

PACTA Aggregate Score - Analysis and methodology

The Swiss Climate Scorecards aim to establish transparency of best practices in the Paris alignment of financial investments to encourage investment decisions that contribute to achieving climate goals. An important component of this scorecard is the portfolio aggregate score, which aims to communicate externally on climate performance, as well as being a starting point for financial institutions and readers to stimulate questions at the sector and technology level.

To help financial institutions communicate their climate performance with a single score, RMI provided the PACTA Aggregate Score as part of the PACTA Climate Test 2022, in which all Swiss pension funds, insurance companies, banks, and asset managers were invited, through their associations, to voluntarily carry out a climate test on their portfolios.

The following **use cases have been identified for the PACTA Aggregate Score:**

- To enable Financial Institutions to communicate internally and externally about climate performance with a single metric.
- To help Investors understand potential priorities for improving portfolio performance and obtain insights into potential long-term transition risks.
- To help Supervisors understand the climate performance of Financial Institution's portfolios relative to their peers.

1. Scope

The aggregate score is based on the PACTA methodology and uses asset-based company-level data to analyze the alignment or misalignment of holdings in the power, fossil fuels, automotive, steel, and aviation sectors with decarbonization pathways.

2. Scenarios used

In order to measure alignment, portfolio results are compared to the changes in production, capacity or emissions intensities anticipated by the European Commission's Global Energy and Climate Outlook scenarios (GECO) 2021.¹ Three scenarios are used, representing a baseline for current policies (>3°C climate change), a minimum achievement of the Paris Agreement objectives (1.8°C climate change) and an ambitious net zero objective (1.5°C climate change), each with a 50% probability of stabilizing global temperatures to their target value by 2100:

- **Current Policy Scenario (CPS):**
This scenario models at the macro-economic level the effect of enacting current policies that have already been adopted up until 2019. If there are NDC targets at national level but no policies, then these are not considered. Macro-economic projections for GDP and population growth are combined with the modelled effects of policies on energy prices and technology development and deployment to then make projections for changes in energy systems and CO₂ emissions. The effects of the Covid-19 pandemic on the energy system are

¹ For more information about the scenarios, please refer to the PACTA for Investors Scenario Supporting Document, or to the website of the scenario provider [JRC, Global Energy and Climate Outlook \(2021\)](#)

factored into the modelling of growth and on the transport sector. The global temperature outcome of the scenario is not specifically stated in the scenario literature, but the charts indicate greater than 3°C.²

- **Nationally Determined Contributions – Long Term low GHG emission development Strategies (NDC-LTC):**

This scenario includes the country and NDC pledges updated at COP26. It is expecting an implied temperature rise of about 1.8°C by 2100. To achieve the target, additional policies need to be put in place, as current policies would stabilize emissions by 2035-2040. The power sector also plays an important role to achieve this scenario target, specially by the reduction of coal power generation. The NDCs cover around 50% of the ambition gap to 1.5°C in 2030.

- **1.5°C Unified (Unif):**

This scenario represents an economically efficient pathway to achieving 1.5°C. The scenario assumes low overshoot by 2050 (1.7°C) with global net-zero GHG emissions reached before 2070. It assumes application of a single global carbon price from 2021 onwards and relies on it as the main policy driver. The 1.5°C Unified scenario has a limited reliance on carbon capture and storage technologies and does not consider financial transfers between countries to implement mitigation measures. If all the targets are achieved as specified by the scenario there would be at least a 50% chance of limiting global temperature rise to 1.5°C by 2100.

3. Alignment assessments at a sector level

In order to make alignment assessments for each sector in scope, the planned production/capacity change per technology for the companies in each portfolio is compared to technological pathways to achieve climate goals contained within the GECO 2021 scenarios. Alignment comparisons are made to each of the three GECO scenarios. An alignment score is calculated and presented for each sector, with different approaches being used:

- For steel and cement, the deviation of emissions intensities from a scenario trajectory are calculated and aggregated for each company in the portfolio, with weighting based on each company's production.
- Oil, gas and coal sectoral alignments are each calculated separately.
- For those sectors where alignment is measured using production capacity metrics (power and automotive), the technology deviations against the scenarios are aggregated at a company and sector level. For these sectors, aggregation is made by applying two weighting factors to each technology alignment result by:
 1. the expected absolute change in the technology (i.e., the relative change in capacity per technology required of the portfolio) and
 2. the production of the scenario in t+5 (i.e., the relative importance of the technology to the portfolio).

² See Figure 3 on page 13 of Keramidias et al, *Global Energy and Climate Outlook 2021: Advancing towards climate neutrality*, EUR 30861 EN, Publications Office of the European Union, Luxembourg, 2021,

The calculation provides an aggregate score for sectoral alignment for each of the three scenarios, comparing the portfolio's sector production deviation with respect to each of the GECO 2021 Scenarios.

4. Score Aggregation at a portfolio level.

At a portfolio level, the sectoral alignment results for each scenario are then aggregated, with two weighting factors being applied:

1. The portfolio exposure to the analyzed sectors
2. The remaining carbon budget per sector until 2030 used by the GECO 2021 model.

The choice of the two weighting factors ensures that the results incorporate one factor that relates to the relevance of the sector for climate change and another reflecting the financial allocation choice made by the investor. An adjustment is made to the sector carbon budget weighting to account for double counting of the scope 3 CO₂ emissions associated with oil, gas and coal use.

5. Scores

The PACTA Aggregate Score is provided at the portfolio level for the sectors in scope and by type of financial asset (corporate bonds and equity). As a rule, the sector scores always accompany the aggregate score in order to provide more actionable information on sectoral performance. The score is provided in the form of a letter grading which can be interpreted as follows:

- **A+:** Ahead of the 1.5°C Unified scenario. (Portfolios exceeding the alignment level with respect to the 1.5°C Unified scenario by more than +15%)
- **A:** Aligned with 1.5°C Unified scenario. (Portfolios aligned with the 1.5°C scenario. Alignment level with respect to the 1.5°C don't exceed 15%)
- **B:** Ahead NDC-LTS Scenario 1.8°C, behind 1.5°C Unified scenario (Portfolios exceeding the alignment level with respect to the NDC-LTS Scenario by at least 15%)
- **C:** Aligned with the NDC-LTS Scenario (1.8°C), representing a minimum level of alignment with the objectives of the Paris Agreement to stabilize temperatures well below 2oC.
- **D:** Ahead Current Policies Scenario (>3°C), Behind the NDC-LTS Scenario (1.8°C), aligning with pathways assessed as contributing to dangerous levels of climate change.
- **E:** Behind Current Policies Scenario (>3°C), aligning with pathways assessed as contributing to a significant risk of dangerous levels of climate change.

Annex - Example of the PACTA aggregation methodology at a Sector level for the automotive sector

Assume that the production assigned to a portfolio according to the PACTA methodology³ is as follows for automotive manufacturing,

Total production in $t_0=100$ vehicles, distributed among the following technologies:

- 20 Electric Vehicles (EV)
- 80 Internal Combustion Engines (ICE)

Total planned production in $t_5= 100$ vehicles, distributed among the following technologies:

- 30 Electric Vehicles (EV)
- 70 Internal Combustion Engines (ICE)

Prescribed production by the scenario in $t_5= 100$ vehicles, distributed among the following technologies:

- 40 EV (using SMSP)
- 60 ICE (using TMSR)

Technology	Alignment deviations in t_5	Weighting factor 1: Portfolio t_5 scenario technology share	Weighting factor 2: technology share of portfolio target production change between t_0 and t_5	Aggregation steps
Electric Vehicles	$(30-40/40)$ = -25%	$40/100 =$ 40% of target production	$40 - 20 = 20$ units 50% of scenario change	$-0.25 * 0.40 * 0.50$ = -0.05
Internal Combustion Engines	$(60-70/60)$ = -17%	$60/100 =$ 60% of target production	$80 - 60 = 20$ units 50% of scenario change	$-0.17 * 0.60 * 0.50$ = -0.05
Aggregate Score at a sector level				$(-0.05 + -0.05)$ Divided by $(0.60 * 0.50) + (0.40 * 0.50)$ = -0.20 deviation

³ For detailed information about the PACTA for Investors methodology, please refer to the Methodology document, available at <https://www.transitionmonitor.com/pacta-for-investors/knowledge-hub-background-information/>