sparkchange

The new standard in carbon investing

Proactive Webinar, 24/03/2022

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COMPANY PURPOSE

SparkChange provides data & investment solutions that help the global finance industry leverage the most pivotal market of our time: carbon

LOCATIONS: UK, US, Germany

TEAM MEMBERS: 22

SECTOR: ESG Data Analytics

www.sparkchange.io

We're working with leading global companies to impact the lives of billions

BARCLAYS

SOLACTIVE German Index Engineering

Imperial College London

MONASH University

MACQUARIE

STATE STREET

PROBLEM

As the world responds to the climate emergency, the finance industry struggles to adapt.

- The largest transition of funds in history is taking place; investment industry at tipping point as $43tn in funds publicly commit to net zero[1]
- It's a challenging combination for investors to:

  - Achieve ESG goals
  - Generate investment returns
  - Hedge carbon risks

- Current ESG data is insufficient to solve climate goals
- Hence investors rely on nascent (or as yet unknown) ESG investment strategies and technologies
- Increases uncertainty/risk of meeting publicly pledged targets

$43tn
committed to net zero

[1] The Financial Times (2021), Investment industry at 'tipping point' as $43tn in funds publicly commit to net zero carbon emissions

SOLUTION: AN INTEGRATED CARBON ECOSYSTEM

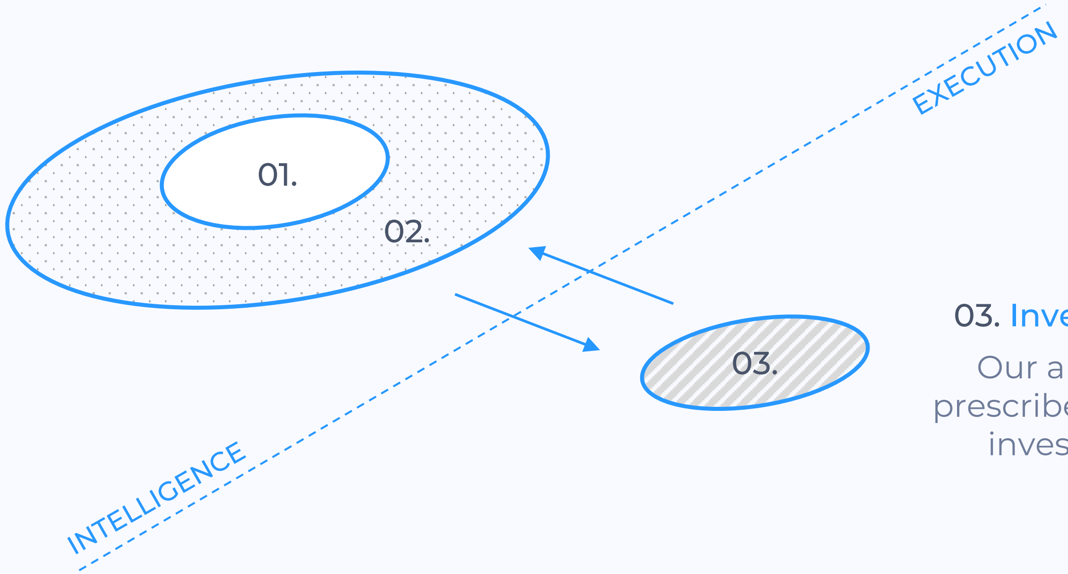
SparkChange provides data and tools to integrate the global finance industry with carbon markets.

01. Proprietary Data

Discover unique insights between carbon and financial markets

02. Analytics Platform

Formulate actionable strategies to meet specific decarbonisation, risk or returns objectives



03. Investment Solutions

Our analytics platform prescribes ready-to-execute investment solutions

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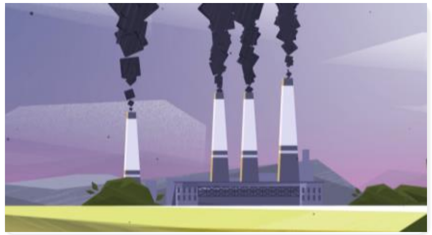
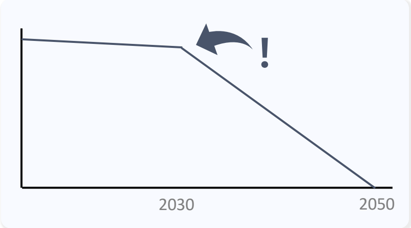
Why (and how) should we accelerate decarbonisation



1 Finance industry agrees carbon is THE thing to tackle

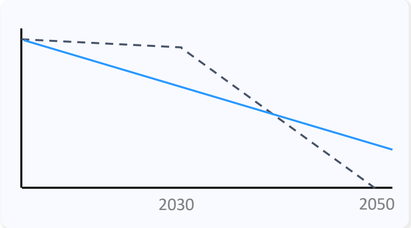
MSCI calls Climate "first among equals" in their ESG trends to watch[1]

"Decarbonise or die", world's biggest investor warns business chiefs[2]



2 Politicians have created an unrealistic decarbonisation pathway

Meeting our climate goals requires a drastic cut to emissions in the future – double the reductions seen during Covid



3 Acting sooner creates environmental and economic benefits

- ✓ More attainable pathway
- ✓ Less environmental damage
- ✓ More realistic 2050 emissions
- ✓ Faster adoption of new solutions

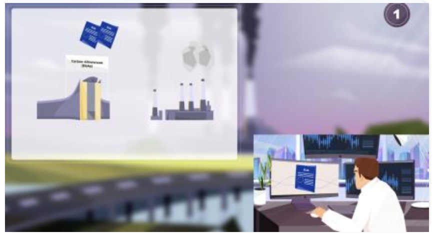
4 Carbon market is the EU's primary decarbonisation tool

The EU Emissions Trading System is a large, reformed market with positive outlook

5 How it works:
1 allowance ⇒ 1 tonne CO_2

Industrial firms that emit CO_2 must obtain Carbon Emission Allowances from regulators – each allowance permits them to emit 1 tonne of CO_2

Introduction to carbon markets



6 Investing in allowances creates direct environmental impact

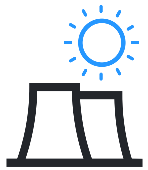
Buying, holding and selling allowances creates dual benefits by i) preventing emissions <u>and</u> ii) delaying emissions

How does this work?

[1] MCSI, 2022 ESG Trends to Watch [2] The Sydney Morning Herald

ENVIRONMENTAL IMPACT

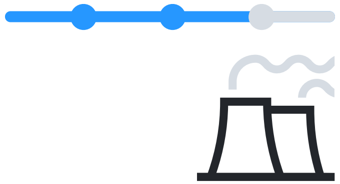
How does investing in physical carbon allowances create impact?



1 | By preventing emissions

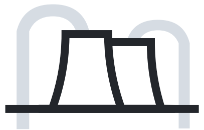
Withholding allowances triggers an EU law that results in additional allowances being cancelled in future years, with irreversible effect.

How does this law work?



2 | By delaying emissions

Buying and withholding carbon allowances stops polluters from being able to use them during that period.



3 | By accelerating technological adoption

Increasing scarcity and investor demand results in higher carbon prices, which incentivises the switch from dirty fossil fuels to cleaner energy.

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ENVIRONMENTAL IMPACT

How can EU law trigger the cancellation of future allowances?

The Market Stability Reserve: Brief history

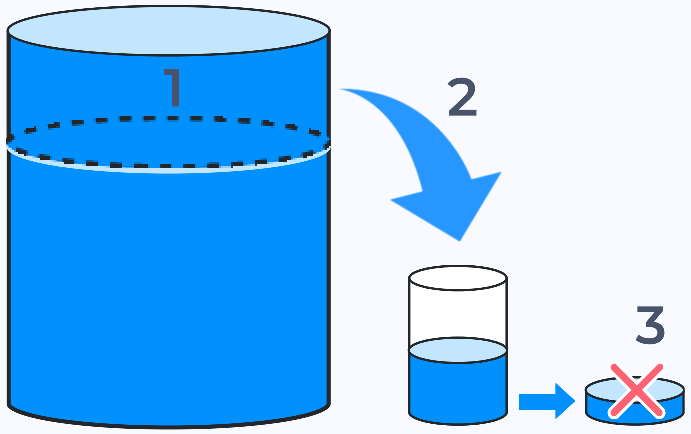
- During the financial crisis, the EU had no way of adjusting supply
- This created an overhang of supply that suppressed prices for years afterwards
- In response, the MSR was introduced to automatically adjust supply whenever emissions levels change
- Effectiveness demonstrated by price history

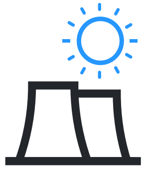
How the Market Stability Reserve works

1 | European Emissions Trading System **surplus** is greater than 833m allowances in circulation[1]

2 | 24% of surplus EUAs are withheld from future auctions and **transferred** to Market Stability Reserve (MSR)

3 | Amount of allowances in MSR above previous year's auction volume are **cancelled** (as of 2023)





Aided by the MSR cancellation effect, withholding 1 EUA for 10 years prevents 0.82 – 1.48 tonnes of emissions

Research paper available
Quantifies effect of MSR on emission reductions

LSE
THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

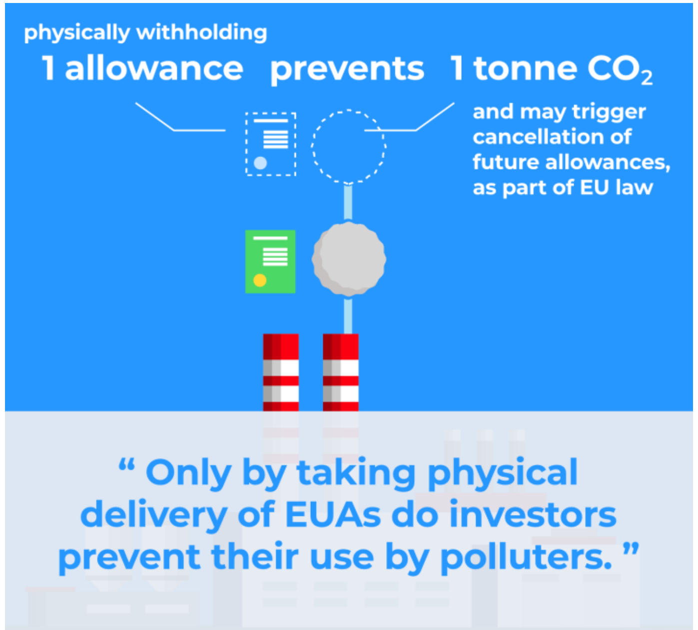
[1] If number of allowances in circulation falls below 400m, EUAs from MSR get returned to the market

ENVIRONMENTAL IMPACT

Benefits of a physically-backed EUA product approach

	Physically-backed EUA products	Futures-based EUA products
Guaranteed Impact	✓ Yes	✗ No
Avoids Contango	✓ Yes	✗ No

	EUAs	Offsets
Alignment with Paris Agreement	✓ Yes	✗ No
Regulated and standardised	✓ Yes	✗ No
Create net emission reductions	✓ Yes	✗ No
Impact and returns achievable together	✓ Yes	✗ No
Valid net zero instrument	✓ Yes	✗ No



For illustrative purposes only

[12] https://www.parisalignedinvestment.org/media/2021/03/PAII-Net-Zero-Investment-Framework_Implementation-Guide.pdf, page 25

Why add Physical Carbon Allowances to your portfolio?

Enables investors to achieve both financial returns and positive environmental impact

— As a standalone investment —

Improve impact

Create genuine environmental impact by withholding emitters' allowances. EUAs are an asset that produce a positive impact and can be re-sold; unlike offsets, which have no resale value once used and (mostly) do not reduce emissions

Capture investment returns

Since the supply of carbon allowances is diminishing, their scarcity value is increasing, creating potential for an attractive returns profile

— Or as part of a portfolio —

Hedge price risk

Given most portfolios are short the carbon price already, investors can neutralise their exposure to a rising carbon price

Qualify for ESG standards

Combine with equity/fixed income structures to qualify for ESG standards such as CTB/PAB benchmarks

Risks of adding to your portfolio

When you trade ETCs, your capital is at risk

carbonImpact

Don’t just measure your problem. Solve it.

CarbonImpact is an end-to-end solution to analyse and align a portfolio’s carbon exposure. It formulates actionable decarbonisation strategies to help investors adapt to the climate crisis.

01. Calculate carbon exposure

Upload a portfolio to analyse how its carbon exposure develops over time by scope, sector and region.

02. Define environmental goal

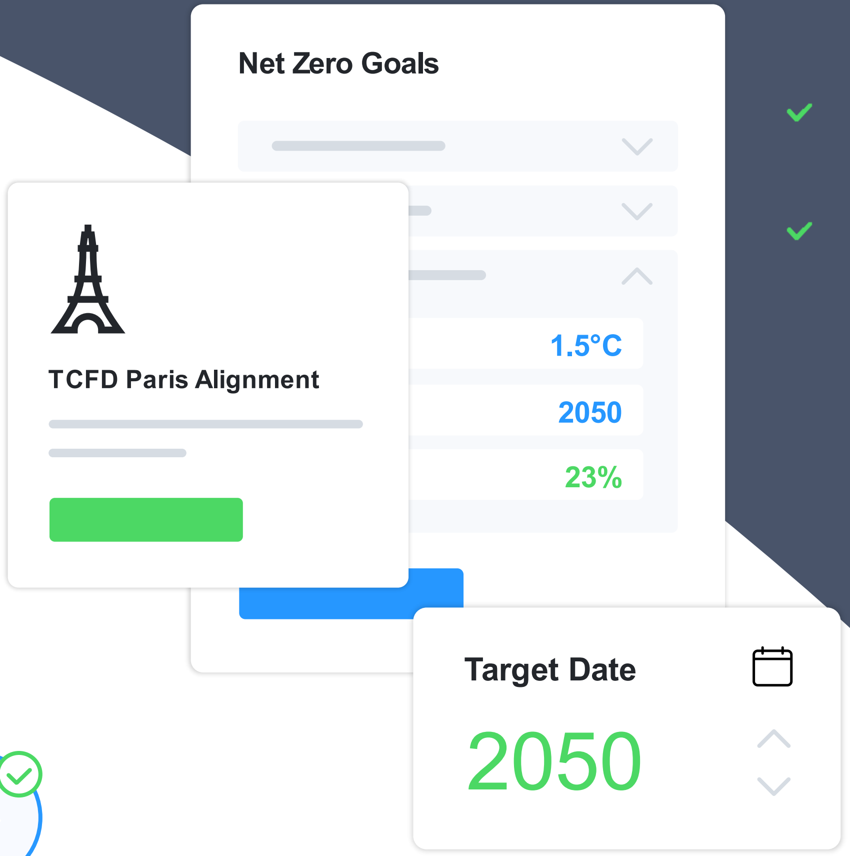
Set your desired climate goal from a wide range of industry benchmarks, or balance your entire footprint.

03. Analyse gap

Identify and understand precisely what is required to achieve alignment.

04. Review executable strategies

Understand the financial impact and suitability of each prescribed decarbonization strategy.



- Complements investors’ existing screening strategies
- Agnostic to data input
- Supports broad range of benchmarks

Cloud-based API integration & technical assistance available

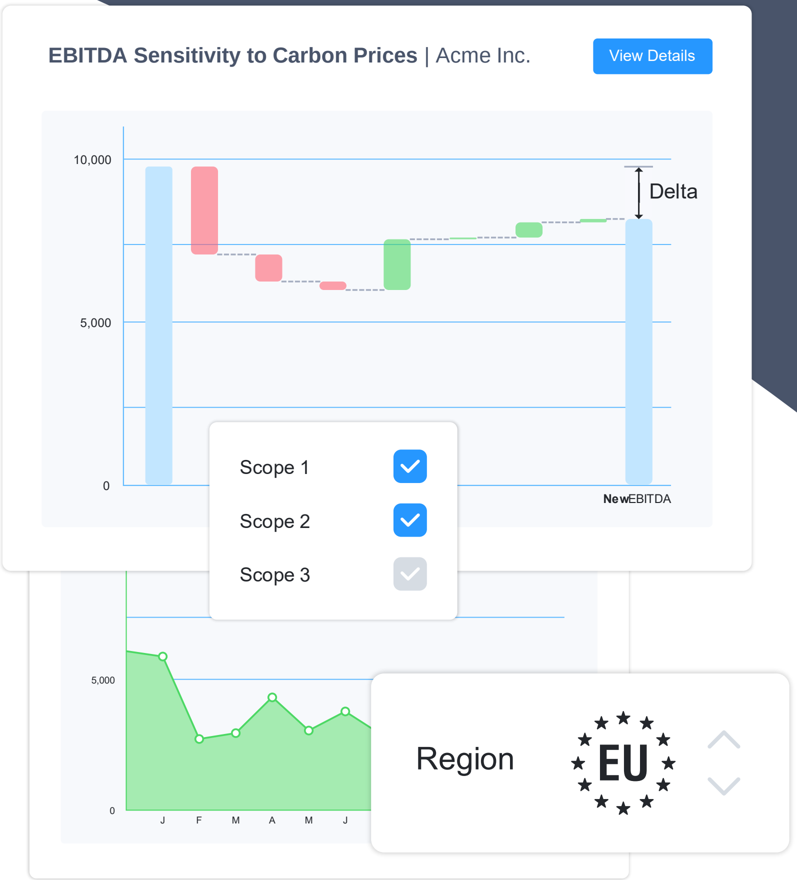
DATA ANALYTICS

carbonAlpha

Discover which companies thrive in a high carbon price future.

CarbonAlpha allows portfolio managers to harness carbon as a source of Alpha generation, or mitigate exposure to carbon as an increasingly important risk factor.

- Forecast company valuations and portfolio exposure for different carbon price scenarios
- Increase returns by identifying winners/losers per sector at different carbon prices
- Hedge a portfolio's carbon price exposure per regional carbon market



- Bridges carbon & financial markets
- Enables direct integration of carbon pricing into a portfolio
- Developed by leading carbon market experts
- Backed by rigorous academic framework

Research collaborators: Imperial College London

Provides complete picture of the effect of carbon pricing

Multi-region analysis
Covers differences in regional carbon markets and their regulatory regimes.

Understand cost pass-through (by sector)
Reveals what % of a company's carbon costs can be passed to their customers.

Analyse net change to EBITDA
Shows the positive or negative effect of higher carbon pricing on EBITDA.

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Thank you for listening!

Follow-up:

Billal Ismail
Head of Sales

- Please feel free to contact me directly at bi@sparkchange.io
- Our company website address is http://www.sparkchange.io
- More details regarding our EUA ETC can be seen at https://www.hanetf.com/product/30/fund/sparkchange-physical-carbon-eua-etc