



EUA Derivatives

- the solution to the unknown cost

Oct 2023



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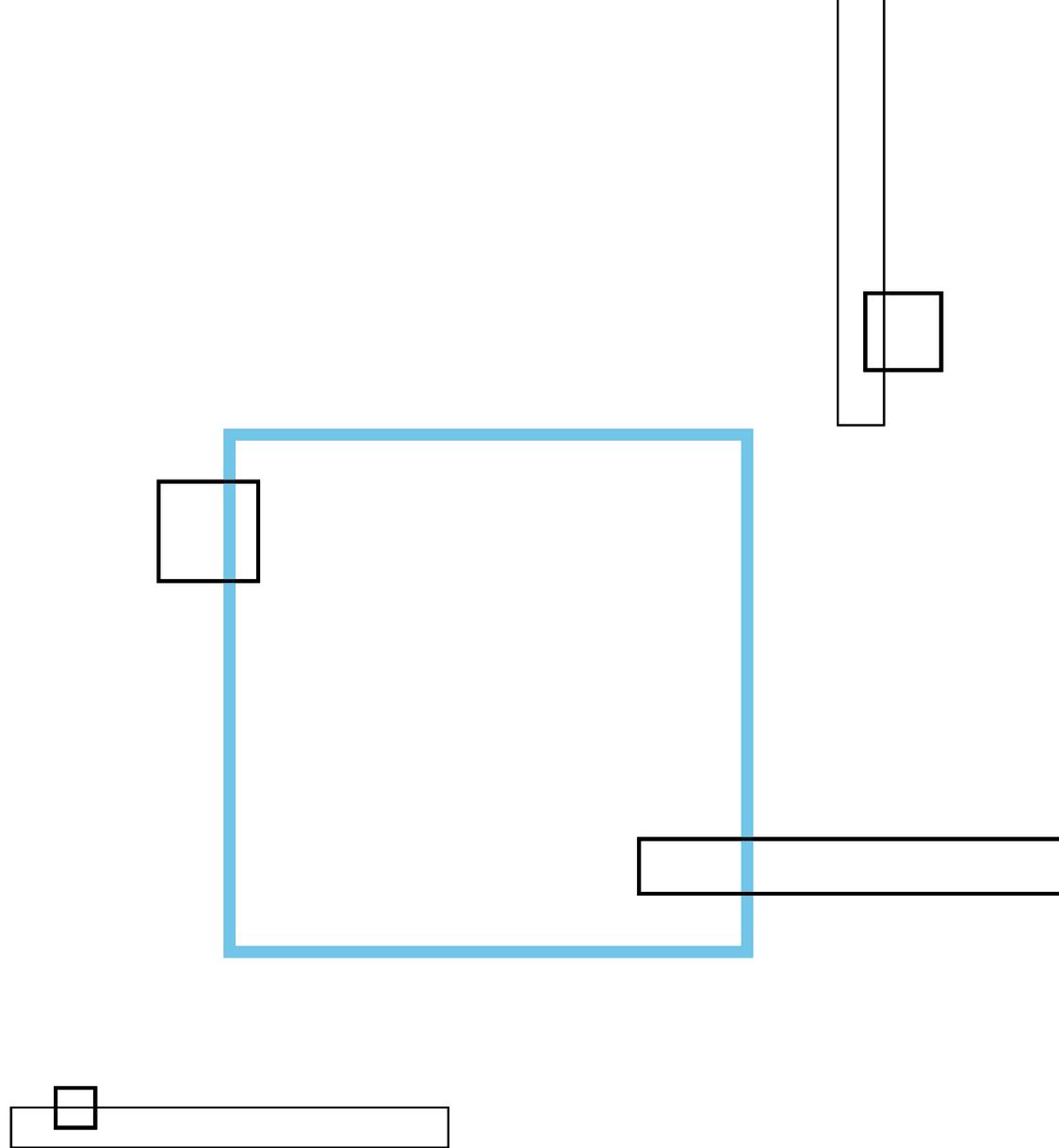
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ICE Environmental Markets



ICE host to the world's largest environmental markets

Connect to a global environmental portfolio to price climate risk



>**\$1T notional value** of environmental futures and options traded per annum



>**95% market share** of all globally traded environmental futures and options trade on ICE



>**6 billion tonnes of carbon credits**, equating to the Co2 absorption of 6 billion trees



>**250 million RECs**, equal to the annual per capita energy consumption of 140 million people



>**5 billion RINs** – equal to 119 million barrels of renewable fuel

ICE Environmental Markets

Negative externalities
Carbon Allowances

Positive externalities
Guarantees of Origin

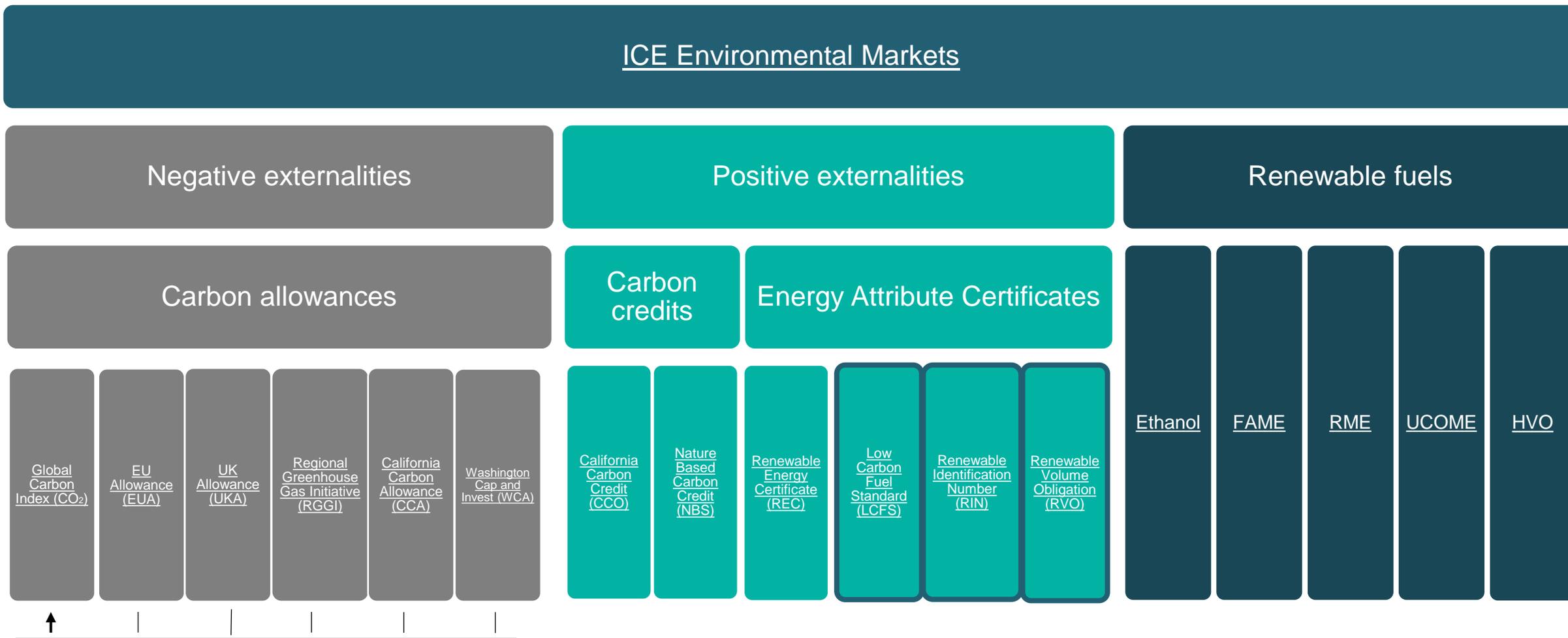
Renewable fuels

Sustainable Indices



ICE environmental markets

Valuing positive and negative externalities and renewable fuels



EU ETS is coming to the rest of the World

ETS for shipping starts in 2024



CBAM starts in 2026

The Problem

- New annual cost: current price ~81euros per allowance
- Revenues earned in 2024
- What will the cost of allowance when you need to deliver in Sep 2025?

Answer:

- Hedge or lock in the cost using the EUA futures and/or options contract

For those who want to understand how futures and options markets work:

<https://www.ice.com/support/education/trading-derivatives>

Courses: <https://www.ice.com/EducationCourses.shtml?courseList>

EUA Market Dynamics

- The EU ETS was established in 2005. It covers ~40% of the greenhouse gas emissions from the EU, and applies to heavy industry, the power sector, and airlines operators. Covered companies have to surrender allowances equal to their annual emissions, the following year
- EUA futures are contracts for allowances issued by the EU Emissions Trading System. The EU ETS is a Cap and Trade programme, which puts a cost on pollution and allows companies to trade amongst themselves to reduce emissions in the most cost-effective manner.
- EUA Futures are physically delivered products whereby contracts held to expiry result in deliveries within the EU Registry
- ICE lists EUA Daily Futures (spot), EUA Futures (2 monthly, 3 August, 7 quarterly, and 7 December contracts) and EUA options (2 August, 6 quarterly and 7 December contracts)

ICE – EUA Futures Contracts

- Daily Futures :
 - Contracts that expire on a daily basis;
 - Delivery of physical EUA two days after transaction;
 - Equivalent to spot market.
 - Monthly Futures :
 - Last trading day is the last Monday of the expiry month;
 - Delivery of physical EUA is between the first and third day of the last trading day;
 - Monthly Futures Options :
 - Futures options The last trading day is 3 days before the last trading day of the underlying futures contract.
 - In-the-money options are automatically transferred to futures.
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- Example: If you buy futures for December 2023, the last trading day is Monday, December 18th, so you will receive the EUA in your registry account on December 20th.

EUA Contract Details

Product	EUA Futures
Launch	Oct 2005
Exchange	ICE Endex
ADV lots (12mo)	31,199
Open Interest Lots	565,958

Contract Size	1,000 allowances/lot
Trading Fees	€4 (incl. clearing)
Delivery Fee	None
Settlement Window	17:05 – 17:15 CET

Product	EUA Options
Launch	Sep 2008
Exchange	ICE Endex
ADV lots (12mo)	6,562
Open Interest Lots	260,544

Contract Size	1,000 allowances/lot
Trading Fees	€4 (incl. clearing)
Delivery/Exercise Fee	None/€1.50
Settlement Window	17:05 – 17:15 CET

EUA Specifications

<https://www.ice.com/products/?filter=EUA>

EUA Futures Margin Rates

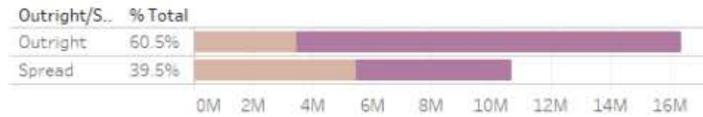
<https://www.theice.com/products/197/EUA-Futures/margin-rates>

EUA Futures & Options – Market Structure

Trade Type Ranking

Block/Screen	Trade Type Description	% Total	Total Lots
Screen	Regular trade	66.6%	18,033,900
	Trade at settlement	0.5%	130,850
Block	Block trade	32.2%	8,734,552
	Exchange of Futures for Sw...	0.5%	139,914
	Exchange of Futures for Phy...	0.2%	44,554
	Block trade at Settlement	0.0%	5,714

Strategy Type Ranking



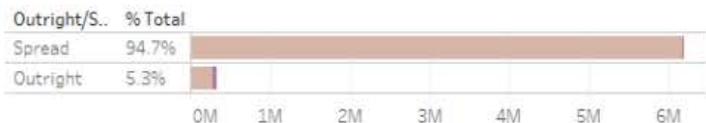
Futures



Trade Type Ranking

Block/Screen	Trade Type Description	% Total	Total Lots
Block	Block trade	99.1%	6,463,716
	Exchange of Futures for Sw...	0.0%	350
Screen	Regular trade	0.9%	59,098

Strategy Type Ranking



Options



EUA Price Movement & Volatility



ICE – EUA Contracts

- Cost of carry (margin) is currently only 12% of notional value.
 - ICE EUA Futures has 95% of market share.
 - ICE EUA Options has 100% of market share.
 - EUA Futures have high liquidity, 62% traded on the screen, the rest through brokers or bilateral.
 - Market is in contango.
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EUA Codes

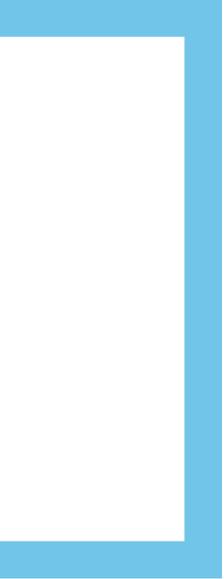
	Contract	Code
ICE Physical/Logical	EUA Future	C/ECF
ISIN	EUA Future	EU000A1RRN98

Data Provider	Contract	Code
ICE Connect	EUA Dec 22 Future	ECF 22Z-ICN
Bloomberg	EUA Future	MOA cmdty CT
	EUA Option	MOA cmdty OMON
Reuters	EUA Future	0#CFI2

ICE Endex Market Data - US\$125 per user per month (US\$130 in Jan 2024)

Useful Links

ICE Environmental Website	https://www.theice.com/energy/environmental
ICE Monthly Report	https://www.theice.com/microsite/usenvironmentalmonthlymarketreport
EU ETS Website	https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets_en
EU Registry	https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/union-registry_en



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