

PACTA Climate Test Switzerland 2024

Briefing for Participants (Equities Portfolios & Corporate Bonds, Real Estate & Mortgages and qualitative survey)

January - December 2024





RMI is an independent, non-partisan, nonprofit organization of experts across disciplines working to accelerate the clean energy transition and improve lives. Since its founding in 1982 by Amory Lovins, RMI's chairman emeritus, it has grown to over 600 staff working on four continents and has its headquarters in Basalt, Colorado. RMI decarbonizes energy systems through rapid, market-based change in the world's most critical geographies to align with a 1.5°C future and address the climate crisis. We work with businesses, policymakers, communities and other organizations to identify and scale energy system interventions that will cut greenhouse gas emissions at least 50% by 2030. Since June 2022, RMI has overseen the management and application of the open-source PACTA software from the independent Think Tank 2°Investing Initiative 2DII. Since then, the tool has been maintained and further developed within RMI's Climate Finance team.

Fahrländer Partner Raumentwicklung (FPRE) is an independent consulting and research company headquartered in Zurich with branches in Bern and Frankfurt am Main. FPRE provides a wide range of decision-making tools and services to real estate actors. These include applications for real estate analysis, consulting, market data and valuation. In addition, FPRE maintains its proximity to research through its teaching activities in training and further education and through research collaborations. FPRE has further developed the PACTA real estate model on behalf of the FOEN and supplemented it with the modules on "Scope 2 emissions" and "Scope 3 emissions from building materials".

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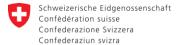
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Execu	utive Summary	
Ab	out this document	
	ow does the Climate Test 2024 in Switzerland work?	
Wł	hat is the PACTA-software ('Equity and Bond Module')?	
	hat is the Swiss 'Real Estate and Mortgage Module'?	
FA	.Q	9
1.	Climate Scenario Analysis	14
1.1.	Overview of metrics for scenario analysis	14
1.2.	Overview of inputs and coverage for scenario analysis	15
1.2	2.1. Coverage	15
1.2	2.2. Data Inputs	15
1.3.	Current Technology Mix Exposure	19
1.4.	5-Year Forward-Looking Alignment Trend	20
1.5.	Future technology mix	23
1.6.	Company-level results	22
1.7.	Swiss Real Estate and Mortgage Module	26
2.	Impact Analysis	29
2.1	. Overview of metrics for impact analysis	29
2.2	Climate action survey	29
3.	Technical & Administrative Advice	31
3.1	. Technical Advice	32
3	3.1.1. Formatting Data	
3	3.1.2. Data Upload – real estate and mortgage module	
3	3.1.3. Data Upload – equity and corporate bond module	34
3	3.1.4. Audit – equity and corporate bond module	35
3	3.1.5. Accessing your results	
3.2		
	3.2.1. Registration Process	
3	3.2.2. Non-disclosure Agreement (NDA)	40

Executive Summary

About this document

This note provides a technical briefing on the suite of the PACTA (Paris Agreement Capital Transition Assessment) Climate Test in Switzerland 2024, and how its modules & analytics can be applied by financial institutions. This file is addressed to financial institutions willing to participate in the Climate Test 2024 with their global listed equities and corporate bonds portfolios as well as their Swiss mortgages and real estate investments. The test will include a quantitative analysis of these asset classes but will also capture the climate relevant action of participants in all asset classes on a qualitative level with a survey.

The aggregated results from these PACTA Climate Tests are an important monitoring tool for financial institutions and public authorities in Switzerland on how far progress has been made towards the goal of the Paris Agreement to align financial flows in a climate-friendly way. This goal was set out as a priority area for action in the Federal Council's report "Sustainable Finance in Switzerland, areas for action for a leading sustainable financial centre 2022-2025". In addition, the Swiss population approved the Climate and Innovation Act in June 2023. This stipulates that the Swiss financial market should effectively contribute to achieving the climate goals. Switzerland rolls out this PACTA Climate test for the fourth time after 2022, 2020 and 2017. This monitoring framework allows the government, parliament, financial institutions, and the public to track progress of the financial markets' climate goal alignment.

This year's test will be applied again to all Swiss pension funds, insurances, banks, and asset managers on a voluntary basis. The Climate Test is a dedicated project initiated by the Federal Office for the Environment (FOEN) together with the State Secretariat for International Finance (SIF), in which RMI works together with Fahrländer Partner Raumentwicklung (FPRE) to support participating institutions with the application of PACTA. The PACTA Climate Test 2024 aims to contribute to this knowledge about the climate impact through financial market actors. Therefore, a comparable market coverage to the previous tests is intended. Further functions are included in the test especially in the area of real estate and mortgages. In addition, the survey is adapted to capture the extent on how the Swiss financial market already adapts the upcoming regulatory requirements and recommendations by the federal council and the associations.²

The Swiss Federal Council recommends that financial market players use comparable and meaningful climate compatibility indicators to help create transparency in all financial products and client portfolios (see also the <u>federal council's press release</u> of the 17.11.2021). PACTA compares the production plans of global companies and refurbishment plans of Swiss buildings included in the portfolios with a pathway that is needed to limit maximum warming to 1.5° Celsius. Participation in the Climate Test can therefore support the implementation of this recommendation.

This PACTA climate test consists of two quantitative modules and a qualitative survey: First, the alignment of participating institutions' investments in equity and corporate bonds with various climate scenarios in 8 different climate relevant real economy sectors will be measured: power, coal mining, oil, gas, auto manufacturing, cement,

¹ See Climate and financial markets (admin.ch) and www.bafu.admin.ch/pacta-climate-test

² Such as the <u>ordonnance on climate related disclosure requirements</u> incl. transition plans in line with the Swiss climate goals (Art. 3), the effective contribution requirement for the whole financial market to reach the Swiss climate goals (Art. 9 KlG), the recommendation of the federal council to use the new version of the <u>Swiss Climate Scores SCS</u>, on all financial products, the disclosure requirements and recommendations by <u>ASIP</u>, <u>AMAS</u>, <u>KGAST</u>, <u>SBA</u>, the <u>stewardship code of AMAS and SSF</u>.

steel, and aviation. This quantitative analysis is carried out with the **original PACTA 'equity and bond module'**, an open-source software developed and maintained by RMI which was originally created by the 2°Investing Initiative (2DII). As a second part of the Climate Test, the **'real estate and mortgage module'** analyzes the emission intensity of Swiss properties and compares it to climate targets to achieve 1.5°C. This module has been mandated by FOEN and developed by Wüest Partner AG and further developed by FPRE for the PACTA Climate Test 2024. The qualitative survey captures climate strategies and further climate-relevant activities of financial institutions across all their business activities.

The Climate Test 2024 in Switzerland is part of the PACTA Coordinated Projects (COP) which are run by RMI. PACTA COP is a dedicated program to help governments and supervisors with the application of PACTA to the portfolios of their regulated entities. The outcome can be used by governments, supervisors, and participating financial institutions to inform their climate strategies and actions. In addition to previous Switzerland assessments (2017, 2020, 2022), PACTA Coordinated Projects have been run in Austria, Liechtenstein, Luxembourg, Norway, Colombia and Peru.

This briefing is available in English, German and French. It and summarizes the project management components of the Climate Test 2024 in Switzerland, the PACTA methodology and how it can be used by financial institutions in practice.

How does the Climate Test 2024 in Switzerland work?

The goal of this Climate Test is to measure the alignment of both the entire financial sector and the individual participating institutions. The outcome can be used by the government or participating institutions to inform their climate strategies and actions. In particular, it can contribute to the fulfill the financial institution's reporting requirements e.g. according to the Climate Reporting Regulation (also called TCFD Regulation) or associations requirements. Also, indicators for the Swiss Climate Scores are determined for each equity and corporate bond portfolio using the PACTA methodology. In addition, more insights are provided concerning the Scope 1, 2 and partly Scope 3 emissions for real estate and mortgage portfolios. On the financial market level, the PACTA Test 2024 aims to gather evidence, on how the upcoming regulatory requirements and recommendations are already adapted by the market and what the main channels are to effectively contribute to reach the climate goals.

For the Climate Test, FOEN acts as host of this assessment and invites – together with the State Secretariat for International Finance (SIF) and supported by the associations – the relevant financial institutions, whose participation is voluntary. Participants then upload their portfolios a to a dedicated, secure, and confidential platform (<u>Transition Monitor Platform</u>, open for the Swiss coordinated PACTA climate test as of 01 March 2024), which in turn delivers individual climate alignment results with anonymized peer comparisons. A Finma-compliant data center² located in Switzerland is used to transmit the real estate and mortgage portfolios to FPRE. For mortgage portfolios a dedicated non-disclosure-agreement guarantees the confidential use of the data (see section 4.2.2.). The test contains two parts of interlinked analysis:

- Climate scenario analysis (chapter 1). The first building block of the PACTA tool is the climate scenario analysis. The analysis covers the equity and corporate portfolio's current exposure to climate-relevant sectors as well as an analysis of the alignment of the investment and production plans of the companies in the portfolio with global climate goals. Additionally, the alignment of real estate and mortgage portfolios with Swiss climate targets for the building sector is analyzed.
- Impact analysis (chapter 2). The second part is a qualitative survey of further climate actions by financial institutions. The objective of this qualitative analysis is to identify in addition to the quantitative analysis financial institutions' climate-relevant measures within all asset classes (beyond the asset classes analyzed in the quantitative part) or outside asset management strategy, e.g., Net zero transition plans for the entire financial institution. Both analyses are needed to help contextualize climate-relevant activities, find best practice as well as to inform the focus of future research with respect to the effectiveness of climate-relevant measures.

Results. The results of the analyses will be put into three different documents.

- On the one hand, a meta report will be created containing the results for the entire participating financial sector in English with an executive summary in German and French. FOEN publishes this report. However, the meta report does not contain any individual but only anonymized and aggregated information.
- In addition, one report per financial sector (pension funds, insurance companies, banks and asset managers) is produced with anonymised and aggregated data. These automatically generated sectoral reports correspond to the form of the individual test reports and are published in German and French by the FOEN.
- On the other hand, automatically generated, individual reports will be created for each participant available in German and French as well as in English (except of the real estate/mortgage chapter which will be provided in English and German). These individual reports consist of several parts: a detailed analysis per portfolio as a partial report for real estate and mortgage portfolios and as an interactive partial report for equity and corporate bonds, each with statements from the quantitative analysis as well as from the qualitative

² ref. https://www.exoscale.com/datacenters/switzerland/#ch-dk-2

questionnaire. There is also a static **executive summary** in which the most important results are presented at an aggregated level. These individual sub-reports are available for each portfolio submitted but can also be aggregated into a report for the entire financial institution. These individual reports also show peer comparisons and are confidential. The decision on the publication of individual results lies with the respective test participants.

THIS IS NEW:

Many participating institutions will already be experienced with the PACTA Climate Test and its methodology from the last three rounds in 2022, 2020 and 2017. Compared to the last climate test in Switzerland in 2022, the following changes should be highlighted to the participants in the Climate Test 2024:

Real estate and mortgage module:

- **Renewable heating systems:** Different types of renewable energy sources can now be recorded in more detail such as, efficient wood heating, heat pumps, etc.
- **Real consumption data:** If participants have consumption data at their disposal, they can be implemented in addition and be used for individual illustration.
- Scope 2 emissions: With a new add-on module, emissions from electricity consumption and district heating can now also be reported. If the electricity and district heating mix is known, it can be stated directly. Otherwise, a Swiss average mix is assumed.

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• Scope 3 emissions from building materials: Initial findings on Scope 3 emissions from the gray energy of buildings can now be reported. These are primarily generated during production, construction, renovation and demolition.

Qualitative survey: Valuable feedback from the associations and experts was used to adapt the qualitative survey. The priorities for 2024 are:

- Net zero targets and transition plans
- Transparency and reporting: implementation of existing and announced (self-) regulations and recommendations from the Federal Council and sectors
- Climate-relevant measures for mortgages, equity and corporate bond portfolios and in the primary market (restructuring plans for real estate portfolios are recorded via the quantitative real estate module)

Equity and corporate bond module:

- **Updated Scenarios:** For detailed information see the scenario table on page 21.
- **Individual reports** will be available for participants to download for 3 months.
- Possibility to obtain basic PACTA data: RMI is trying to find a solution to the existing licensing issues so that the PACTA technology data per company ("asset level data") on which the portfolio is based can be obtained after the analysis if there is interest for the analyzed portfolio (for a fee).
- The stress test module has been removed and will no longer be part of the climate test in 2024. Stress tests will continue to be carried out by 2 Degrees Investing Initiative Deutschland e.V. (2DII), please contact 2DII if you are interested in these.

What is the PACTA-software ('Equity and Bond Module')?

The PACTA software measures the alignment of corporate bonds and listed equity with climate scenarios, such as the Paris Agreement-conform 1.5°C pathway, for the following 8 climate-relevant sectors: power, coal mining, oil & gas, auto manufacturing, cement, steel, and aviation. Therefore, PACTA identifies the financial portfolio's exposure to high- and low-carbon technologies across the climate-relevant sectors. This assessment can be used to approximate the portfolio's relative exposure to the economic activities that are impacted by the transition to a low-carbon economy. Further, PACTA then compares the extent to which companies' current and planned assets, production profiles, investments, and GHG emissions are aligned with the benchmark-scenario. As an output, PACTA provides sector-specific, technology-focused insights into how current 5-year plans of companies allocated to the portfolio compare to the 1.5°C-pathway or other climate scenarios. *Figure 1* below summarizes the process.

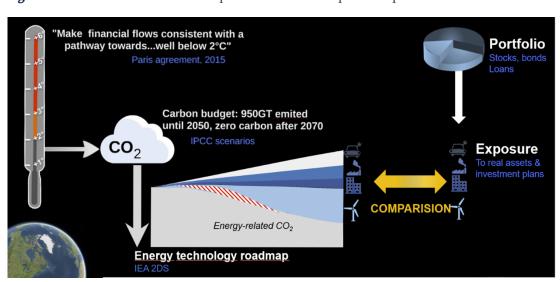


Figure 1: How PACTA works - A comparison between companies' exposure and climate scenario trajectories

What is the Swiss 'Real Estate and Mortgage Module'?

The Swiss Real Estate and Mortgage Module is an open-source software based on R that was conducted by FOEN and developed by Wüest Partner AG and further developed by FPRE for the PACTA Climate Test 2024. It allows financial institutions to measure the alignment of their Swiss mortgage and real estate portfolio with the climate target of the Swiss building sector to reach net-zero emissions in 2050. To take part in this analysis, you need to upload the location of the properties in your portfolio in form of the EGID (Swiss Federal Building Identifier) or an address. Other attributes like the heating system or square meters of the energy attribution area per building can either be filled in by the participants which have this data available or automatically be matched with the Swiss Building and Housing Register (GWR). Refurbishment plans can also be stated. The CO2-emissions of each property as well as of the whole portfolio is then estimated and compared with peers and the emission pathway of the Swiss building sector. For more information about the methodology, please refer to section 1.7.

FAQ

Q: Where can I find more information about the PACTA Climate Test 2024?

A: Further information on the project, including the briefing note, specific webinars and other project data, can be found on the FOEN website for the Swiss Climate Test 2024 www.bafu.admin.ch/pacta-climate-test or for the PACTA method for equities and corporate bonds at https://pacta.rmi.org.

Q: How much does it cost to participate?

A: Participation is free of charge. The further development of the open-source tool and the roll-out of the coordinated PACTA test in Switzerland are supported by FOEN.

Q: What asset classes and sectors are covered in the analysis?

A: The quantitative PACTA analysis covers global listed equity, and corporate bonds in the power, automotive, oil and gas, coal mining, aviation, cement, and steel sectors. In the Swiss case, also Swiss real estate and mortgages can be covered with a separate module (see section 1.7.). With a qualitative survey additional climate relevant action of participants also on further asset classes are captured.

Q: Why should I participate in the coordinated test instead of running the analysis on my own using the online tool and the R-Script for the real estate module?

A: Financial institutions can currently run the PACTA tool (resp. the equity and corporate bond module) at https://platform.transitionmonitor.com/. However, there are several benefits to participating in this coordinated climate test round, notably:

- Ability to compare results directly to your 'peers' in Switzerland and the entire industry in an anonymized manner
- Application of further technical updates and improvements of the PACTA modules before the public release, especially for real estate and mortgages.
- Contribution to evidence for policy makers on the climate progress of the Swiss financial market on a voluntary basis.
- Analysis, peer comparison and discussion of best-practice in climate impactful action (e.g. Climate goals, transition plans, impact channels, evidence of impactful action)
- Swiss Climate Score Indicators and results can support the achievement of reporting requirements.
- Assistance from analysts and different dedicated workshops.
- Additional to the individual, interactive reports including an executive summary, a meta report and sectoral
 reports will be provided. These can serve as a political basis for demonstrating progress in the various financial
 sectors.

Q: What is the timeline of the PACTA Climate test?

A: The test will take place in 2024 and will involve the following steps (for more information, please refer to section 4.):

Time	Steps				
From February	Information about the test, the data templates as well as the non-disclosure agreements are available on the <u>website</u> for the Swiss PACTA Climate Test 2024 in German, French and partly in English (see following sub-sections).				
March	Onboarding webinars. If you are interested in participation, please register via the PACTA Climate Test 2024 website: www.bafu.admin.ch/pacta-climate-test - 05. March 2024, 15-17h: PACTA climate test introduction (English) - 07. March 2024, 15-17h: PACTA Klima-Test Einführung (Deutsch)				
March – May	The webinars will be recorded (except Q&A sessions). RMI will provide a link. Registration, data upload, and filling in the survey (see following sub-sections) - Registration with a single e-mail address per institution on the Transition Monitor Platform with the Initiative Code PA2024CH as of 01 March 2024. - Optional signing sample NDAs (see chapter 3.2.2.) - Upload of data (see section 1.2. for data inputs) - Automated data validation and feedback - If necessary, upload of corrected data - Fill out survey				
June – September	Analysis of the portfolio data and preparation of the results (see section 1. & 2. for more information about methodology) by RMI and FPRE.				
October/November (expected)	Distribution of individual results; the Meta report and sectoral reports will be published. Individual Reports, consisting of the Interactive Report and an Executive Summary. Participants receive an automatically generated interactive test report of their results, including peer comparisons. Further, participants receive an automatically generated, static executive summary which summarize the test results for a broader audience. Each institution is free to decide about publication. Meta Report, country study with aggregated data (meta-study), which will be published by FOEN. Sectoral reports, automatically created sectoral reports, which contain the anonymized and aggregated data by financial sector (pension funds, insurances, banks, and asset managers). These sectoral reports will be published by FOEN.				

Q: If I want to participate, what are the next steps?

A: The following steps need to be taken to participate in the PACTA Climate Test 2024:

- Signing up for onboarding Webinars. here: www.bafu.admin.ch/pacta-climate-test
- **Information on the Webpage**: This website is the knowledge hub of the Swiss PACTA Climate Test 2024 where you can find various project-related information, such as:
 - o Invitation by FOEN and SIF
 - o Information about the PACTA Climate Test 2024 in general
 - o The templates for your portfolio data
- Registration for the PACTA Climate Test 2022. From 01 of March 2024 on you can register on the <u>Transition Monitor Platform</u>. Registration is necessary to take part in the climate test. The Initiative Code for the coordinated Swiss Project is PA2024CH.

- O You can only register with one e-mail address by institution. If several people within your organisation would like to upload files and fill out the survey, please coordinate this internally via this single e-mail address and log-in password you will receive.
- Participants who have already registered for the 2022 test or used the online PACTA tool can use
 the same account. The initiative can be added to existing accounts via the code PA2024CH starting
 on 01 of March 2024.
- o To ensure that the institute results reach you regardless of any changes in personnel, we recommend that you use as general an e-mail address as possible for registration.
- During the registration process, you need to indicate to which peer group you belong (insurance, pension fund, asset manager, bank). This information will be used for peer group comparisons in the Meta Report, but also in the Executive Summary and Interactive Report.
- NDA. From 1st of March 2024 you can find the pre-signed non-disclosure agreements (NDA) on the <u>Transition Monitor Platform</u>. A version for your internal review prior to March 1st can be accessed on <u>www.bafu.admin.ch/pacta-climate-test</u>. There will be two different NDA templates, one by RMI and FPRE, including FPRE's real estate analysis, also covering the qualitative survey, and a separate NDA for the mortgage analysis only with the dedicated personnel at FPRE for the project. Only the personnel will have access to the mortgage portfolio data. If you require an NDA, please fill out the highlighted sections in the templates and send the documents to RMI (pactacop@rmi.org) and FPRE (pacta2024@fpre.ch) respectively.
- Data preparation. As a third step, the portfolio data for the quantitative analysis needs to be prepared before upload. Therefore, you will find two templates, one for the equity and corporate bond module as well as one for the real estate and mortgage module on the PACTA Climate Test 2024 Website. Please use the templates to prepare your portfolio datasets accordingly before upload. For the data preparation, please make sure that the portfolio data are dated to the 31.12.2023.
- We ask you to upload your whole portfolios to gather a representative overview of the Swiss financial sectors climate alignment. This is also important from the point of view of FOEN, SIF and the associations.
- Data upload. Once the data have been prepared according to the templates, you can upload them **from 01st**March 2024 until 17th May 2024 on the <u>Transition Monitor Platform</u>. In order to achieve the most representative result, we ask you to upload all the investments you manage (cf. also question p. 16). As the PACTA Climate Test Switzerland 2024 is a voluntary exercise, it relies on self-reported data, and neither RMI nor FPRE have means to track the accuracy or details of the portfolio data. They can only be checked for plausibility by the information provided in the qualitative survey.
- Data audit. The data for the equity and bond module, will be audited automatically on the platform to see if the data frame consists of the correct structure. If not, the user will be notified. The real estate and mortgage data is transferred directly from FPRE to the one Swiss server in a Finma-compliant data center in Switzerland, such that RMI has no access to the financial data, only the dedicated personnel at FPRE. This data will be audited after the upload. Users will be notified if additional information is needed.
- **Survey.** Besides the quantitative analysis of your portfolio data, the aim of the climate test is also to acknowledge your efforts to achieve climate compatibility beyond the uploaded data. In addition, the survey helps to gain a comprehensive picture of the climate-impacting activities of Swiss financial institutions. Therefore, we ask you to fill out an online survey, also to plausibilize the data. You can view the full set of questions that will be asked in a pdf version on the <u>website</u> of the Swiss PACTA Climate Test 2024.
- Analysis and Results. After the portfolio data have been uploaded and the survey answered, RMI and FPRE will start analyzing the data and creating the output reports which will be released around October/November 2024. The participating institution will receive its individual, (interactive) results only via the personal log-in (alerted by e-mail). The reports will be available for download for 3 months.

Q: How will users be supported during the process?

A: RMI and FPRE commit to support users through different channels as far as the project financed by FOEN allows during the entire project. However, as RMI is an independent non-profit organization and not an investment advisor or consultancy, individual support of participants is important but has to be limited because of the resources available. The following resources will be offered:

- **Dedicated Website**: The dedicated website <u>PACTA Climate Test 2024 Website</u> is intended to work as a resource centre where participants can find all the information and files they need to partake in the project. The website will be hosted by FOEN, and will have all the documents needed i.e. participant briefing, NDA template, portfolio templates, introduction webinars.
- **FAQ section:** The answers to the most frequently asked questions in the course of a climate test can be found in this briefing note. Please consult it before considering the helpdesk offer.
- **Introduction webinars.** Details on registration can be found in the schedule and those on the content in the question below. You can find the agenda in the registration link for the webinars at www.bafu.admin.ch/pacta-climate-test.
- **Helpdesks.** RMI will offer helpdesks to participants who have specific targeted questions, either about the general process of the project (i.e., timeline, registration, etc.) or specifically about the equity and bond module (e.g., data upload, methodology, etc.). The helpdesks will work as one-on-one session between the participant and a PACTA analyst. Participants can book a slot (available in English, with the aim of providing German and French upon request.) A link to book a slot will be provided by RMI on 01.03.2024. Participants who have specific questions related to the real estate and mortgage module may pose their question directly to FPRE via email (pacta2024@fpre.ch).
- **Emails.** Apart from the option above, participants can also request user support via email. General questions and questions related to the equity and bond module, may be sent via email to RMI: pactacop@rmi.org. Questions of a technical nature should be addressed in a helpdesk session. Questions in regard to the real estate and mortgage module, may pose their questions directly to FPRE via email (pacta2024@fpre.ch).
- **Results workshops**. After the publication of the reports, workshops will be held for the test participants. The meta-results will be presented and the individual, interactive test reports will be explained. FOEN and RMI will inform the participants about the exact dates as soon as they are available.

Q: Which data to prepare and what to consider?

A: In order to achieve the most representative result possible, we ask you to consider all the investments you manage, both for the equity and bond module as well as for the reals estate and mortgage module. Besides the name, you can optionally specify various other properties of the portfolio. Specifically, you are asked to indicate per portfolio to which of the following categories it applies:

- The aim of this portfolio is:
 - Alignment with the Paris Agreement (Alignment)
 - Contribution to the mitigation of climate change (Impact)
 - None of the above
- This portfolio is subject to a net zero engagement strategy:
 - o Yes
 - o No

Please make sure that uploaded portfolios are of the effective date 31.12.2023.

The equity and bond portfolios should contain positions in a list of ISINs with corresponding market values and currencies. We will also evaluate funds according to all listed direct holdings within the fund. We kindly ask you to adhere to the form specifications of the portfolio templates for all portfolio data records submitted.

Q: Will my portfolio information be kept confidential?

A: All data provided or downloaded in the process of using the online tool is kept confidential and will not be distributed or used for purposes other than running the analysis and providing results, as well as anonymized use for meta-studies and peer comparison. RMI and FPRE will sign a non-disclosure-agreement with the participants to ensure confidentiality if required by the participant. For the mortgage data, the participants will sign a separate NDA with the analysts at FPRE. This NDA is only between the analysts and the participating party and not with FPRE as an entity. That way, even RMI and FPRE will only have access to the actual results from the analysis of the mortgage module, and not to the portfolio data themselves. For the PACTA online tool, RMI uses a stand-alone server, i.e., no other website or information is stored on the server, which increases the security significantly. The server is set up in compliance with the security standards of the German Federal Data Protection Act (BDSG, "Bundesdatenschutzgesetz"), Tele Media Act (TMG, "Telemediengesetz"), and is built on infrastructure that is DIN ISO/IEC 27001 certified. The data from the real estate and mortgage portfolios is stored in a Finma-compliant data center in Switzerland. The data center meets the security and data protection requirements in accordance with ISO/IEC 27001, SOC-1 type II and SOC-2 type II certificates, among others.

Q: Will I be required to publish the results?

A: You will not be required to publish the results. However, the PACTA results from this analysis – in form of your executive summary or individual, interactive report – can be used for climate disclosure. To learn more about how PACTA is compatible to the TCFD guidelines and EU Taxonomy, please refer to <u>2DII's report "The Disclosure Puzzle: The Role of PACTA"</u>.

Q: How does the PACTA analysis differ from portfolio carbon foot printing?

A: PACTA is a scenario-based analysis and is forward looking, as it assesses the alignment of a portfolio with different climate scenarios based on forward-looking production and capacity data of companies. Carbon foot printing relies on backward-looking emissions data and provides rather a snapshot of today based on historical data. The PACTA analysis and carbon foot printing are therefore rather complementary. As part of the Executive Summary of the individual test report, you will also receive a carbon footprint statement for each of your submitted portfolios (based on ISS-ESG data). Since portfolio carbon foot printing often requires the normalization by financial units, this prevents benchmarking to scenarios, and hinders a meaningful comparison between the climate performance of companies.

Q: Will the project give me information on what climate actions I can take?

A: Climate action is defined as all measures that financial institutions can take to achieve a positive climate impact in the real economy. Examples of measures applied today include engagement, active voting, replacing fossil fuels with renewable heating in real estate, incentivizing customers in mortgage portfolios. The project does not provide an investment recommendation, but shows, among other things, what peers are doing.

RMI is trying to find a solution to the existing licensing issues so that the PACTA technology data per company ("asset level data") on which the portfolio is based can be obtained for the analyzed portfolio (for a fee) after the analysis if there is interest.

Q: Where are the overall results for Switzerland published?

A: The results of the PACTA Climate Test 2024 of Switzerland (meta report) and the sectoral reports are published by the FOEN. You can find the report and the overall results of the 2022, 2020 and 2017 analyses at www.bafu.admin.ch/climate-and-financial-markets.

Q: I have another question that is not answered in this briefing.

A: Please contact us at pactacop@rmi.org (for questions about the equities and bonds module) or at pacta2024@fpre.ch (for questions about the real estate and mortgages module).



Chapter I

Climate Scenario Analysis

1. Climate Scenario Analysis

The climate scenario analysis is being conducted separately for the equity and bond module on the one hand (RMI's PACTA methodology) and the mortgage and real estate module on the other hand (developed on behalf of FOEN by FPRE). This difference is also reflected in this section. The sub-sections 1.1. to 1.6. mainly refer to the equity and bond module, while section 1.7. refers to the mortgage and real estate module.

1.1. Overview of metrics for scenario analysis

The first part of the analysis is a climate scenario analysis, which provides an assessment of a financial portfolio's alignment with different climate scenarios from the IEA, and JRC. It answers three questions, each corresponding to a metric included in the results of the analysis:



Research Question. What share of the portfolio is currently exposed to activities in sectors which are affected by the transition to a low carbon economy?

Exposure Metric. The *current sector and technology mix exposure* shows the estimated share of the portfolio that is exposed to the following sectors, representing roughly 70-80% of global CO₂ emissions and an estimated ~80% of CO₂ emissions in a typical equity or corporate bonds portfolio: power, automotive, oil and gas, coal mining, aviation, cement, and steel.



Research Question. How aligned are the investment and production plans of companies in the portfolio with different climate scenarios and the Paris Agreement?

Production Volume Trajectory Metric. Based on static portfolios, the metric shows the portfolio's evolving production in the next 5 years to selected technologies relative to three IEA transition scenarios (the Net Zero by 2050 (NZE), Announced Pledges Scenario (APS), Stated Policies Scenario (STEPS) and three JRC's temperature goal scenarios (Reference, NDC and 1.5°C). It also compares the portfolio's trajectory to the trajectory of the global listed equity or corporate bond market over the next five years. It is expressed as a percentage deviation from the scenario, as well as a deviation in units of capacity or production (e.g. Megawatt, cars produced).

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Research Question. What is the portfolio's technology mix in climate-relevant sectors expected to look like in five years based on current investment plans of the companies underlying the portfolio, and how does it compare to peers, the market, and a technology mix aligned with the Paris Agreement?

Technology Mix Metric. This metric illustrates the portfolio's expected technology mix in the power, automotive, oil and gas, and coal mining sectors in five years based on the current production and capital expenditure plans of the companies, based on the results of #1 and #2, and compares it to peers, the market, and a technology mix aligned with a climate scenario that meets Paris Agreement goals.



Research Question. Which companies are driving the portfolio's alignment with climate scenarios?

Company-level Technology Mix Metric. This metric is an extension of the technology mix, but at the company level for the power and automotive sector. It displays a breakdown of each invested company production capacity in each sector by technology. This is compared to the portfolio, benchmarks and a hypothetical portfolio if it were to be aligned with the selected scenario. Companies that have higher exposure to a technology than the portfolio drive the exposure of the portfolio to this technology up.

1.2. Overview of inputs and coverage for scenario analysis

1.2.1. Coverage

Asset Classes. The analysis covers listed equity, and corporate bonds. An additional analysis is possible for the Swiss real estate and mortgage sector (please see section 1.7. for further information).

Sectors. The analysis covers climate-relevant sectors that are key to the transition to a low carbon economy. These include the power, automotive, oil and gas, coal mining, aviation, cement, and steel sectors, which together account for approximately 70-80% of the CO2 emissions associated with a typical portfolio as well as 15-25% of a typical portfolio in terms of asset value. Agriculture, and forestry sectors, despite being highly relevant in terms of climate, are not covered on a global level due to a lack of available data and may be covered by other tools. R&D investments are also not covered.

1.2.2. Data Inputs

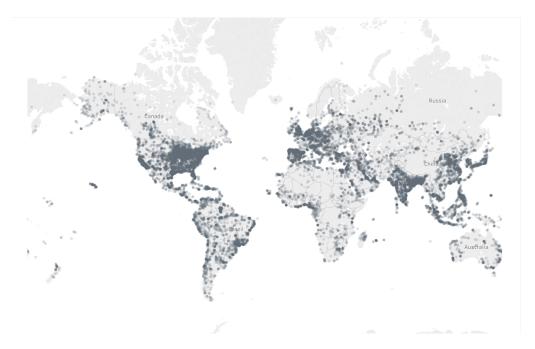
Portfolio Data. To run the portfolio assessment, participants provide an input file containing security information for each of the portfolios to be analyzed. It includes the following information (see section 4.1. for more information):

i. Investor.Name": Name of your institution. It should be the same for all lines of this file.

- ii. "Portfolio.Name": You can report as many portfolios as you wish and name them as per your convenience. The results will be grouped by portfolio (each different name disclosed in this column is characterized as one single portfolio). This means that if you report 20 different portfolios, you will receive in the Transition Monitor Platform 20 different interactive reports. You will be able to group these results on the platform.
- iii. "ISIN": each line of this file will correspond to one asset ISIN. ISIN stands for International Securities Identification Number and is a code that uniquely identifies a specific security issue.
- iv. "MarketValue": amount allocated on that specific ISIN as per the defined time stamp (e.g. 31.12.2023 for 2023Q4);
- v. "Currency": currency associated with the market value.

Financial Data. Financial data from Factset is used to assign securities to sectors and to link them to parent and subsidiary companies, as well as for sector classification analysis. This data is supplied by RMI.

Physical Asset-Based Company Data. The model uses, where possible, forward-looking asset-based company data for key technologies in climate-relevant sectors. The model is data agnostic as long as it complies with the format needed to run the PACTA code. The so-called asset-based company data for PACTA analyses are sourced from Asset Impact. Asset Impact gathers data on physical assets from data providers included those listed in the following table and matches them with companies and financial securities to produce the asset-based company data feeding into PACTA. For PACTA COP projects data will be updated every fourth quarter of each year. The map below highlights an example of the individual data points for global coal-fired power plants.



Data provider	Sectors	Key data points				
EnerData and	Power, oil &	a. Power plant data, including installed capacity, technology,				
Global Energy	gas, coal mining	status (i.e., announced, active, decommissioned, etc.).				
Monitor	 	b. Oil and gas field data, including annual production volume.				
	 	c. Coal mine data, including annual production mass.				
AutoForecast	Automotive	Production forecasts for light duty vehicles.				
Solutions	 					

Cirium		Aviation	Passenger, cargo and combined aircraft data, including number of
		; ; !	seats or tons transported, aircraft model, etc.
Global	Energy	Steel	Steel plant data, including production and CO ₂ emissions.
Monitor			
Cemnet		Cement	Cement plant data, including production and CO2 emissions.

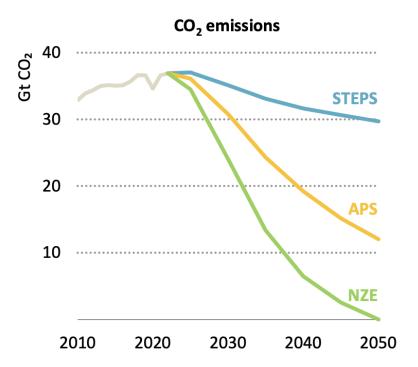
Scenario Data. This analysis is based on the climate scenarios developed by the IEA, and JRC, shown in the table below.

Scenario	Abbreviation	Estimated temperature increase	Source	Sectors Covered
"GECO POLES 1,5°C"-scenario	GECO1.5	~ 1.5°C	JRC GECO 2023	Power, automotive, oil &gas and coal
"GECO POLES NDC°C"-scenario	GECO NDC	~ 1.9°C	JRC GECO 2023	Power, automotive, oil &gas and coal
"GECO POLES Reference"-scenario	GECO Ref	~3°C	JRC GECO 2023	Power, automotive, oil &gas and coal
Net Zero by 2050	NZE	1.5°C in 2100	IEA WEO 2023	Power, automotive, oil & gas, coal, cement, steel, and aviation
Announced Pledges Scenario	APS	1.7°C in 2100	IEA WEO 2023	Power, oil &gas and coal
Stated Policy Scenario	STEPS	2.4°C in 2100	IEA WEO 2023	Power, oil &gas and coal

These scenarios were selected for their high degree of granularity, extensive geographic and sectoral coverage, as well as for the compatibility of their indicators with the needs of RMI's analysis. In particular, the model uses the following indicators as basis for comparison to the portfolio:

- a. Power capacity by technology in megawatt (MW).
- b. Oil production in barrels per year.
- c. Gas production in billions of cubic feet per year.
- d. Coal production in tons of coal equivalent per year.
- e. GHG emissions pathways in the aviation, shipping, cement, and steel sectors.

The figure below illustrates the distinction between IEA's "Stated Policies", "Announced Pledges Scenario" and the "Net Zero by 2050" in terms of CO2 emissions reduction until 2050.



Technical Deep Dive: Asset-Based Company Data

The PACTA model is based on physical asset-based company data across key climate-relevant sectors. Any data source formatted as required by the PACTA code can be used. On Transition Monitor and as part of the PACTA COP project, RMI sources the data from Asset Impact. Asset Impact links financial portfolios with the real economy and provide RMI with asset-based indicators linked to companies and securities.

Asset Impact works with specialized sectoral data providers (see table on the previous page) to source data on individual assets in climate-relevant industries. These specialized data providers use a variety of research capabilities, including web scraping, desk research, and direct engagement with industry to map physical assets. Forward-looking information is based on company investment and production plans that have been announced publicly.

These asset-level datasets cover over 280,000 individual assets (e.g. individual power plants, oil fields, etc.), accounting for around 75% of global carbon emissions. The following charts show the coverage of asset-level data relative to estimated global production figures—the global benchmark—for the power, oil & gas, coal, and automotive sectors. They also highlight the share of assets that have been mapped to financial data and are thus included in the analysis.



Only the assets that have been mapped to financial data are included in the analysis (the blue box in the charts above). This is because financial identifiers are required to link the asset-based production data to the portfolios provided by the participants.

The gap between the asset-level data coverage and the global production figures can be explained by non-corporate asset ownership, time lags in reporting, and errors in asset-based datasets. The discrepancy between the asset-based company data and the financially mapped production figures exists because not all companies listed in the asset-based company data have been matched with financial instruments in the financial data. Asset Impact is continuously working to expand its matching capabilities, including with a text-string matching software and manual matching.

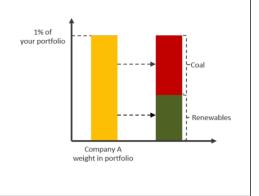
Provided that assets have been matched with financial data, Asset Impact allocates production to companies, and further to financial instruments, based on direct ownership of assets and based on majority ownership of subsidiary companies that own assets. The result is a forward-looking production profile for each financial instrument that serves as starting point and basis of comparison for climate scenario analysis.

1.3. Current Technology Mix Exposure

Research Question. What share of the portfolio is currently exposed to activities in sectors by the transition to a low carbon economy?

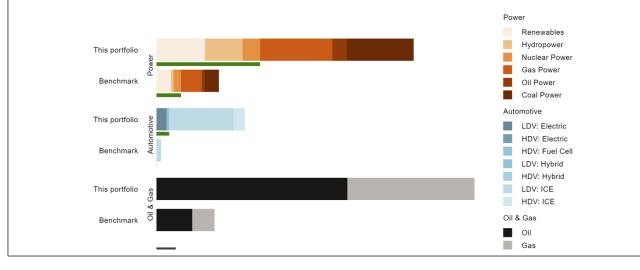
Metric and Methodology. This metric shows the estimated share of the portfolio that is currently exposed to companies with assets in the fossil fuels, power, aviation, cement, steel, and road transport sector. It is calculated by first taking the weight of the portfolio that is exposed to companies in each of these sectors and then calculating the technology breakdown of assets owned by these companies (see figure on the right).

The portfolio's current technology exposure is compared to the market portfolio, which is calculated based on the exposure of the global universe of assets in the relevant asset class to the sectors, as well as to the peers participating in the tests.



Limitations. The sectors included in this analysis account for about 70-80% of the CO_2 emissions associated with a typical portfolio, and thus contribute significantly to a portfolio's exposure to climate risk. However, the metric does not cover sectors, such as the real estate, agriculture and forestry sectors, despite being highly relevant in terms of climate risk and impact, due to a lack of available data and scenarios.

Sample Visual. This chart shows the estimated share of the portfolio that is exposed to activities in the power, automotive and fossil fuel sectors (*Note: The analysis extends to the other sectors described above*), in comparison to the listed equity market. A value higher than the market portfolio suggests that the portfolio is currently more exposed to these activities than the market, on average. A value lower than the market portfolio suggests that the portfolio is less exposed to these sectors, all other things being equal. The participant will also benefit from comparing results to peers. The green bars reflect the share of as low-carbon considered technologies, i.e. technologies which need to be built out to manage the future transition towards a low-carbon economy.



Use Cases.

- Manage exposure to climate-relevant sectors & technologies;
- Provide clarity to management and other stakeholders to what extent the portfolio is exposed to 'transition risk' and 'climate compatibility' issues;
- Reporting to external stakeholders.

1.4. 5-Year Forward-Looking Alignment Trend

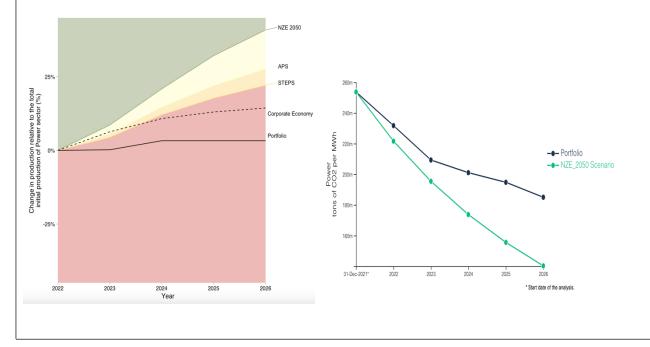
Research Question. How aligned are the investment and production plans of companies in the portfolio with different climate scenarios and the Paris Agreement?

Metric and Methodology. This metric traces the portfolio's exposure to selected climate-relevant technologies relative to various IEA and JRC transition scenarios. The trajectory of the global listed equity or corporate bond market is also shown, as well as comparison to the peers participating in the PACTA COP country project. It is forward-looking and compares the portfolio's expected production trajectories in different technologies to scenarioaligned trajectories over the next five years. The portfolio's expected trajectory is based on the underlying companies' investment plans for the next five years, while the market's trajectory is the combination of the current investment plans of all companies in the respective asset class for the same period.

The scenario-aligned trajectories represent the trajectories that would be expected if the companies in the portfolio were to develop according to the scenarios. They are calculated by applying the rates of change defined by the scenarios to the portfolio companies based on their respective market share (see next page for detail).

Limitations. The portfolio's expected trajectory is based on currently known production and capital expenditure plans from companies and is therefore subject to change. In fact, given the 5-year time horizon, it is likely that plans will change, which presents an opportunity to engage with companies on their investment plans. Similarly, participating financial institutions may alter their portfolio's composition over time.

Sample Visuals. The first visualization type are the trajectories charts. These charts trace the corporate bond portfolio's exposure to a given sector production in comparison to the IEA and JRC scenarios. The dashed line shows the expected development of the corporate bond market over the next five years based on current investment plans. The interactive report also displays the alignment of emission intensities by sector compared to the IEA's NZE 2050 scenario (second chart). The chart uses the current emissions intensity of companies within the portfolio as a starting point and shows how this expected to develop over the next five years based on the plans of the company and what would be expected under the scenario.

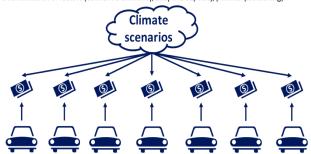


Use Cases.

- Input into target-setting approaches.
- Strategic insight into portfolio positioning relative to market, peers, and scenarios.
- Input into different climate actions (engagement, etc.).
- Indicator for climate goal alignment of financial flows from a policy perspective (implementation of Art. 2.1.c Paris Agreement).
- Reporting to external stakeholders.

Technical Deep Dive: ALLOCATING 'RESPONSIBILITY' FOR ACHIEVING (MACRO) CLIMATE GOALS TO COMPANIES / ASSETS (MICRO ACTORS)

- 1 Each 'company' / 'asset' gets allocated responsibility based on their 'market share'
- 2 Each 'company' / 'asset' gets allocated responsibility based on 'economic efficiency' (i.e. least cost)
- 3 Each 'company' / 'asset' gets allocated responsibility based on 'historic responsibility'
- 4 Each 'company' / 'asset' gets allocated responsibility based on 'bottom-up' allocation involving a combination of factors (economic efficiency, adaptive capacity, political positioning)



The market share approach is currently applied in PACTA:

Market share approach: This approach uses a simple 'market share' allocation rule where all sector-level production and capacity decarbonization requirements proportionally distributed across companies based on market share in the technology or For high carbon technology, each company should do a decarbonization effort proportional with the market share in the technology. If the scenario asks for a 20% decrease in ICE vehicles, then all car maker should diminish their ICE production by 20% in the next 5 years. It's not possible to apply

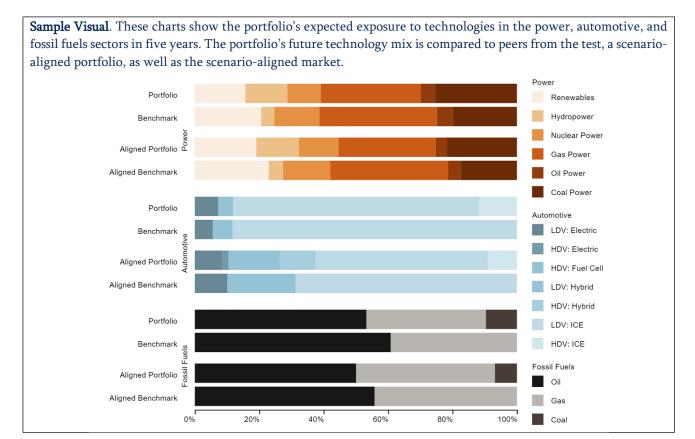
this methodology for green technology because a company which would not produce renewables today will not be asked to produce renewable in the future, while we assume that all companies should have renewables capacities at the end of the transition. That's why efforts for green technology build out are shared based on their market share in the total sector. Thus, if we consider two companies that have the same capacity size, and one is already 100% renewables (100MW of renewables), while the other one hasn't started its transition yet (100MW of coal), they should both do the same absolute efforts in renewables to align with a Paris Scenario. The idea behind this approach is that the 2 companies of the same size will want to grow at the same absolute pace in renewables.

1.5. Future technology mix

Research Question. What is the portfolio's technology mix in climate-relevant sectors expected to look like in five years based on production plans of the companies in the portfolio, and how does it compare to peers, the market, and a technology mix aligned with the Paris Agreement?

Metric and Methodology. This metric illustrates the portfolio's expected technology mix in the power, automotive, oil and gas, and coal mining sectors in five years. It is calculated by taking the portfolio's current exposure to each technology and then applying the trajectory of the exposure over time based on revealed investment and production plans, calculated in the previous step. That is, it represents the next 5-years production values shown in the 5-year trend charts. The metric is compared to peers, the market, and a technology mix aligned with Paris Agreement goals (e.g.: Sustainable Development Scenario by IEA).

Limitations. The portfolio's expected trajectory is based on currently known production and capital expenditure from companies and is subject to change. In fact, given the 5-year time horizon, it is likely that plans will change, which presents an opportunity to engage with companies on their investment plans. Similarly, participating financial institutions may alter their portfolio's composition over time (which indeed, may be one of the outcomes of the test itself). Further, for simplicity's sake, it aggregates certain technologies and may not capture non-mature technologies.



Use Cases.

- Management of concentration risks and portfolio diversification considerations.
- Input into target-setting frameworks and climate action strategies.
- Reporting to external stakeholders (given that it is more intuitive to understand).

1.6. Company-level results

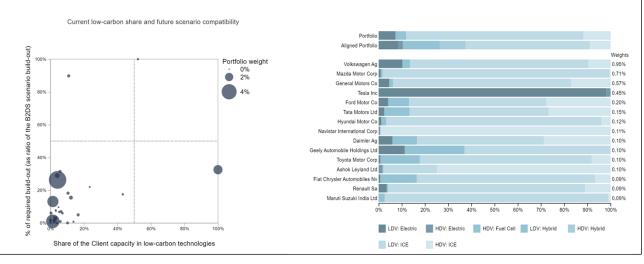
Research Questions. Which companies are driving the portfolio's alignment with climate scenarios? Which companies are the leaders and laggards with regards to shifting towards low carbon alternatives?

Metric and Methodology. This metric is an extension of the conventional technology mix brought to the invested company levels for automotive and power sectors. Within the exposure to the automotive and power sectors it identifies the top invested companies (directly and indirectly through funds) and verifies the share of the portfolio that is currently exposed to these companies operating assets, and it is calculated by taking the weight of the portfolio that is exposed to companies.

In this metric, invested companies' technology mix are compared to alignment results. Within the automotive and power sector, low-carbon technologies compete with high-carbon technologies in the current market, which allows to assess how companies are split.

Limitations. Currently only available for Power and Automotive companies. Moreover, the production-plans are self-reported and may not be updated on a timely manner in data providers databases.

Sample Visuals. The first chart (left) combines current technology mix (x-axis) and alignment information (y-axis) for all invested companies in the chosen sector. Dots positioned further to the right represent companies that have a larger share of low carbon technologies. Dots positioned further up indicate that companies have more ambitious build-out plans in low carbon technologies. The size of the dots represents the weight of the company in the portfolio. The second visualization (right) shows the breakdown of each company's production capacity in each sector by technology. This is compared to the portfolio, benchmarks and this portfolio if it were to be aligned with the selected scenario. Companies that have higher exposure to a technology than the portfolio drive the exposure of the portfolio to this technology up.



Use Cases.

- Develop climate strategies such as engagement, best-in class investment, exclusion or use exercising voting rights, among others.
- Provide clarity to management and other stakeholders to what extent the portfolio is exposed to 'transition risk' and 'climate compatibility' issues.
- Reporting to external stakeholders.

Updated Data:

Underlying data used for the analysis will be sourced as of 2023Q4. For the power sector a change in the data provider occurred: Data for 2021Q4 was sourced by Asset Impact from GlobalData whereas 2023Q4 data is sourced and consolidated by Asset Impact from EnerData and Global Energy monitor.

Methodological FAQs:

Q: Why does the size of my portfolio differ between the audit file and the table 2.1 in the interactive report?

A: During the audit process, the user's portfolio is assessed as it is submitted (including short positions). However, with the current methodology it is not possible to analyze short position. The link between physical assets and shorted assets cannot be established, as it would lead to negative production. Therefore, in the results shown in interactive report, only positions with positive market value are considered. Hence, values may not match between the audit process and the interactive report results.

Q: Why do exposure values in a given sector differ between charts 2.2 and 3.1.1?

A: As part of the analysis, PACTA only focuses on the main carbon intensive sectors, and the most carbon intensive part of the value chain. Chart 2.2 shows the financial exposure of your portfolio to those sectors and is directly derived from Factset data. Results shown in chart 3.1.1 focus on the technology mix. For companies inside our scope of analysis (e.g. fossil fuel extraction, power generation, automotive production, etc.), physical assets are mapped based on data provided by Asset Resolution. For some companies, AI does not provide data points for assets, as the sector classification is not perfectly aligned with RMI's scope of analysis. For companies where no any physical assets can be linked, no technology mix can be established those will not be included in chart 3.1.1. Therefore the total exposure in chart 3.1.1 can be lower than in chart 2.2.

Q: Why do I see results in a sector for ownership weight but not for portfolio weight?

A: Results shown with the filter portfolio weight are results for companies within a financial sector, i.e. only companies with their main business purpose within this sector go into this analysis. This is to avoid conglomerates with small power production as part of their business to skew the results, as those companies are not the companies at risk within the power sector. For the results shown with the ownership weight filter, this differs: Companies production flows into these results based on the user's ownership in this company. This view shows the user the lever of engagement with the held companies for the analyzed sectors. Therefore, for individual portfolios and sectors it can happen that results are available for the ownership weight filter but not for portfolio weight filter.

Q: Why do I see results in a sector for portfolio weight but not for ownership weight?

A: Funds are not included for in the analysis for the ownership weight filter. Funds are included in the analysis for the portfolio weight filter. This is due to the fact that there are no direct voting rights by the user when holding a fund, therefore including funds in the ownership weight filter would skew results of the leverage of engagement a user has and to avoid double counting errors when a user holds a fund and equity of one of the underlying assets at the same time. An additional section in the Interactive report on fund analysis is under construction.

Q Some companies have different results between bonds and equity, how can it be explained?

A: When assets are mapped to a company, both assets directly owned by that company as well as assets owned by subsidiaries / holdings of that companies are rolled-up and mapped to the company. The roll-up methodology differs between equity and bonds. Equity is attributed to the company according to the share the company holds, while bonds are attributed 100% to the parent company in case it is liable for the subsidiaries debt. The data for this differentiation is provided by AI. Therefore the results for equity and bonds can differ.

1.7. Swiss Real Estate and Mortgage Module

Research Question. What are the CO_2 emissions of a building or an entire real estate or mortgage portfolio? How does it compare to peers and how aligned are the properties with the Swiss climate objectives for the real estate sector?

Metrics and methodology.

The direct greenhouse gas emissions (Scope 1) and now also the indirect emissions (Scope 2) from the use of electricity and district heating are calculated in the real estate and mortgages module. Only a few parameters are required per building to calculate the emissions. The location of the property can be specified either via the EGID (Federal Building Identifier in the GWR) or as an address. The location can be used to assign spatial climate conditions for the calculation of heat demand and to evaluate the data according to spatial reference units (e.g. per canton). The following information is also mandatory:

- Energy reference area
- Number of floors above ground
- Year of construction
- Main use
- Main energy source for heat generation

The above information can usually also be supplemented from the Buildings and Dwellings Register (GWR). Due to the heterogeneous data quality in the GWR (see restrictions below), participants are recommended to enter their own verified information.

Optionally, details on renovations and the production of electricity with a building's own photovoltaic system can be entered. If available, it is recommended to enter these building characteristics, as this leads to much more meaningful results. The following details are optional:

- Details on years of renovation of roof, windows, facade, basement ceiling
- Year of installation of the heating system (relevant for oil and gas heating systems)
- Existence of an energy certificate (Minergie or comparable)
- Information on the photovoltaic system (installed capacity or area)

The emissions from electricity and district heating in Scope 2 are based on emission factors with average Swiss values. If you have your own information on the emission factors for electricity or district heating, these can be provided optionally.

The calculated emissions of the buildings can be aggregated per portfolio or per company and compared with the values of peers in the same sector or with the emission reduction targets for 2050.

The calculation of emissions in Scope 1 and Scope 2 is primarily based on the following Swiss standards:

- SIA 380/1 (2009) "Thermal energy in building construction"
- SIA 384/3 (2020) "Heating systems in buildings energy requirements"
- SIA 2024 (2021) "Room utilization data for energy and building services engineering"
- SIA 2056 (2019) "Electricity in buildings energy and power requirements"
- Life cycle assessment data in the construction sector KBOB / V2022 V3

In addition to the emissions from operation in Scope 1 and 2, indirect emissions from buildings from the "Construction" sector can now also be calculated in the Real Estate and Mortgages module in accordance with SIA 2032 (2020). These emissions from non-renewable primary energy (also known as gray energy) are assigned to Scope 3. The "construction" area mainly comprises the production phase (including raw

materials, transportation, production), refurbishment (replacement) and the disposal phase (including dismantling, demolition, transportation, waste treatment).

For the calculation of the above Scope 3 emissions, the mandatory building characteristics already listed for Scope 1 and 2 can be used as a minimum requirement. If available, optional information can increase the significance of the calculation:

- Number of underground storeys (excl. underground car park)
- Existence of an underground parking garage
- Presence of a photovoltaic system (or specification of area/output from Scope 2)
- Type of foundation
- Type of excavation support
- Roof shape

The calculation of Scope 3 emissions in the PACTA Climate Test 2024 in the "Construction" area is based on the following standards:

- SIA 2032 (2020) "Grey energy Life cycle assessment for the construction of buildings"
- Life cycle assessment data in the construction sector KBOB / V2022 V3

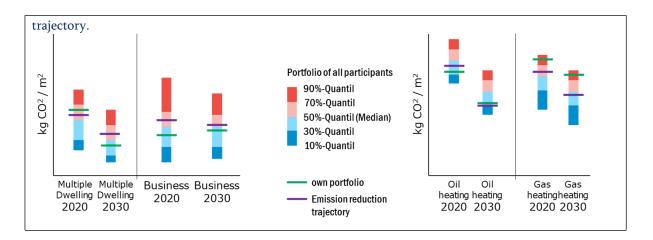
As the SIA 2032 standard defines fixed replacement times (depending on the building component) in a 60-year observation period for the calculation of amortization, the refurbishment data specified in Scope 1 cannot be taken into account for Scope 3.

The calculated Scope 3 emissions of the buildings in the "Construction" sector can be aggregated per portfolio or per company and compared with the values of the peers in the same sector. In addition, a statement can be made on the residual value not yet amortized as at 31.12.2023 and indicative statements on various further development scenarios (value retention, replacement value).

Note: The Scope 3 emissions in the PACTA Real Estate and Mortgages module cover the "Construction" sector described above in accordance with SIA 2032 and do not provide a complete picture of all Scope 3 emissions caused by the building.

Limitations. The automatically used input data from the Swiss Buildings and Dwellings Register (GWR) may be of varying currentness depending on the geographical region and building type and is updated by the relevant authorities. The data is refined over time and can also be provided by the owner of the portfolio. If correct input data on the buildings is available for your own portfolio, it is recommended that it be submitted instead of the information automatically taken from the GWR. In addition to the abovementioned building characteristics, it is not possible in this model to take into account further energy aspects, detailed information on the materials used in construction or recycling issues cannot be taken into account in this model. There will also be no discussion of financial indicators (e.g. refurbishment costs) or property-specific recommendations for the further development of buildings.

Sample Visual. The evaluation will take place according to different criteria (e.g. type of buildings, heating systems, regions). E.g. can two dates in time be compared, whereby the owner's strategy of refurbishment can be considered for the evaluation of the alignment with the Swiss emission reduction



Use Cases.

- Input into target-setting frameworks and climate action strategies.
- Management of refurbishment concerns and risks.
- Reporting to external stakeholders

Chapter II

Impact Analysis

2. Impact Analysis

The third part of the analysis is an impact analysis, which highlights climate actions taken by financial institutions to support emissions reductions in the real economy. It provides answers to a single question, corresponding to a metric included in the results of the analysis.

2.1. Overview of metrics for impact analysis

Research Question. Are net-zero transition plans drawn up? Which transparency and reporting recommendations and requirements are implemented? What are the climate actions taken by financial institutions to support GHG emissions reduction in the real economy?

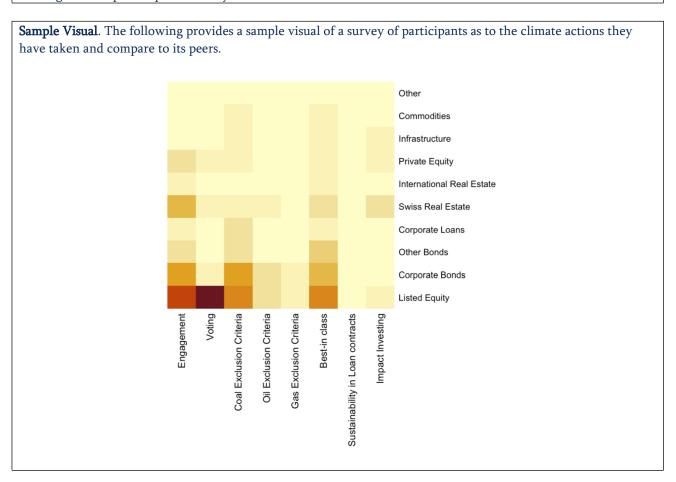
Metric. The qualitative analysis will involve providing results of survey data collected together with the portfolio data.

2.2. Climate action survey

Research Question. What are the climate actions taken by financial institutions to support GHG emissions reduction in and foster a climate-aligned transition of the real economy?

Metric and Methodology. The qualitative analysis will involve providing results of survey data collected together with the portfolio data. In addition, the survey helps to make the quantitative assessments more plausible and to gain a comprehensive picture of the climate-impacting activities of Swiss financial institutions. You can download the questions in a PDF format at www.bafu.admin.ch/pacta-climate-test. Once registered, you can enter the answers in the corresponding online tool.

Limitations. The goal is, to combine the two analytical components to show the potential impact of the actions on the targeted companies quantitatively.



Use Cases.

- Complement quantitative analysis to create transparency on climate actions and the actions impact in the real economy on mitigation.
- Over time, monitor the efficacy of climate actions.

Chapter III

Tochnical Q-

Technical & Administrative Advice

3. Technical & Administrative Advice

This chapter provides technical and administrative advice. The first section of this chapter provides insights into the technical considerations when formatting and uploading your portfolio data as well as accessing your results. In the second section, a more detailed overview of the registration process and the Non-Disclosure Agreements (NDA) with RMI and FPRE will be presented.

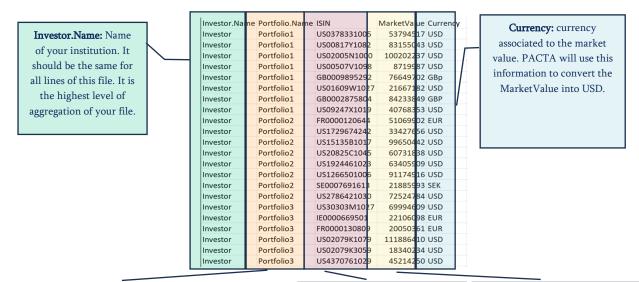
3.1. Technical Advice

3.1.1. Formatting Data

Formatting data for the listed equities and corporate bonds module. A sample csv file is available at the <u>Transition Monitor Platform</u> and on <u>www.bafu.admin.ch/pacta-climate-test</u> The file is composed of 5 columns, in this specific order:

- 1. "Investor.Name": Name of your institution. It should be the same for all lines of this file.
- 2. "Portfolio.Name": You can report as many portfolios as you wish and name them as per your convenience. The results will be grouped by portfolio (each different name disclosed in this column is characterized as one single portfolio). This means that if you report 20 different portfolios, you will receive in the <u>Transition Monitor Platform</u> 20 different interactive reports. You will be able to group these results on the platform.
- 3. "ISIN": each line of this file will correspond to one asset ISIN. ISIN stands for International Securities Identification Number and is a code that uniquely identifies a specific security issue.
- 4. "MarketValue": amount allocated on that specific ISIN as per the defined time stamp (e.g. 31.12.2023 for 2023Q4);
- 5. "Currency": currency associated with the market value.

The final file should resemble the figure below. Please do not change the columns organization or change their names. Check the formatting of the numbers, the software will read only comma/period as decimal separators. Make sure you are working in a .csv file; the software will not read .xls or .xlsx files. Before uploading your portfolio, we kindly ask for you to perform basic consistency checks like, i) total amount reported in USD and, ii) number of portfolios. Once the upload period in over, you will not be able to change the information reported.



Portfolio.Name: Name of the portfolio containing the assets disclosed. You can disclose as many portfolios as you whish in the same csv file (no need for multiple files). Bear in mind that the number of portfolios disclosed will be the number of reports received.



ISIN: each line of this file will correspond to one asset ISIN – it is the lowest level of aggregation. Make sure your ISINs are compatible with the international standard of 12 digits. You can report ISINs for all your assets, however, only listed equities, corporate bonds and funds will be considered in the analysis.

MarketValue: amount allocated on that specific ISIN as per the defined time stamp (e.g. 31.12.2023 for 2023Q4). Please report the full number (not in millions or thousands). You can report this amount in any currency – there is no need to convert the amount. PACTA will automatically convert this value in USD.

3.1.2. Data Upload – real estate and mortgage module

PACTA Coordinated Projects - Briefing for Participants

The portfolios with Swiss real estate and mortgages can be transferred via a personal link on the Transition Monitor Platform. This link automatically takes you to a website operated by FPRE in a Finma-compliant data center located in Switzerland. Here you can upload the populated templates with your real estate or mortgage portfolios. If you have any questions about submitting your portfolios, please contact FPRE by e-mail (pacta2024@fpre.ch).

The submitted data will be used exclusively by FPRE for the preparation of the individual test reports per portfolio and participant as well as for the aggregated and anonymized sector reports and the overall FOEN report. Neither RMI nor the FOEN have access to your submitted portfolios. After the end of the PACTA Climate Test 2024, the submitted data will be deleted.

The template for real estate and mortgage portfolios will be available on the <u>PACTA Climate Test 2024 website</u>. Please note that the template is an Excel file consisting of an instruction sheet and a data entry sheet. The file explains which data must be reported and which information is optional and serves to increase the robustness of the results. A data validation integrated into the template provides you with information for each building in the event of possible errors in the data entry.

A separate, completed template should be submitted for each portfolio. Real estate (e.g. own properties) and mortgages must be submitted in separate portfolios. It is possible to submit several real estate portfolios as separate templates (e.g. for Fund X, Fund Y and Mortgage Portfolio Z). A building should only be submitted in a single portfolio. Please make sure that you enter a unique name for each portfolio in the input fields provided for this purpose, which will be clear and comprehensible for you later in the reports.

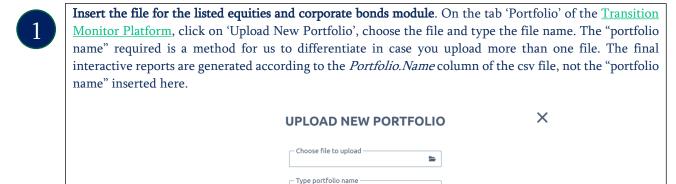
When submitting your portfolios, please use the structure and form specifications of the Excel template provided unchanged and adhere to them.

If incorrect entries are detected when submitting a completed template, the submission will be aborted and a corresponding message will be displayed. Once the incorrect entries in the template have been corrected, the submission can be repeated.

FPRE relies on your data to generate your results and perform the analysis in the Real Estate and Mortgage module. FPRE's PACTA team has no possibility to verify the accuracy of your data or to change your uploaded data after submission. Therefore, please note that the verification process and the reliability of your data are critical to the overall PACTA Switzerland 2024 project.

3.1.3. Data Upload – equity and corporate bond module

After signing the NDAs, gathering, cleaning and preparing your portfolio data, the csv file for equity and corporate bonds is now ready to be uploaded into the website. To guarantee your file will be correctly inserted into the website and analyzed, follow the steps below:





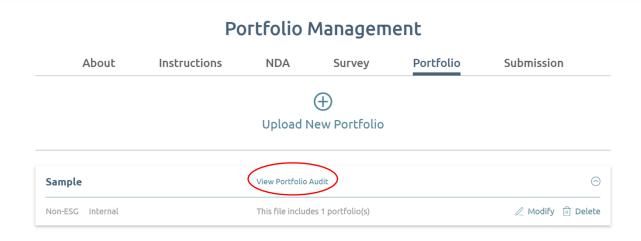
- Portfolio engagement and portfolio goal Please indicate whether the selected portfolio pursues one of the displayed objectives and whether the portfolio is subject to a net zero engagement strategy. To do this, select the corresponding checkboxes.
- Audit your file for the listed equities and corporate bonds module. This is the most important step to guarantee your analysis will be performed accurately. After you uploaded your file, click on "View Portfolio Audit" to conduct the automated audit. For further information on the audit, please refer to section 3.1.4.
- Submit your data for the listed equities and corporate bonds module. After the auditing, you are ready to submit your portfolio data.
- Answer the Survey. To complement the quantitative analysis with qualitative insights, a survey will be conducted (see section 2.2.). You will find a link to the survey on Transition Monitor Platform. Please take your time to go through the survey carefully. After having answered all questions to the best of your knowledge, you can upload the results on the platform.

3.1.4. Audit – equity and corporate bond module

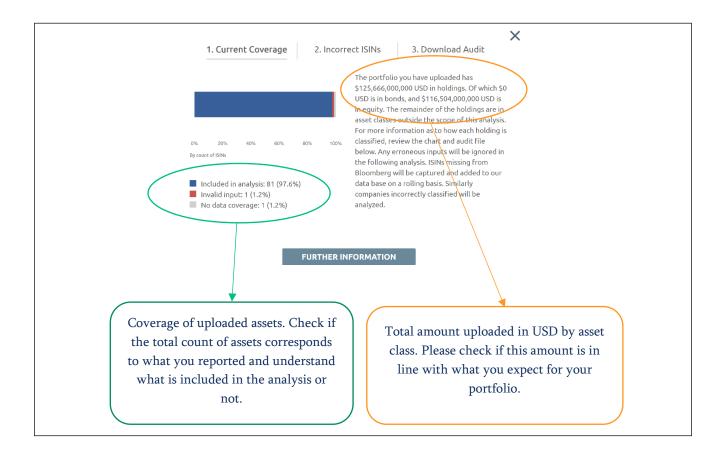
You can audit the files you are uploading in the listed equities and corporate bonds module through the so called "audit function". In this step you will have more clarity on the coverage of the test regarding your total assets, as well as spot errors in your input such as negative numbers and invalid ISINs. This step is very important as it guarantees that your portfolio is accurate and can be included in the country's meta-analysis.

To audit your file upload a portfolio and click "View Portfolio Audit". A window will pop, and the function will be triggered. The process can take up to 30 minutes to be concluded, therefore we advise you not to close the browser window while it is loading. The test will show which assets were identified in your portfolio, which will be included in the analysis and the total amount uploaded in USD. You will be able to download the audit file and check each asset included or not in the analysis. We strongly advise you to check this file thoroughly and, in case you find any inconsistencies, please correct your data, re-upload the portfolio and repeat this step until you are comfortable with the status of your file, the coverage, and the correctness of total amount.

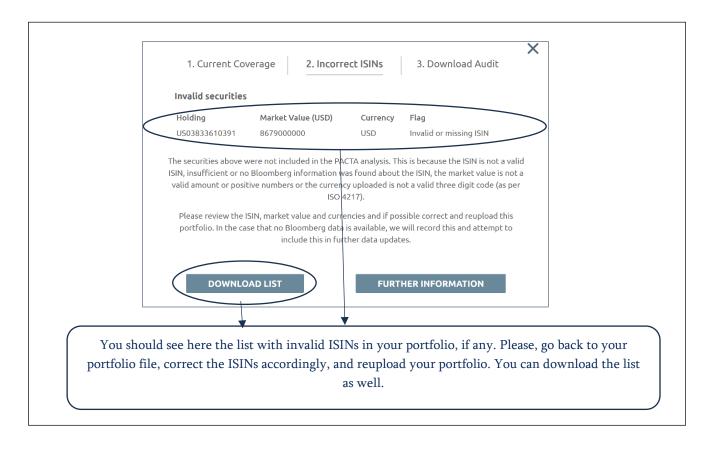
RMI is not able to perform further data alterations in your portfolio once the platform is closed and is not responsible for any inaccurate data uploaded to our platform. Your results will be calculated based on your self-reported data.



The first audit tab is called "Current coverage". In this tab you will have a full picture of the assets identified by the tool and the total amount uploaded in USD by asset class. The chart is a visual representation of the assets covered. The blue area are the assets identified in our database but note that not all these assets will be part of the final analysis as assets can be identified but might not be part of the sectors in scope. The red area corresponds to invalid ISIN or, in other words, ISINs that do not follow the standard and therefore needs to be corrected. The gray area corresponds to assets identified but not covered in our database.



The next tab to be analyzed in your audit, is the "**Incorrect ISINs**" tab. In case PACTA reads through an invalid ISIN or an ISIN not found in Factset, then it will be listed here. Please check the ISINs and correct it accordingly.



In the last tab, "**Download Audit**", you can download a full csv file with an overview of your portfolio audit. Below you will find a description of columns available in this file.

- investor_name: Input by the user in the portfolio CSV
- portfolio_name: Input by the user in the portfolio CSV
- holding_id: Unique, sequential ID given to each holding in your portfolio
- isin: ISIN provided by the user in the portfolio CSV
- value_usd: market value reported by user converted to USD
- company_name: company name determined from the user provided ISIN
- asset_type: asset type determined from the user provided ISIN:
 - o Equity: refers to listed equity, this asset type is read through PACTA and included in the final analysis;
 - Bonds: refers to corporate bonds, this asset type is read through PACTA and included in the final analysis;
 - Funds: refers to ISINs attributed to funds, this asset type will be looked-through and PACTA will identify the equities and corporate bonds components of the funds and attribute it to your portfolio as indirect ownership of assets. Fund's coverage relies on Lipper data, and is subject to change across the project period;
 - Others: refers to assets identified but not covered in PACTA (sovereign bonds, derivatives, commodities, etc.);
 - Unclassifiable: assets not identified and not covered by PACTA.
- valid_input: logical TRUE or FALSE flag.
 - o FALSE: the "Flag" variable (see description below) is classified as "Holding not in financial database or "Invalid or missing ISIN", or "Negative or missing input value";

- o TRUE: the "Flag" variable is classified as "Included in analysis.
- direct_holding: logical TRUE or FALSE flag:
 - o TRUE: asset owned directly in your portfolio;
 - o FALSE: asset owned indirectly through a fund or fund of funds.
- financial_sector: Determined PACTA (climate-relevant) sector as the primary activity of the company:
 - Oil&Gas;
 - Shipping;
 - o Automotive;
 - Power;
 - o Aviation;
 - o Steel;
 - o Coal;
 - o Cement;
 - Other (sector identified but not a PACTA sector);
 - Unclassifiable (sector not identified).
- bics_sector: BICS broad level sector classification
- sectors_with_assets: "+" separated list of PACTA sectors that the company has assets in (this often
- includes more PACTA sectors than the company's primary sector/activity)
- has_ald_in_fin_sector: logical TRUE or FALSE flag:
 - TRUE: PACTA have data for assets of the company that are active in the company's primary sector (linked to financial_sector)
 - FALSE: PACTA do not have data for assets of the company that are active in the company's primary sector (linked to financial_sector)
- flag: identifies whether the asset is included in the analysis or not
 - Included in the analysis: asset could be identified and market value assigned is valid (please note that this doesn't mean that this asset will be included in the final analysis. The asset can be identified but not belong to a PACTA sector which ultimately means it will be out of the final results);
 - Holding not in financial database;
 - o Invalid or missing ISIN: please check the ISIN and correct it accordingly;
 - Negative or missing input value: please check the market to check whether it is negative or missing, correctly it accordingly.

After you went through all the audit and corrected all the inconsistencies, you can now reupload your portfolio and go through the audit process again. Retake the audit process until you are comfortable with the accuracy of the data you are uploading.

RMI relies on your data to generate your results and to complete the country analysis. The PACTA team has no means to check whether your data is accurate or to change your uploaded data once is submitted, therefore, please keep in mind that the auditing process and the reliability of your data is key for the entire PACTA Switzerland 2024 project.

Press the "submit" button. Once you are comfortable with your portfolio data, you are ready to submit it. This is the last step you need to take in the project.



After this step you just have to wait until your results are available.

After the uploading data phase of the project, RMI and FPRE starts the analysis period, where meta-results are produced, and individual interact reports for each participating institution is generated.

3.1.5. Accessing your results

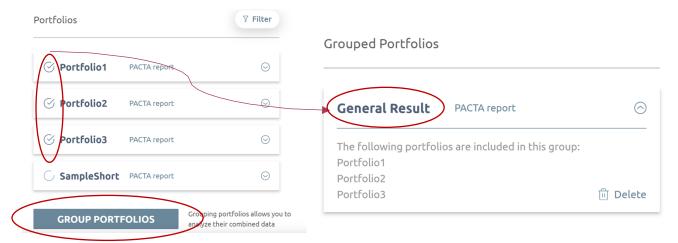
Expected in October/November 2024, you will be informed to the registered e-mail address once your results are ready. To access your results simply log-in in the <u>Transition Monitor Platform</u> with the same credentials you used to upload your portfolio and click in "Results". In order to ensure that results of your institution reach you regardless of any internal changes, we recommend that you use a general e-mail address when registering and log-in for the test.

Your results consist of a number of different documents: As part of your individual results, you will receive an **Interactive Report** and a static **Executive Summary**, for each portfolio as in the 2022 exercise. **The summary also shows most indicators for the Swiss Climate Scores based on the PACTA methodology, including a carbon footprint for the portfolio.**

Grouping your results

As mentioned previously, you can submit as many portfolios as you wish. You will receive one interactive report for each portfolio disclosed. If you wish to group your equity and corporate bond portfolios and see your general results you can do this by

- 1. Selecting the portfolios you want to group
- 2. Click in "Group Portfolios"
- 3. Give a name for this group
- 4. Analyze your aggregated results on the report generated under "Grouped Portfolios"



3.2. Administrative Advice

3.2.1. Registration Process

To register for participation in the Swiss climate test, please register on the <u>Transition Monitor Platform</u> from 01 March 2024 until 17 May 2024 with the Initiative Code PA2024CH. The following things should be considered:

- A registration via <u>Transition Monitor Platform</u> is required, no matter whether you only want to upload
 equity and bond portfolio data, real estate and mortgage data, or both. However, for the real estate and
 mortgage module, you will be redirected to FPRE after registration.
- Please note that only one person per financial institution can register. If more people want to take part in this exercise, you need to share the access internally.
- If you have already registered in the 2022 exercise, you can use the same account for the new initiative. The code PA2024CH can be added to existing accounts from 01.03.2024 onwards.
- During the registration process, you need to indicate to which peer group (sector) you belong (insurance, pension fund, asset manager, bank). This information will be used for peer group comparisons in the Meta Report, the Sectoral Reports but also in the individual, Interactive Report.

3.2.2. Non-disclosure Agreement (NDA)

Some institutions may require a Non-disclosure Agreement (NDA) before the transfer of the data. The usual steps of signing the NDA and portfolio data preparation will be presented in the following.

Portfolio allocation data is sensitive for many financial institutions, and therefore internal policies are developed to avoid leakage and misuse of such data. RMI and the designated personnel for the project at FPRE guarantee that all data provided or uploaded in the process of using the transition monitor platform is kept confidential and will not be distributed or used for purposes other than running the analysis and providing results, as well as anonymized use for meta-studies and peer comparison. RMI uses a stand-alone server, i.e., no other website or information is stored on the server, which increases the security significantly. The server is set up in compliance with the security standards of the German Federal Data Protection Act (BDSG, "Bundesdatenschutzgesetz"), Tele Media Act (TMG, "Telemediengesetz"), and is built on infrastructure that is DIN ISO/IEC 27001 certified. FPRE uses a Finma-compliant data center located in Switzerland.

NDA for the data transfer of the equity and bond portfolios, as well as real estate portfolios:

To guarantee that your data is safe, a pre-signed NDA in English language with RMI (for equity and bond portfolio) and FPRE (for real estate portfolio) as well as a separate NDA just with the dedicated personnel from FPRE for the analysis of the Swiss mortgage portfolios (only available in German and French) are made available for financial institution on the <u>Transition Monitor Platform</u> 1st of March 2024. Prior to that participants can download the NDA (without signature fields) for internal review on <u>www.bafu.admin.ch/pacta-climate-test</u>. RMI does not require participants to sign this NDA in order to perform the test. However, this may be required by internal financial institutions policies.

If your institution requires an NDA, you can download the pre-filled and -signed NDA on the <u>Transition Monitor Platform</u>. After gathering the signatures, you can send the document back via regular post mail or electronically via email. Please send the NDA for RMI to <u>pactacop@rmi.org</u> and the NDA for FPRE to <u>pacta2024@fpre.ch</u>.