

2° Investing Initiative

PACTA (Paris Agreement Capital Transition Assessment)

FEEM Workshop: Methodologies and Tools to Evaluate the Financial Impact of Climate-Related Risks and Opportunities

20. November 2020

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Founded in 2012



Working globally, with offices in Paris, New York, Berlin, Brussels, and London



Collaborate with FIs, NGOs, universities, policymakers and supervisors



Non-profit, non-commercial think tank

Introduction

Paris Agreement Capital Transition Assessment

PACTA is a free and open-source methodology and software to assess the alignment of financial portfolios with climate goals.

Core module of the PACTA analysis: **climate scenario analysis for listed equity and corporate bonds**

Recent expansion to cover **corporate lending portfolios**: this module has been road-tested by a group of 17 major international banks including UBS, BNP Paribas, ING, Standard Chartered, Barclays and Credit Suisse.

Uptake since 2018: >1,500 financial institutions worldwide representing a total of USD 106 trillion in AuM, application in collaboration with financial supervisors (EIOPA, Dutch Central Bank) and governments (Switzerland, Austria)

Additional tools: stress test scenarios developed in collaboration with financial supervisors and central banks and Climate Action Guide

Introduction

PACTA - What questions does the analysis answer?

The PACTA analysis provides answers to the following questions:

1. What is the exposure of the portfolio to climate-relevant sectors and technologies?

(Exposure)

2. Are the production plans that the portfolio is invested in aligned with energy transition scenarios that meet a 2°C temperature target? **(Alignment)**

3. What are the company-level results driving the alignment?

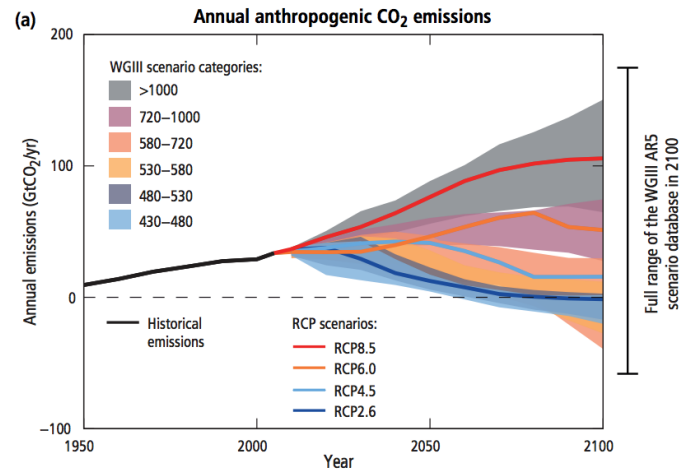
Introduction

Overview – PACTA Methodology

Corporate lending and investment portfolios



Energy Transition Scenarios

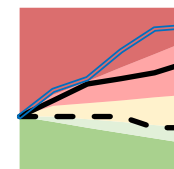
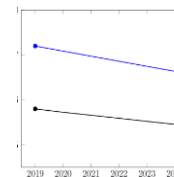
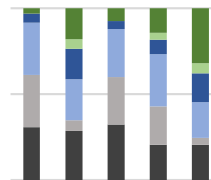


Physical Assets in the Real Economy



Output Metrics

- Technology mix - Emission Intensity - Volume trajectory



Introduction

PACTA Methodology

Physical asset-level data: The analysis is currently based on data covering 40 000+ companies and 230 000+ energy-related physical assets from third-party data providers in 9 climate relevant sectors.

Forward-Looking: PACTA provides a forward-looking analysis of the production plans financed by a portfolio that are compared to climate scenarios.

Sector- and technology-specific approach: The outputs of the analysis are metrics and indicators at sector and technology-level that allow for a detailed evaluation of a portfolios alignment, rather than one aggregated indicator at portfolio level.

Introduction

Coverage - sectors

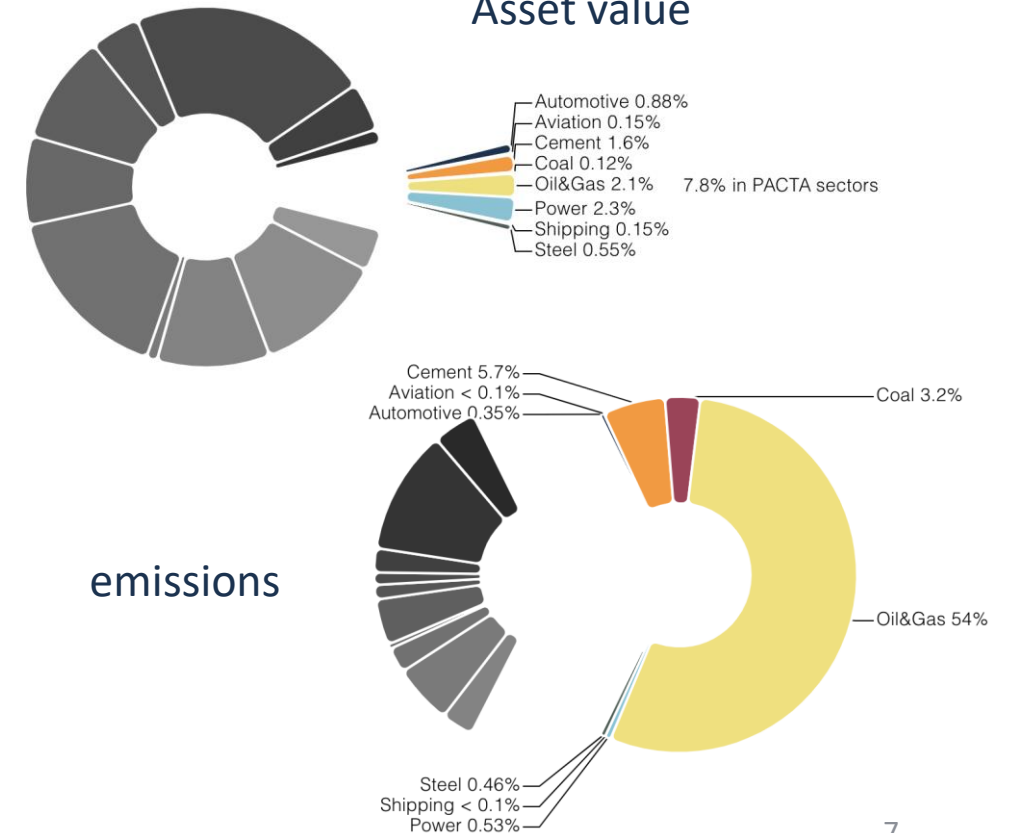
230,000+ assets account for about 75% of CO₂ emissions

Climate-related sectors



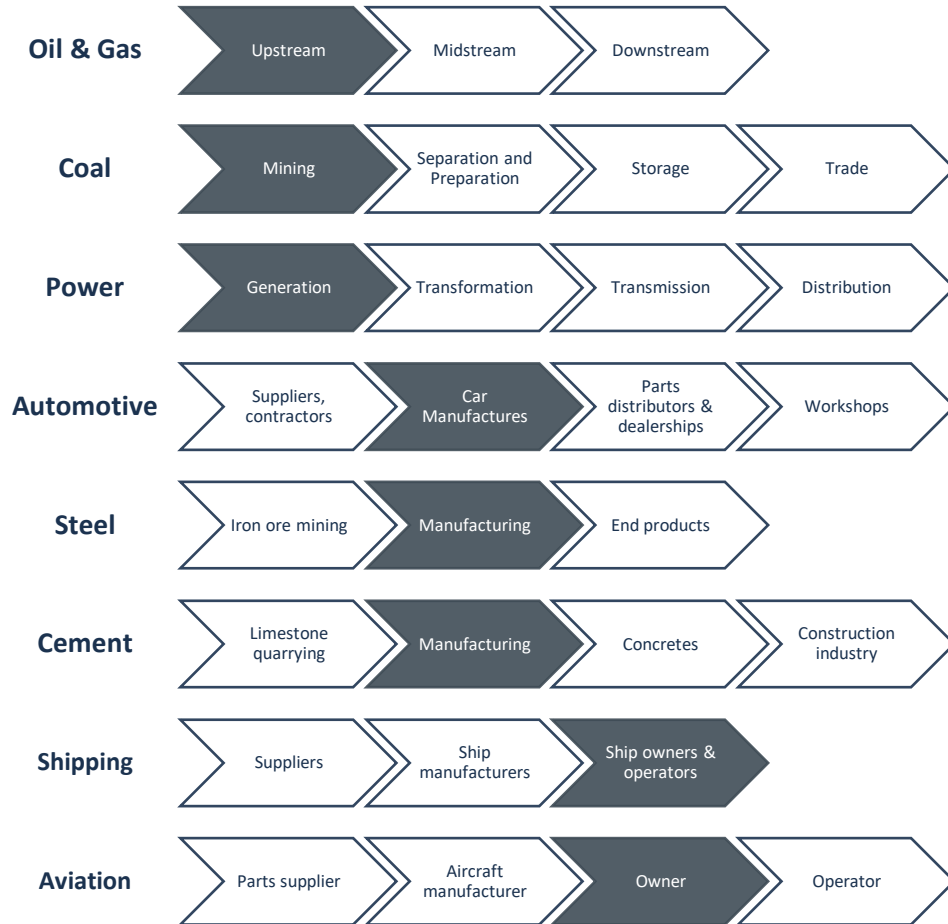
Global CO₂ emissions

At portfolio level:



Introduction

Coverage - Sectors



Only the most climate-relevant segment of the value chain is covered

Rationale is that if steering efforts align this segment of the value chain then the rest will become aligned

Introduction

Data sources

Financial data: Bloomberg, Lipper



Asset-Level Data:

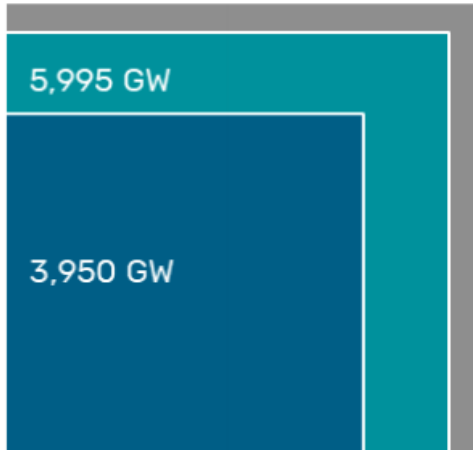
Asset Level Data		
Data provider	Sectors	Key data points
GlobalData	Power, oil & gas, coal mining	a. Power plant data, including installed capacity, technology, status (i.e. announced, active, decommissioned, etc.). b. Oil and gas field data, including annual production volume. c. Coal mine data, including annual production mass.
AutoForecast Solutions	Automotive	Production forecasts for light duty vehicles
RightShip	Shipping	Ship data, including ship type and GHG rating score
CIRIUM, AirNav	Aviation	Passenger, cargo and combined aircraft data, including number of seats or tons transported, aircraft model, etc.
PlantFacts	Steel	Steel plant data, including production and CO2 emissions
Global Cement Directory	Cement	Cement plant data, including production and CO2 emissions
Power Systems Research	Heavy Duty Vehicles	Production forecasts for heavy duty vehicles

Introduction

Data sources

POWER GENERATION (capacity)

6,887 GW

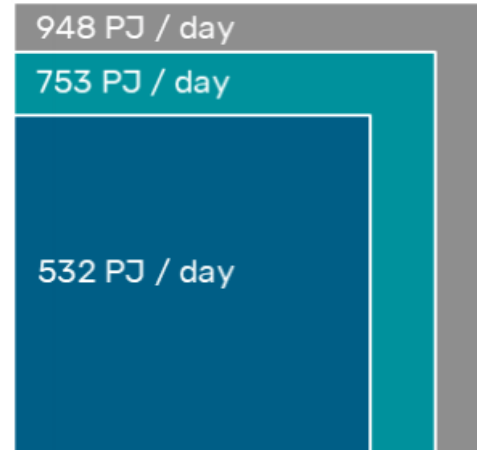


OIL & GAS (daily production)

948 PJ / day

753 PJ / day

532 PJ / day

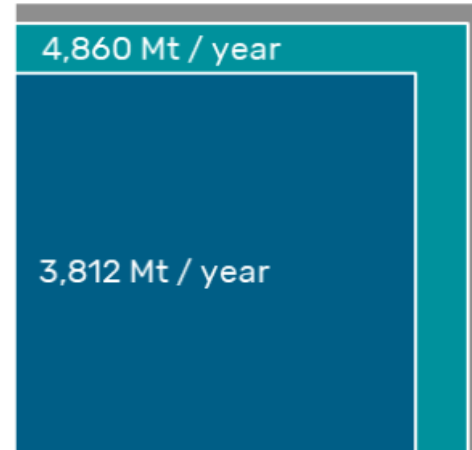


COAL (yearly production)

5,346 Mt / year

4,860 Mt / year

3,812 Mt / year

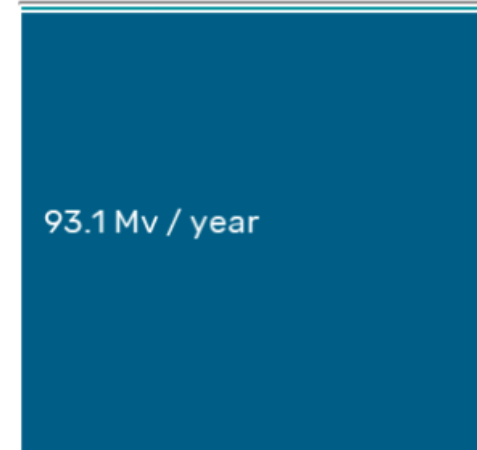


AUTOMOTIVE (annual production)

97.3 million vehicles / year

95.9 Mv / year

93.1 Mv / year



Global benchmark (source: IEA, 2017)

Asset-level data in the database

Financially-mapped data

PACTA Methodology

Exposure to climate relevant sectors and technologies

The PACTA analysis provides answers to the following questions:

1. What is the exposure of my portfolio to climate-relevant sectors and technologies?

(Exposure)

2. Are the production plans of companies in the portfolio aligned with energy transition scenarios that meet a 2C temperature target? **(Alignment)**

3. What are the company-level results driving the alignment?

PACTA Methodology

Exposure to climate relevant sectors and technologies

Portfolio data

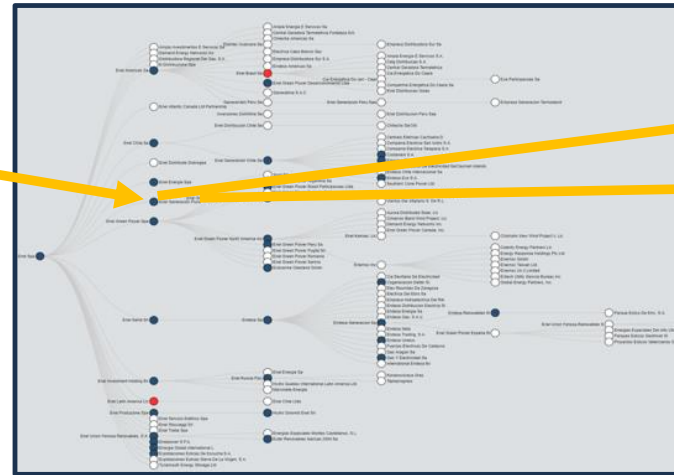


Company and financial data



Production data at plant level

ISIN	MarketValue	Currency
DE000BASF111	2899.2	EUR
ES0118594417	2989.31	EUR
FR0000011355	10156.79	EUR



2020 2021 2022...



543 543 578...



234 256 378...



234 256 378...

Production plans for the next 5 years

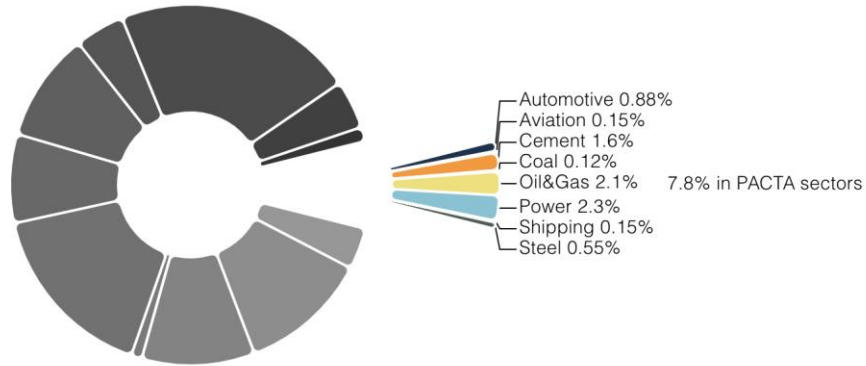
Sector Classification

Analysis of the ownership structure

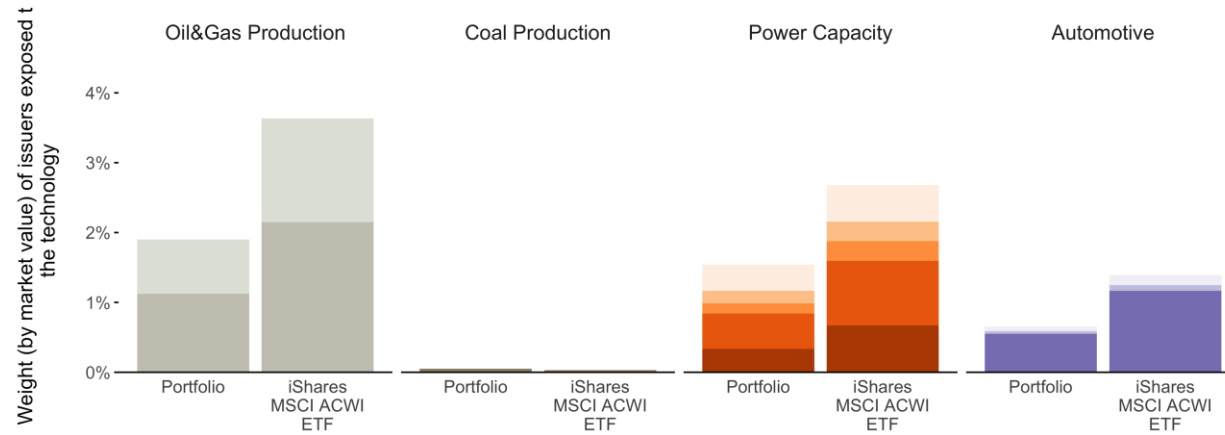
PACTA Methodology

Exposure to climate relevant sectors and technologies

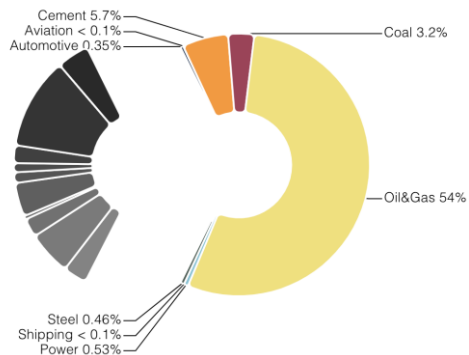
Investments in climate-relevant sectors:



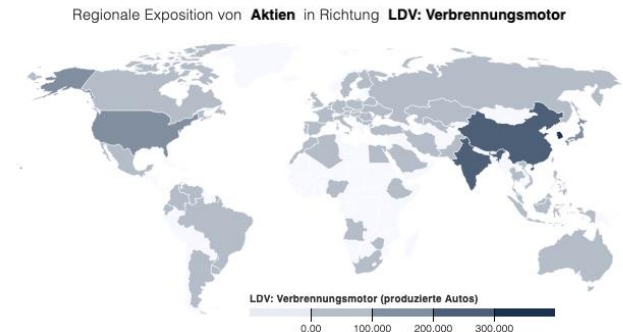
Exposure at technology level:



Corresponding emissions:



Geographical evaluation:



Introduction

Paris Agreement Capital Transition Assessment

The PACTA analysis provides answers to the following questions:

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(Exposure)

2. Are the production plans that the portfolio is invested in aligned with energy transition scenarios that meet a 2°C temperature target? (Alignment)

3. What are the company-level results driving the alignment?

PACTA Methodology

Alignment of companies' production plans

Portfolio data



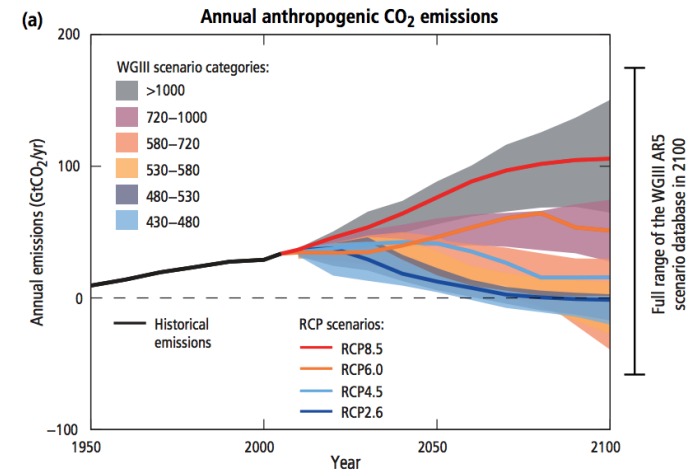
Company and financial data



Production data at plant level



Energy Transition Scenarios



Sources:

- International Energy Agency (World Energy Outlook 2019 and 2020, Energy Technology Perspectives 2017)
- Global Energy and Climate Outlook 2019 (EU Joint Research Centre)

PACTA Methodology

Alignment – Underlying Principles

How are macroeconomic goals (technology pathways) allocated to microeconomic actors (companies)?

Market share approach (sector/technology)

How to allocate company-level activities to financial instruments?

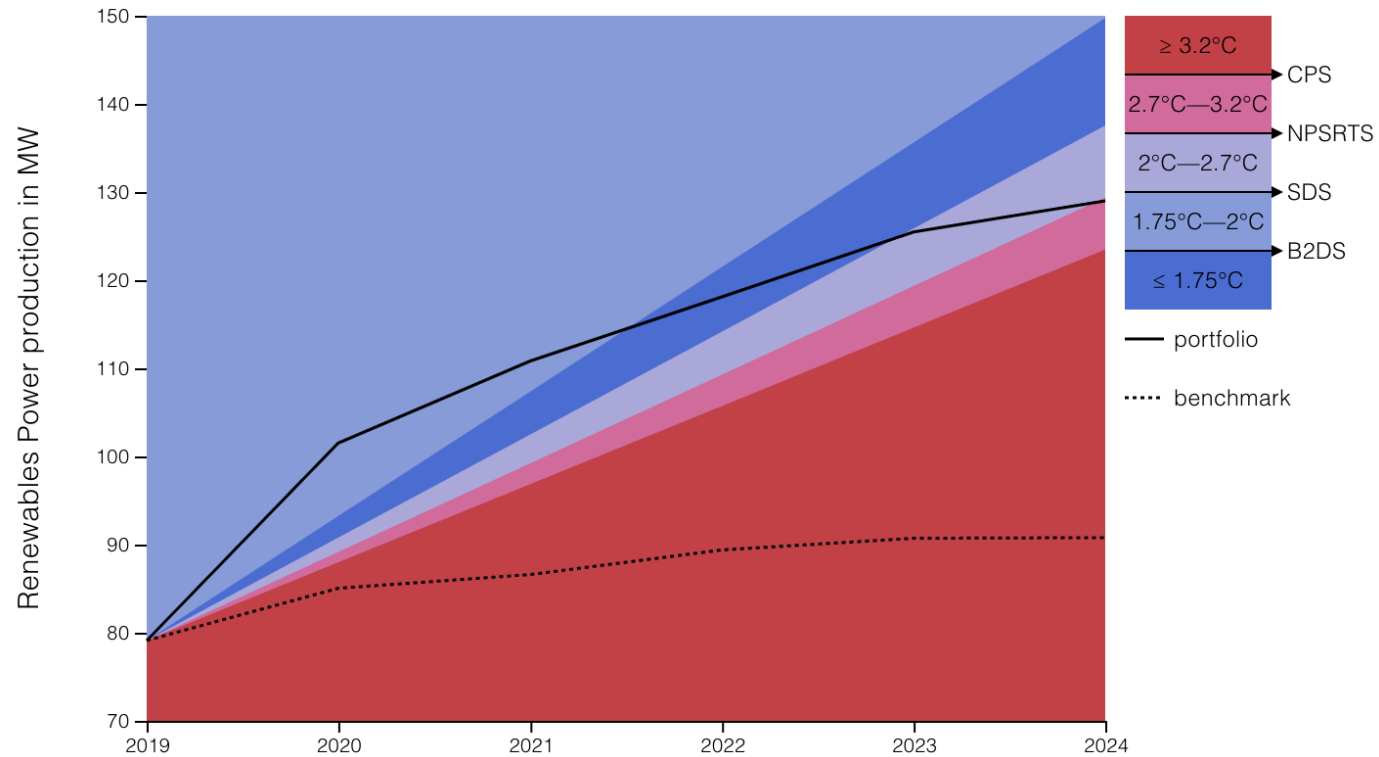
Portfolio Weight approach. This approach calculates the portfolios' technology exposures based on the weighting of each position within the portfolio. This approach is used for the analysis of corporate bonds.

Ownership Weight approach: based on the percent of outstanding shares owned by the investor. This approach comes closer to allocating “responsibility” for the companies' activities to the financial institution. This approach is used for listed equity portfolios.

PACTA Methodology

Alignment – Results

Listed Equity: Production trajectory of **Renewables Power**
compared to **iShares Core S and P 500 ETF**



PACTA Methodology

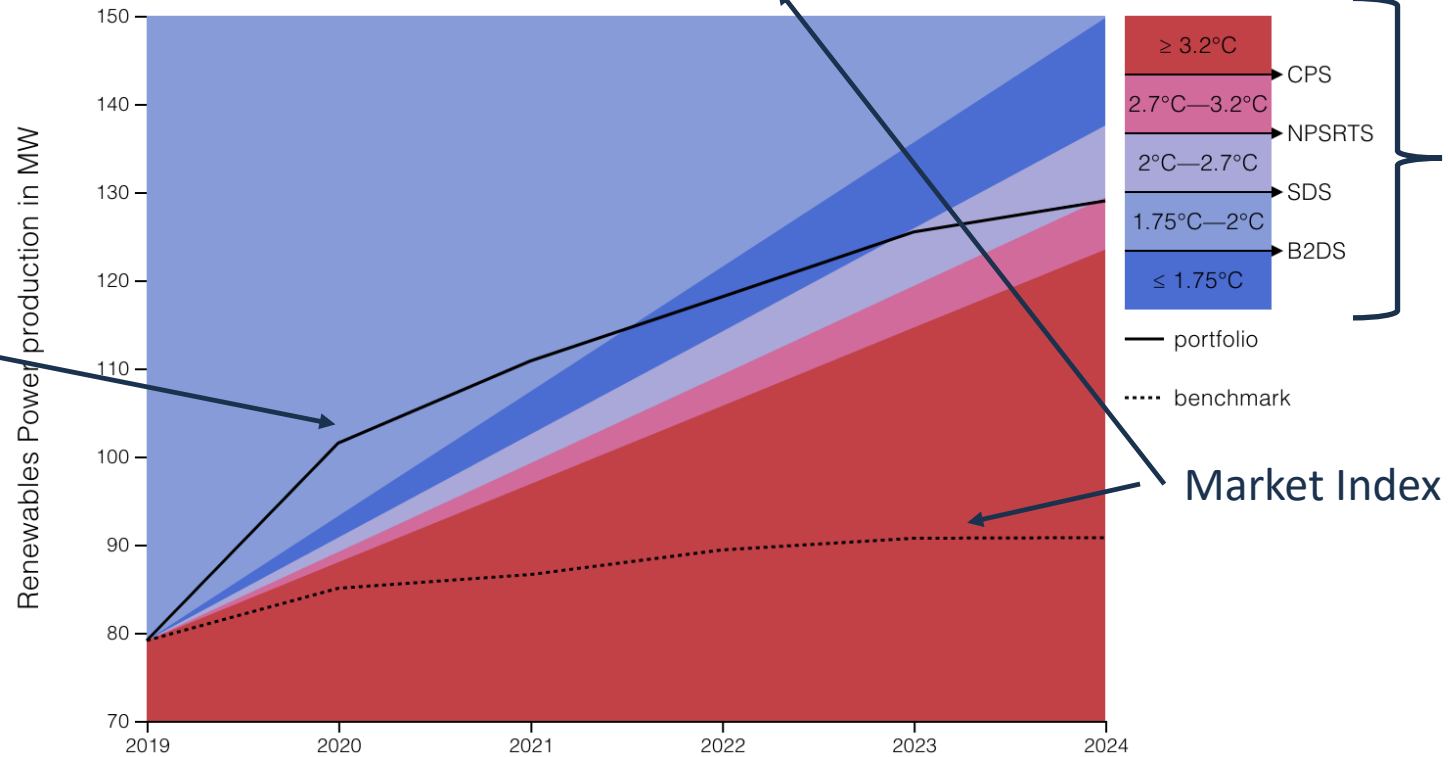
Alignment – Results

Asset Classes

Listed Equity: Production trajectory of Renewables Power compared to iShares Core S and P 500 ETF

Technology

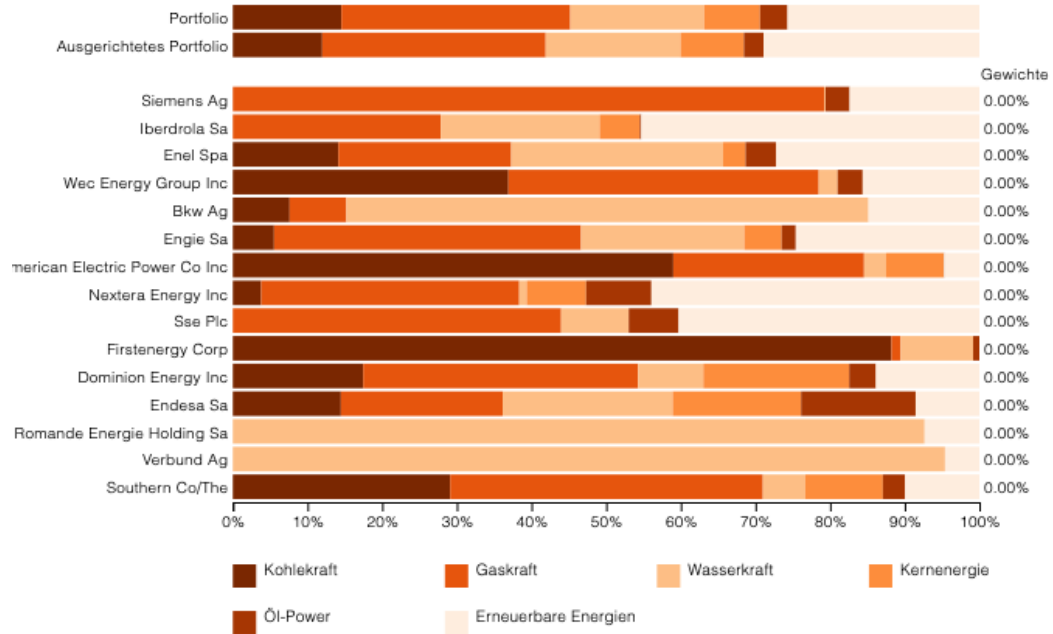
Weighted Production plans of companies in the portfolio



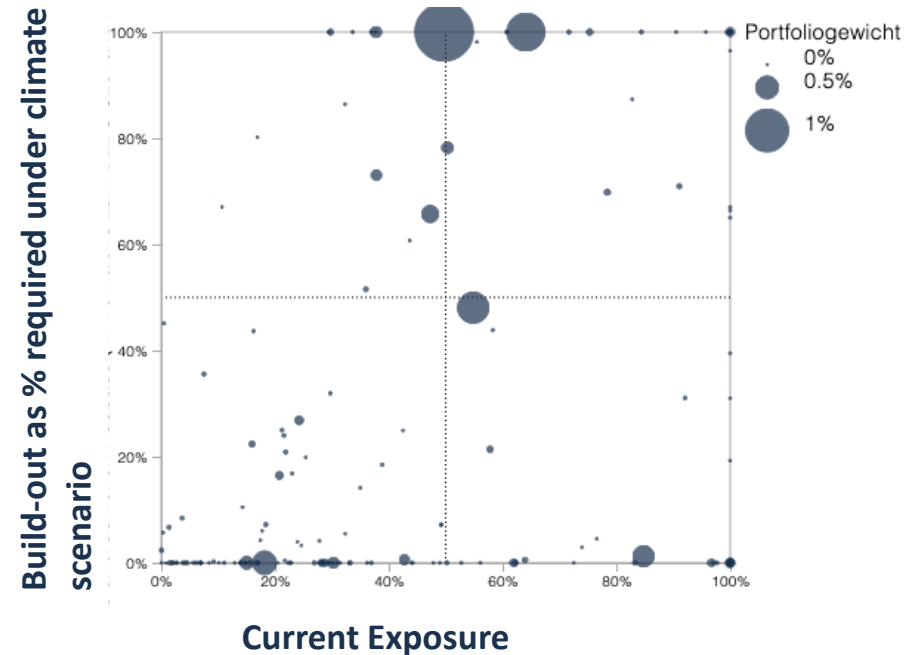
PACTA Methodology

Company-Level Results

Future technology mix:

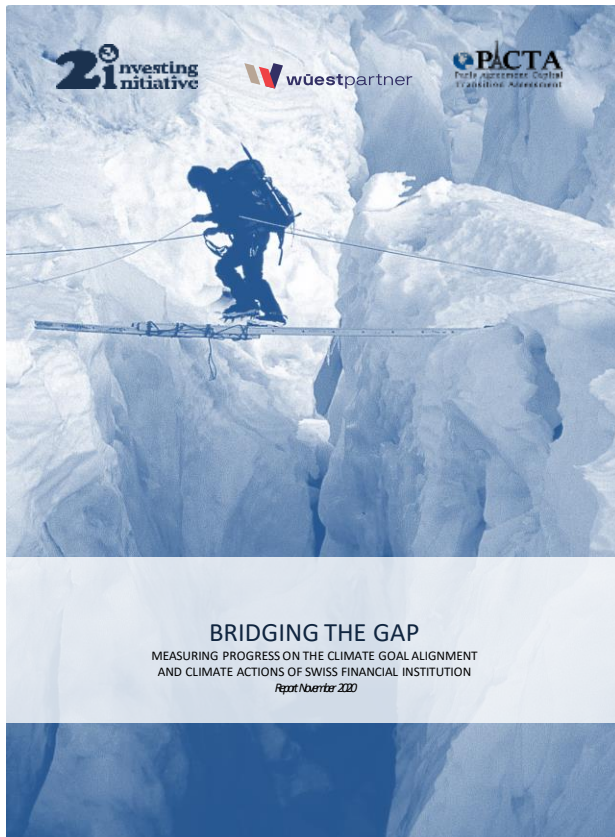


Exposure vs Alignment at company level:

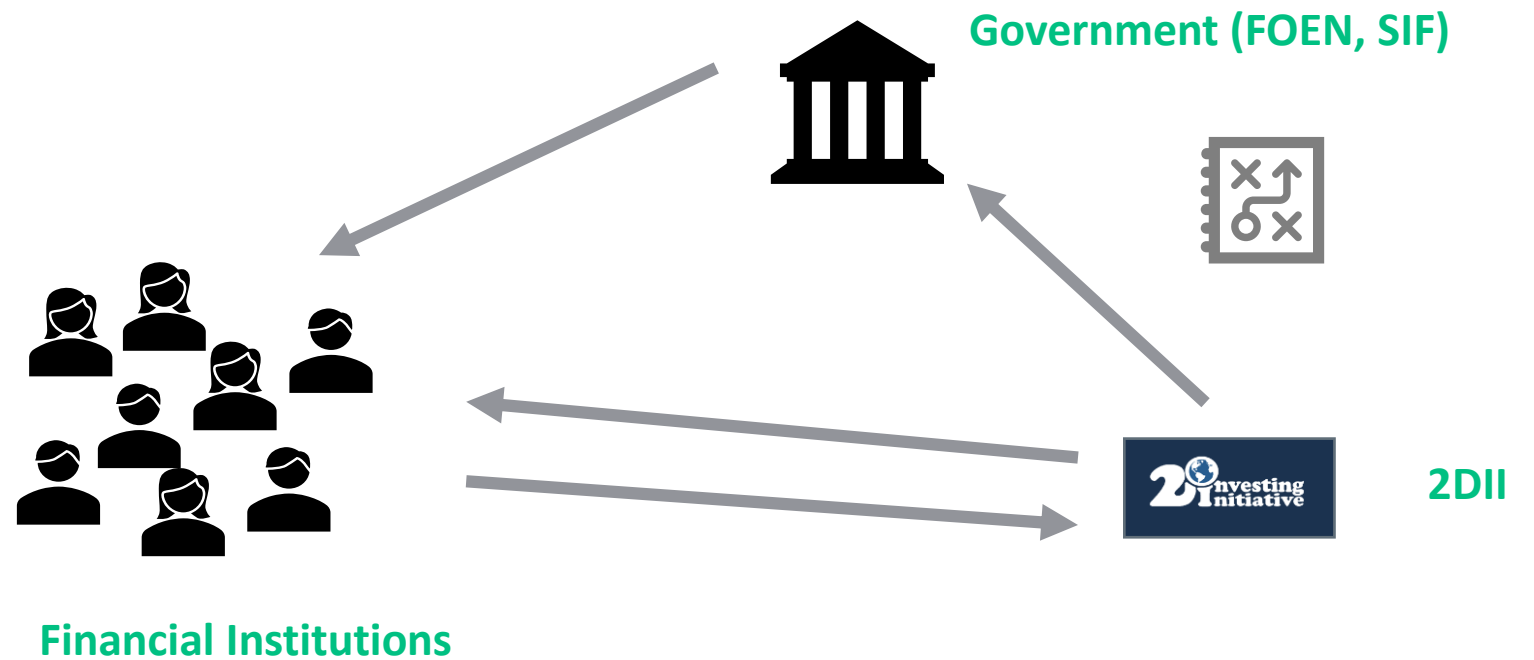


PACTA in Action

Assessment of the Swiss financial market (November 2020)

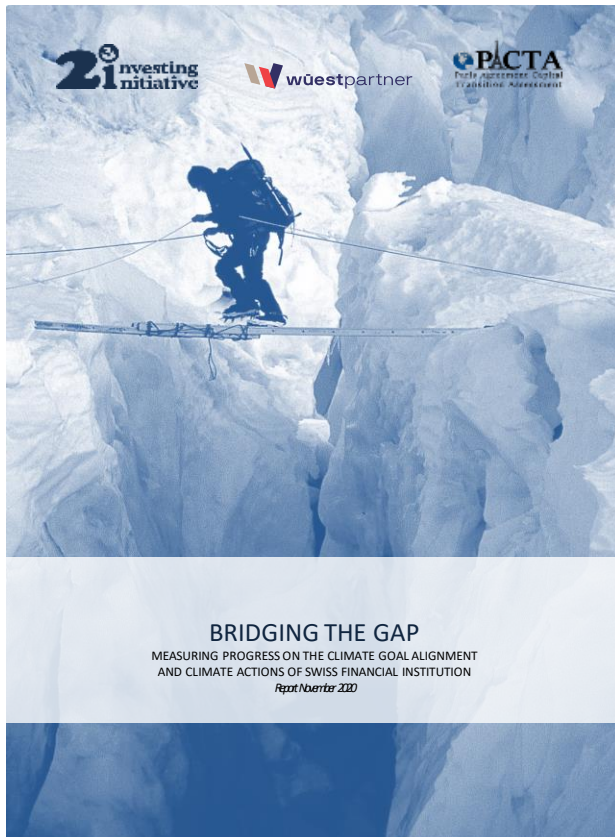


Assessment of the Swiss financial market – institutions representing >80% of the market participating

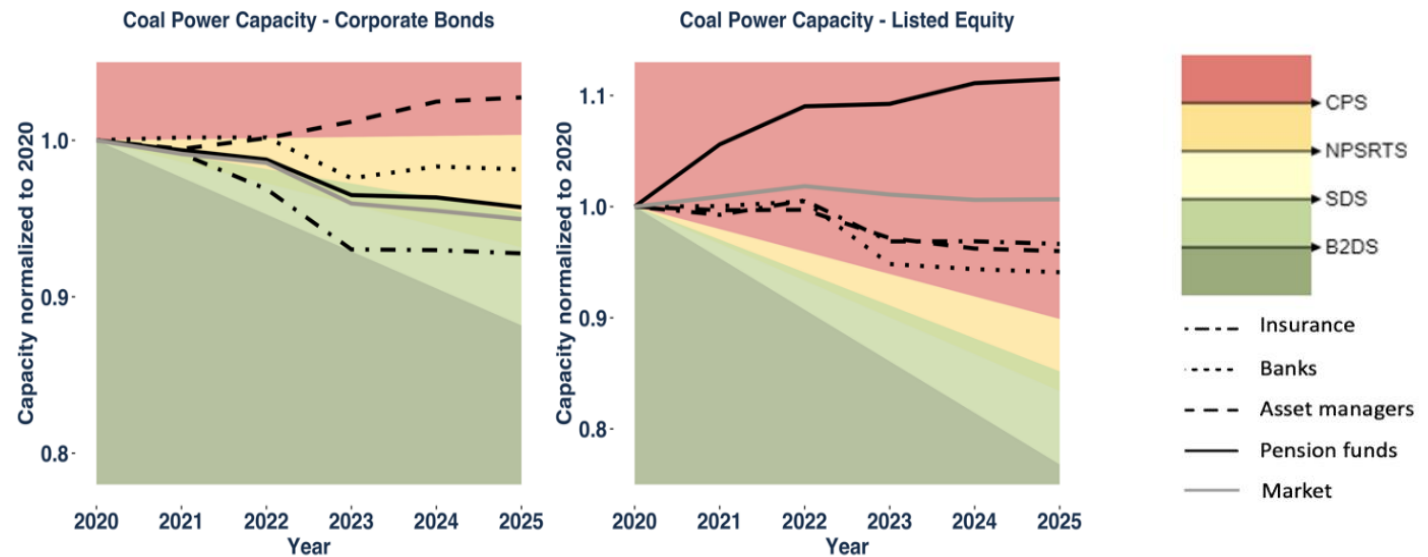


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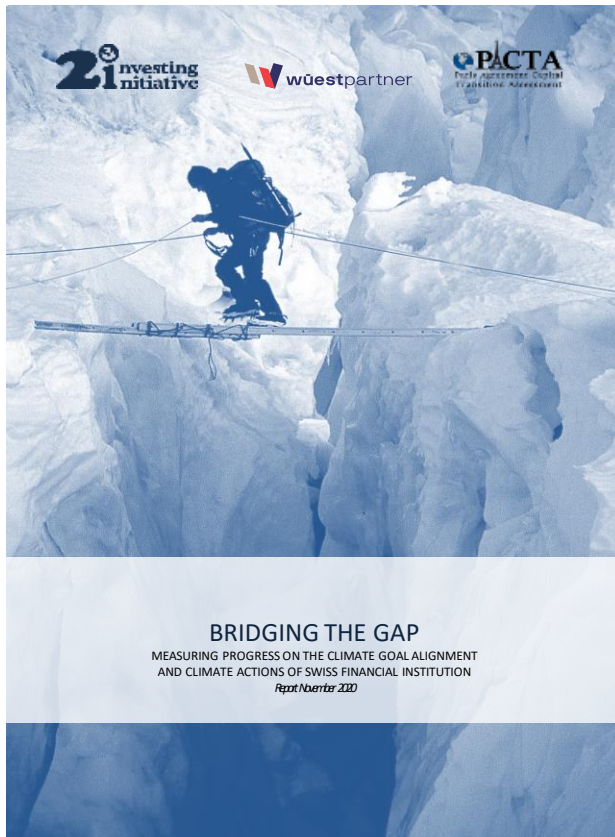


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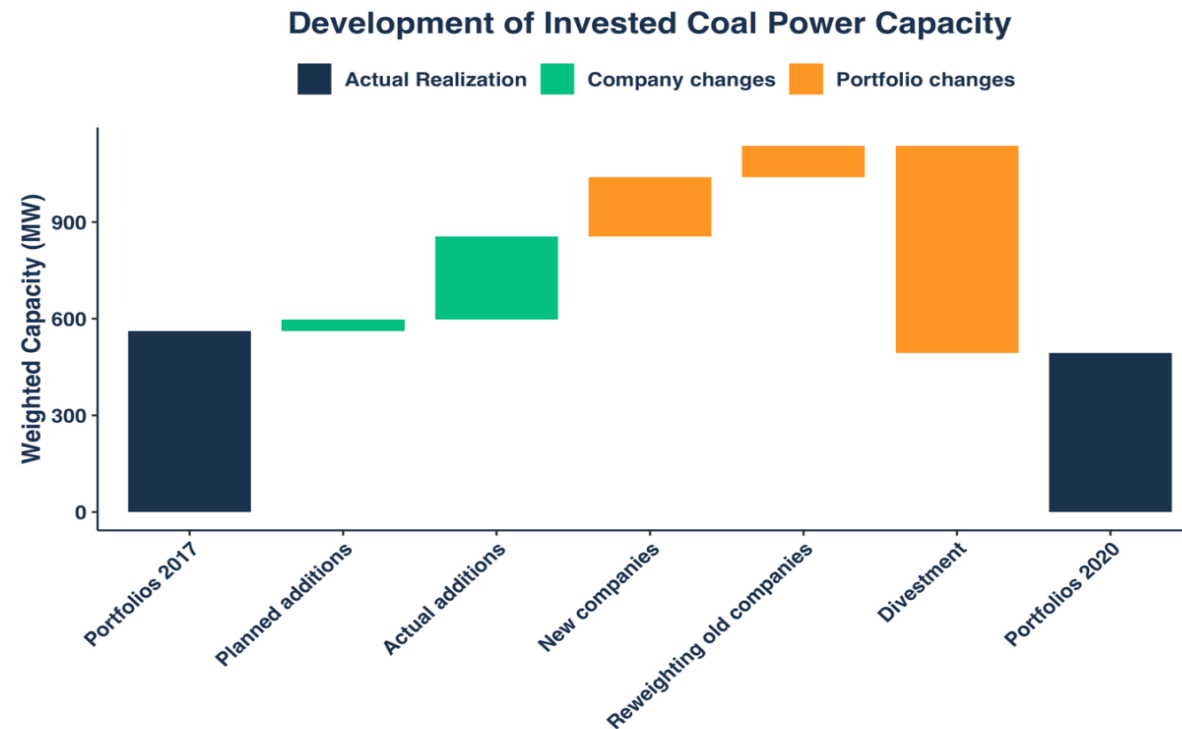


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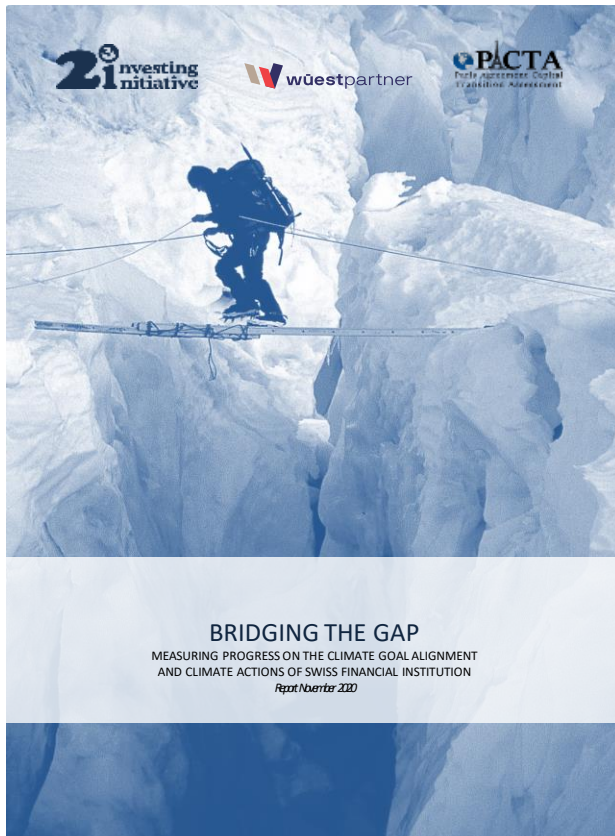


Assessment of the Swiss financial market – institutions representing >80% of the market participating



PACTA in Action

Assessment of the Swiss financial market (November 2020)



Assessment of the Swiss financial market – institutions representing >80% of the market participating

New Infrastructure developed as part of this project available currently only for PACTA 2020 participants

- Interactive Report
- Additional scenarios
- Climate Action Guide

More Information and future development

More information on the PACTA methodology can be found on TransitionMonitor.com as well as the PACTA Knowledge Hub

PACTA can be used to help inform:

- Risk Management
- Climate related decision making and strategy
- Target setting
- Identifying and engaging with clients
- Disclosure and reporting
- Climate stress-tests

