investments run heightened transition risks.
- The stress-test module allows financial institutions to disclose potential losses under a range of different scenarios.** It was developed as an additional feature within the PACTA software universe and integrating third party scenarios (notably the Inevitable Policy Response Scenario developed by Vivid Economics and Energy Transition Advisors, with the support of UN PRI, and the EIOPA climate scenarios).
- PACTA results can be used both on entity level and on product level,** as the analysis is done on the ISIN level. Moreover, PACTA can be used pro-actively to build funds that are aligned to the Paris Agreement as far as the investment in these 8 sectors go.
- PACTA does not provide for an overall portfolio temperature indicator directly.** After all, if a portfolio is aligned with the Paris Agreement in the power sector, but not in the automotive sector, how should one sum these up to an overall portfolio level result? While there is obviously a myriad of ways to “score” climate alignment, there are major challenges related to the interconnectedness and ‘offsetting’ across sectors, uncertainties surrounding data and assumptions, as well as the fact that some technologies and sectors necessary to reach certain temperature targets are not represented in this analysis. Therefore, our research concludes that currently the temperature alignment of a portfolio cannot be represented as a single indicator in a scientifically appropriate way. However, other organizations like InfluenceMap and Blackrock have developed scoring indicators using PACTA and financial institutions using PACTA can develop their own scores and indicators using a number of different approaches and techniques.
- PACTA complements the use of financed emissions data by relying on technology mix data and technology roadmaps associated to climate transition pathways using asset-level data.** Relying on production plans information, it allows to map the evolution of the alignment of a portfolio over a 5-year, forward-looking, period. The European Supervisory Agencies explicitly mention the need to take into account the limitations of existing metrics and require the “disclosure [to] be carried out on the basis of forward-looking scenarios.”



3 EU Green Taxonomy & PACTA

Under the EU Taxonomy Regulation, many financial institutions will be required as of 2022 to disclose whether and to what extent the financial products they offer invest into green climate-related economic activities.

There are four requirements to determine a green activity set out in the Regulation.

First, the economic activity must contribute substantially to one of the six environmental objectives as outlined in the Regulation.

Second, the activity must not do significant harm to any of these six objectives.

Third, the activity must comply with minimum social safeguards.

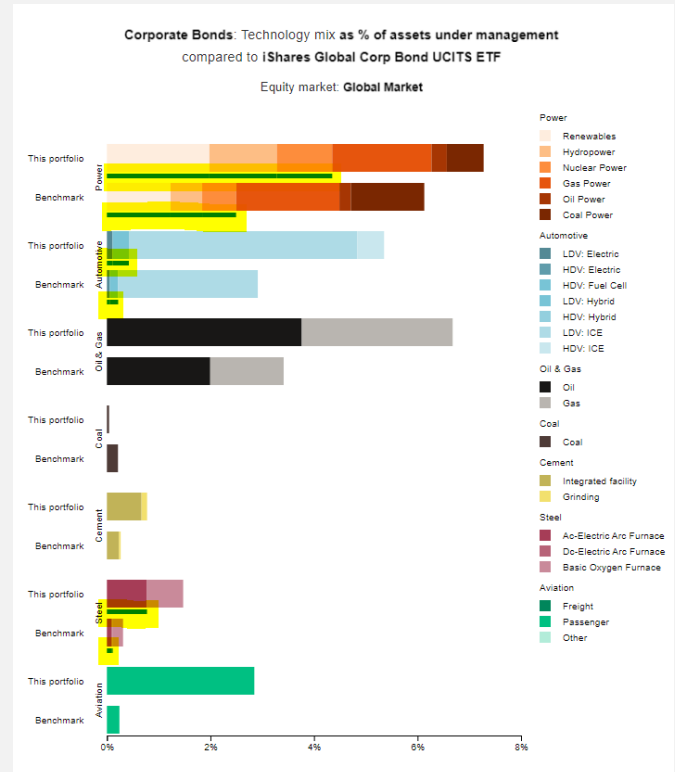
And fourth, the activity has to comply with technical screening criteria. This last part is needed to be able to actually determine when an economic activity is contributing substantially or not significantly harming the six environmental objectives.

Consider for example power generation: at what level of carbon emissions can power generation be considered to contribute substantially to climate change mitigation? A certain level of emission intensity will need to be set, and this is where the technical screening criteria come in. These will be determined in so-called delegated acts, based on input from the Technical Expert Group on Sustainable Finance and the Platform for Sustainable Finance.

The delegated act that outlines what these green activities are from a climate perspective will be finalized soon. Various of the TSC will be based on emission intensity, either per tonne of steel or cement, per MWh, or per passenger per kilometre.

EU TAXONOMY - HOW CAN PACTA HELP?

- PACTA can help you meet part of your disclosure obligations under the Taxonomy, as the online tool can measure/estimate the emission intensity for several of the sectors covered by PACTA, including power and automotive.
- The exposure indicators also provide for a “green share” metric for several key sectors covered by the EU taxonomy (see right, *note: These exposure indicators can also inform on risk issues related to SFDR, see above*). PACTA can thus help you determine whether parts of your portfolio are meeting the thresholds for substantial contribution. There are still limitations, however. The analysis is done on a portfolio level, and the databases do not have information on the “do no significant harm” requirements. Likewise, PACTA does not have information on social safeguards, nor does it cover all sectors. We are working with partners on developing a dedicated taxonomy module.



3 TCFD & PACTA

In 2017, the Task force on Climate-related Financial Disclosures (TCFD) has come up with a set of 11 recommendations classified in four categories. The figure below, extracted from the TCFD final report, provides an overview of these. The TCFD recommendations for climate-related financial disclosures of both financial and non-financial businesses have been largely supported and are now widely considered by financial supervisors and market actors.

Since January 1st, 2021, the UK Financial Conduct Authority has made the TCFD recommended disclosures mandatory for premium listed companies. Discussions about making TCFD recommendations mandatory are gaining momentum in other jurisdictions, notably Canada, New Zealand, and as part of the EU-level review of disclosure regulations.

Meanwhile, government roadmaps like the UK and EU net zero targets and recent TCFD initiatives under review make it clear that the TCFD is moving beyond a purely “risk-based” approach.

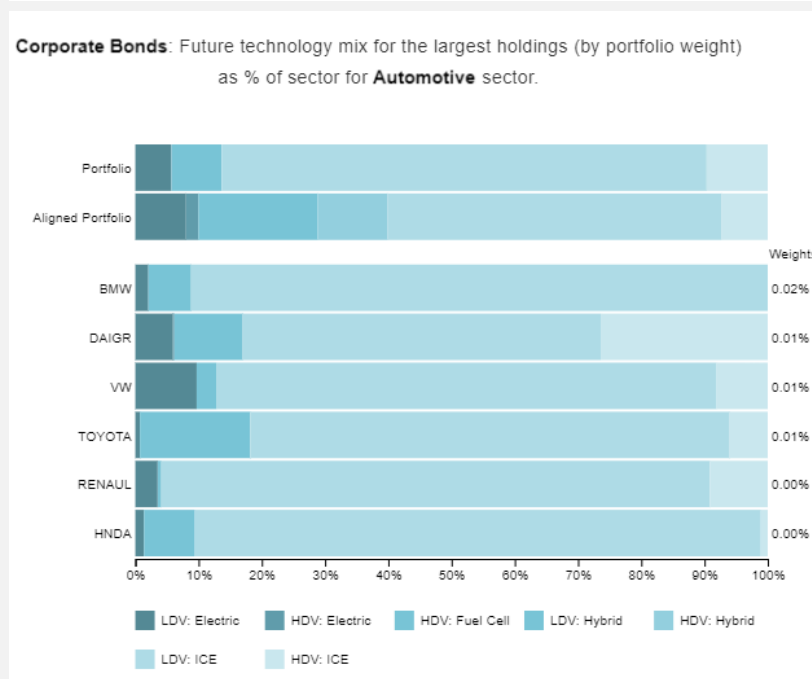
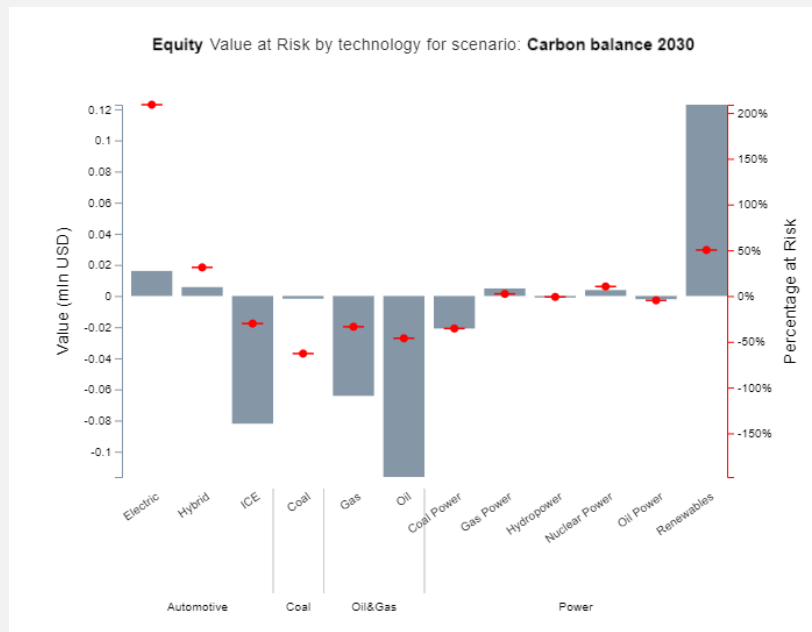
The TCFD recommendations are currently under review as part of a public consultation process that closed in January 2021. Thus, future guidance and frameworks may change as it relates to climate disclosure best practice. Two hotly contested issues relate to the potential use and rise of “Implied Temperature Warming” indicators i.e. indicators that use a single metric or score to determine what the alignment of a portfolio is with a specific temperature outcome, and the way forward for financed emissions and carbon footprinting methodologies. Here too, PACTA supports a forward-looking alignment and scenario-based approach.

The 11 recommendations, split into 4 categories, of the TCFD

Recommendations and Supporting Recommended Disclosures			
Governance	Strategy	Risk Management	Metrics and Targets
<p>Disclose the organization's governance around climate-related risks and opportunities.</p>	<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>	<p>Disclose how the organization identifies, assesses, and manages climate-related risks.</p>	<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>
Recommended Disclosures	Recommended Disclosures	Recommended Disclosures	Recommended Disclosures
<p>a) Describe the board's oversight of climate-related risks and opportunities.</p>	<p>a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</p>	<p>a) Describe the organization's processes for identifying and assessing climate-related risks.</p>	<p>a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</p>
<p>b) Describe management's role in assessing and managing climate-related risks and opportunities.</p>	<p>b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.</p>	<p>b) Describe the organization's processes for managing climate-related risks.</p>	<p>b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</p>
	<p>c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</p>	<p>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.</p>	<p>c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</p>

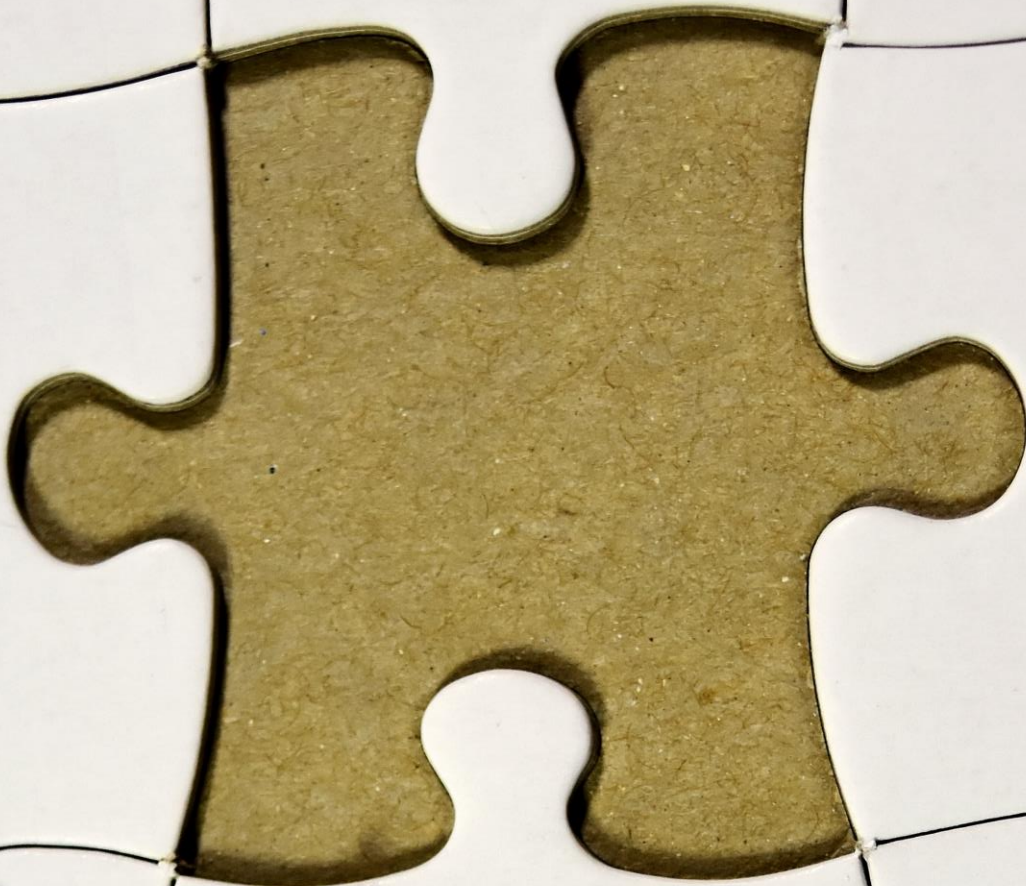
TCFD - HOW CAN PACTA HELP?

- PACTA can help to address recommendations in each of the four categories set forth by the TCFD.
- PACTA as a stand-alone methodology and software application be used to inform the **Strategy** requirements related to scenario analysis. This requirements are not precise in terms of the exact nature of the exercise, but could be linked either to an alignment exercise or the stress-test module provided together with PACTA.
- As part of the PACTA Coordinated Projects currently under way in a number of European countries, the PACTA infrastructure provides for a survey that covers a range of data points related to strategy, governance, and related issues. On **governance**, the survey covers issues related to engagement in initiatives and commitments;
- On **risk management**, the PACTA alignment and stress-testing can inform the description and design of risk management practices
- PACTA metrics can also be used as part of the **Metrics and Targets** section, providing for both alignment and impact metrics.





The 2° Investing Initiative (2DII) is a global, non-profit think tank working to align financial markets and regulations with the Paris Agreement goals. For questions, please contact transitionmonitor@2degrees-investing.org.



DISCLAIMER: "In 2025, 2° Investing Initiative became the Sustainable Finance Observatory (The Observatory). This research is the intellectual property of The Observatory."

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