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Emissions-linked Trading in the US and EU

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Agenda

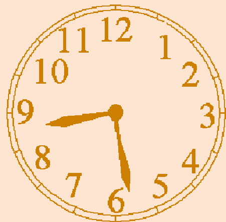
- Emissions trading regimes
- Transaction Structures
- ISDA, EFET, and EFET documentation platforms
- Regulatory treatment of emissions products in the US (*i.e.*, as Swaps, Futures or Forwards)
- Using emissions allowances as an underlying asset in structured products, including property rights issues in different EU Member States, as well as issues with taking security
- Awareness of fraud issues

The EU's Emissions Trading System

Four Phases of the EU ETS

Phase I

- 1 January 2005 to 31 December 2007
- The "**Trial Period**"



Phase II

- 1 January 2008 to 31 December 2012
- Coincides with the Kyoto compliance period
- The "**Compliance Period**"

Phase III

- 1 January 2013 to 31 December 2020
- Airlines join the scheme

- Will other greenhouse gasses be added?

Phase IV

Current phase

- 1 January 2021 to 31 December 2030
- 43% reduction of 2005 Emissions Levels, with 2.2% annual reduction

Key Evolutions of the EU ETS

Phase II	Phase III	Phase IV	Fit for 55"
Lower cap on allowances (6.5% lower compared to 2005) The proportion of free allocation fell slightly to around 90% Several countries held auctions The penalty for non-compliance was increased to €100 per tonne Businesses were allowed to buy international credits (CERs / ERUs) totalling around 1.4 billion tonnes of CO2-equivalent Union registry replaced national registries and the European Union Transaction Log (EUTL) replaced the Community Independent Transaction Log (CITL) The aviation sector was brought into the EU ETS on 1 January 2012 (but application for flights to and from non-European countries was suspended)	Single, EU-wide cap on emissions in place of the previous system of national caps Auctioning as the default method for allocating allowances (instead of free allocation) Harmonised allocation rules applying to the allowances still given away for free More sectors and gases included 300 million allowances set aside in the New Entrants Reserve to fund the deployment of innovative, renewable energy technologies and carbon capture and storage through the NER 300 programme Auctioning of 900 million allowances postponed until 2019-2020 Market stability reserve starts in [2019]	Linking to Swiss ETS 0.46% increase of the linear reduction factor from 1.74 % to 2.2 %, which determines the amount by which the cap will decrease each year From 1 January 2021, the EU ETS covers the emissions from electricity generation in Northern Ireland, while the emissions from GB are no longer included Phase III and phase IV allowances to exist in parallel Phase IV allowances are not eligible for phase 3 compliance obligations Aviation allowances can be surrendered to meet the compliance obligations of aviation operators as well as stationary installations International credits, including certified emission reduction (CER) units that are generated from clean development mechanism (CDM) project activities under the Kyoto Protocol can no longer be used for compliance	Steeper annual emissions reduction of 4.2% Strengthened Market Stability Reserve Phase out of free allocation of allowances in sectors covered by the Carbon Border Adjustment Mechanism (CBAM) [see below] Allocation of free allowances to be linked to decarbonisation efforts Moving to full auctioning of allowances for aviation by 2027 Integrating the Global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) scheme for international aviation Extension to emissions from maritime transport Parallel ETS for road transport and buildings from 2025, with compliance burden placed on fuel suppliers

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EU ETS: Phase IV

To achieve the EU's overall greenhouse gas emissions reduction target for 2030, the sectors covered by the EU ETS must reduce their emissions by 43%, compared to 2005 levels.

The revised EU ETS Directive, which will apply for the period between 2021 and 2030, will enable this through a mix of interlinked measures.

- To increase the pace of emissions cuts, the overall number of emission allowances will decline at an annual rate of 2.2% from 2021 onwards, compared to 1.74% in 2020.
- Between 2019 and 2023, the amount of allowances put in the reserve will double to 24% of the allowances in circulation. The regular feeding rate of 12% will be restored as of 2024.
- As a long-term measure to improve the functioning of the EU ETS, and unless otherwise decided in the first review of the MSR in 2021, from 2023 onwards the number of allowances held in the reserve will be limited to the auction volume of the previous year. Holdings above that amount will lose their validity.

Union Registry

- Union registry: National registries were replaced with a single Union registry. The online registry, which is overseen by the European Commission, records the allowances issued to participating installations, as well as each installation's annual verified emissions and compliance status, and tracks the movements of allowances between accounts (including surrender and cancellation). Operators subject to the EU ETS and individuals and organisations that wish to participate in emissions trading are among those that can open registry accounts.
- European Union Transaction Log: The European Union Transaction Log records and checks each transaction between accounts in the Union registry.

Market Stability Reserve

- Price fluctuations have been an issue in the EU ETS over its lifetime. These have primarily been linked to over-supply of allowances, partly caused by market-driven reductions in production of GHGs. Though originally content to leave pricing to be set entirely by market dynamics (within the cap), the Commission eventually decided that the price of allowances should be managed more actively an introduced the Market Stability Reserve (MSR).
- The MSR adjusts the annual supply of allowances to be auctioned, either downwards or upwards. Adjustment are triggered if the total number of allowances in circulation is above or bellow a pre-determined range. The MSR started operate on 1 January 2019.

Carbon Border Adjustment Mechanism

- The Carbon Border Adjustment Mechanism (CBAM) is an initiative by the EU aimed at preventing the risk of carbon leakage.
- Under the CBAM system, EU importers of covered products will buy carbon certificates corresponding to the carbon price that would have been paid had the goods been produced under the EU's carbon pricing rules.
- The CBAM will be phased-in gradually and will initially apply only to a select number of goods deemed at 'high risk' of carbon leakage. A reporting system will apply from 2023 in respect of these 'high risk' products, and EU importers will subsequently be required to start paying financial adjustment in 2026.

"Fit for '55"

- On 14 July 2021, the European Commission adopted a series of legislative proposals setting out how it intends to achieve climate neutrality in the EU by 2050, including the intermediate target of an at least 55% net reduction in greenhouse gas emissions by 2030.
- As part of the Fit of 55 package, the Commission proposed that the EU ETS would be expanded to include maritime emissions, certain road transport emissions and emissions from commercial property. The Commission also proposed a number of significant changes to the operation of the EU ETS.
- The Fit for 55 package remains subject to the legislative process.

UK ETS

- The UK Emissions Trading Scheme (UK ETS) replaced the UK's participation in the EU ETS on 1 January 2021. The UK ETS has a similar scope to the EU ETS in terms of its objectives and structure. For instance, the UK ETS retains the EU's 'cap and trade' market-based approach to incentivising the reduction of greenhouse gas emissions. Furthermore, both the UK ETS and EU ETS cover energy intensive industries, the power generation sector and the aviation sector.
- There are, however, a number of key differences between the two regimes, including (but not limited to) the following:

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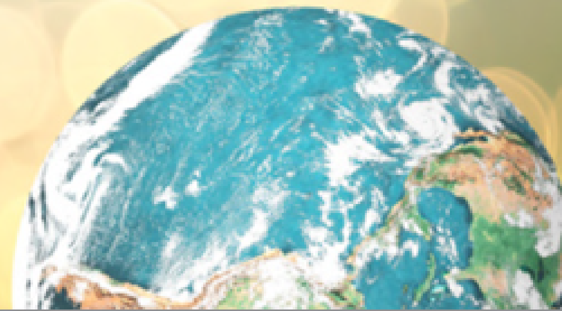
UK ETS

Both the UK ETS and EU ETS cover energy intensive industries, the power generation sector and the aviation sector. There are, however, a number of key differences between the two regimes, including (but not limited to) the following:

- **A lower cap:** The EU's cap on emissions allowances is 1.4 gigatonnes, whilst the UK's emissions cap has been set at 5% below the cap which was notionally set under the EU ETS.
- **A new registry and enforcement system:** The UK has set up an Emissions Trading Scheme Registry and intends to develop a new system to replace the current permit and enforcement systems (which are derived from EU legislation).
- **Simplification for small emitters:** The UK will provide simplified compliance provisions for hospitals and "small emitters" of carbon dioxide, *i.e.*, entities that emit less than 25,000 tonnes of carbon dioxide each year and have a thermal input of less than 35MW.
- **Free allocation:** The EU's free allocation allowances are set at 43% (up to 2026), whilst the UK's are set at 58 million for 2021 and reduce annually thereafter by approximately 1.6 million.

Derivatives in the Carbon Markets



Use of Derivatives in Carbon Markets

Options

- Options are bilateral contracts between an option holder and an option writer. The option writer, in consideration for a premium, grants the option holder the right but not the obligation, to buy or sell an agreed quantity of carbon credits at a fixed price on a future date.
- The most common options are “**put**” and “**call**” options.
  - **Put option holders** have the right to sell or deliver carbon credits at an agreed price on a future date.
  - **Call option holders** have the right to buy or receive carbon credits at an agreed price on a future date.
- The most commonly used types of carbon derivatives in the OTC market include forwards, option and swaps.

Use of Derivatives in Carbon Markets

Forwards

- In forward and futures contracts, the parties agree to buy and sell carbon credits at a future date at an agreed price.
- Forwards differ from options in that the buyer of a forward contract is obliged to pay the agreed purchase price even if the carbon credits are worth less than the purchase price on the settlement date, while the buyer of an option is not obliged to exercise the option and pay the purchase price.

Use of Derivatives in Carbon Markets

OTC Trading

- When entering into a carbon trade in the OTC markets, parties have three options as regards the documentation platforms they use:
  1. ISDA,
  2. IETA, and
  3. EFET.

Trading through climate exchanges

- The development of exchange trading is helping the carbon credit market to reduce credit risk by providing a central counterparty, as well as liquidity, through matching counterparties, trading standardised and simple contracts, and publishing prices.
- There are currently more 10 European exchanges with exchange traded allowance contracts, and nearly 40 worldwide. These include the European Climate Exchange in the United Kingdom, Powernext in France and Nordpool in Germany.
- The European Climate Exchange coordinates the marketing, listing and sales of ECX Carbon Financial Instruments: futures and cash contracts for EU ETS allowances. These are listed on ICE Futures (an electronic trading platform). Trades are cleared through LCH. Clearnet Ltd, which acts as a central counterparty guaranteeing financial and physical performance.

Use of Derivatives in Carbon Markets

Carbon Pools

- Carbon pools are spot trading platforms. Their members are small emitters that have been allocated allowances under the EU ETS. The pool matches their buy and sell orders together in an order book. After placing an order, the parties transfer their funds or allowances into their pool account and these are then transferred within the pool.
- Advantages of carbon pools include:
  - counterparty anonymity;
  - the grouping of small buy and sell orders into larger orders together; and
  - increased liquidity.

Structured Notes:

Types of transactions, issues related to taking securities, use of custodians.

OTC Trading: Documenting Emissions Trading Under the EU ETS - ISDA

ISDA

IETA

EFET

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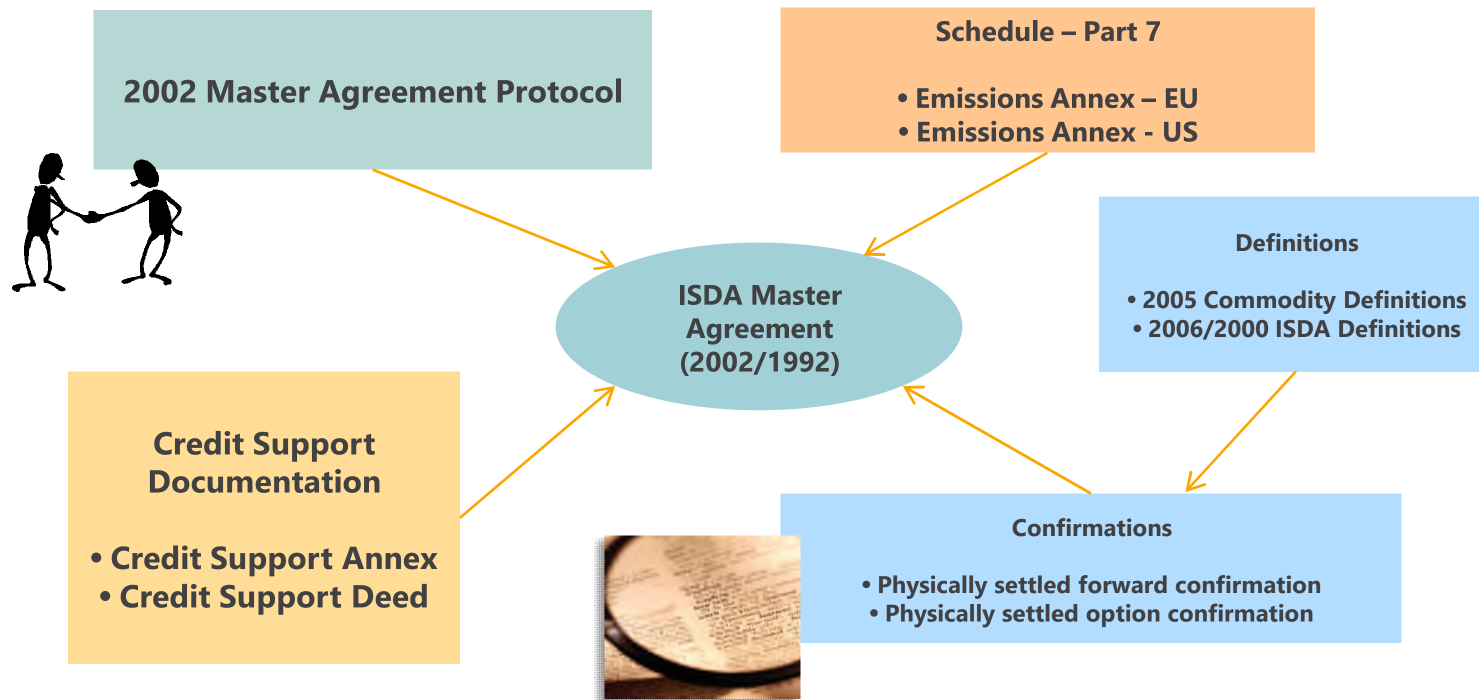
ISDA



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Areas Covered by Sub-Annex H

How to buy, sell and physically settle transactions

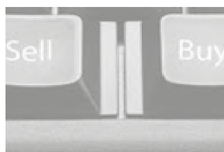
What happens if only some of the allowances are delivered?

Fallbacks for when settlement is disrupted or suspended

What happens if the EU ETS is abandoned?

Terms and fallbacks for when the seller fails to deliver the allowances and/or this results in the buyer being fined

Warranties, representations, taxes, provisions and definitions



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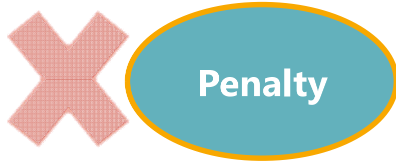
Fallbacks for Failed Settlement/Delivery

- Settlement disruption
- Suspension events
- Failure to deliver

Calculation of Replacement Cost Where There is Failure to Deliver: Three Possible Elections



- **Election 1**
  - Excess emissions penalty does not apply

- **Election 2**
  - Excess emissions penalty does apply

- **Election 3**
  - Failure to deliver (alternative method)

Key Differences Between ISDA, IETA and EFET Platforms

- Excess emissions penalties
- Force majeure
- Settlement disruption and failure to deliver
- Differences in payment and delivery dates
- Opting out of physical settlement of delivery obligations
- Suspension events

US ETS

- The US lags behind the EU in its efforts to set up an emissions trading system. So far, these can be categorized as emissions trading at the state level. Recent attempts at introducing a federal system of emissions trading include the Clean Energy and Security Act, which failed to make it to the Senate for a vote.
- At state and regional level, significant progress has been made in establishing emissions trading systems. In January 2009, the Regional Greenhouse Gas Initiative commenced.
- This was the first mandatory, market-based effort in the US to reduce greenhouse gas emissions. In 2014, nine northeastern and mid-Atlantic states committed to a carbon dioxide cap of 91 million short tons. Each year, this cap reduced by 2.5% between 2015 and 2020.

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Environmental Commodities - CFTC Regulations

- **Jurisdiction of the Commodity Futures Trading Commission (CFTC)**
  - Commodity interest products
    - Swaps, futures, retail commodity transactions and others
- **Implications of product characterization**
  - Commodity interests vs. forwards vs. spot transactions
- **Environmental commodity products**
  - Renewable energy credits (RECs), emission allowances, carbon offsets/credits, etc.

CFTC Interest in Environmental Commodities

- **2011 – Joint Product Release**
  - Sets forth current regulatory thinking of the CFTC
- **2019 – CFTC Market Risk Advisory Committee**
  - June 2019: Meeting to discuss climate-related financial risks, including the impact of climate change on the future stability of the global financial system, current domestic and international initiatives addressing financial risks related to climate change, financial industry approaches to the management and mitigation of such risks, and the challenges ahead for regulators and market participants in the derivatives industry.

CFTC Interest in Environmental Commodities

- **2019—Report of Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the Commodity Futures Trading Commission—"Managing Climate Risk in the US Financial System"**
- The CFTC should pursue the following activities to further catalyze climate finance market development:
  - Consider appropriate and **targeted exemptions** where needed to help facilitate coordination with other regulators and promote market development.
  - Support the study and **adoption of alternative execution methods**, such as block trading, auction style markets, or incentive programs, to attract liquidity providers to make climate-related markets.
  - **Coordinate with other regulators** to support the development of a robust ecosystem of climate-related risk management products.

CFTC Interest in Environmental Commodities

- **2021 – Climate Risk Unit**
- CFTC Chairman Behnam announced the formation of the Climate Risk Unit (CRU) to support the CFTC's mission by focusing on the role of derivatives in understanding, pricing, and addressing climate-related risk and transitioning to a low-carbon economy.
- Comprised of staff from across the CFTC's operating divisions and offices.
- Purposes include conducting research and engaging in ongoing market and stakeholder outreach.
  - *One goal*: Better and more complete understanding in the CFTC of the derivatives and related products being developed to address climate-related market risks and to facilitate the transition to a net-zero economy, and how such products fit within and interact with the CFTC's regulatory and supervisory framework.

Regulatory Characterization of Products

- **Product characterization**
  - Spot contracts
  - Forwards
  - Futures
  - Swaps
- **Forward contract exclusion—Generally**
  - CEA excludes "forward contracts" from substantive federal regulation
  - Dodd-Frank Act amended the CEA to add a forward exclusion to the definition of "swap"
  - The exclusion applies to "any sale of a nonfinancial commodity or security for deferred shipment or delivery, so long as the transaction is intended to be physically settled"

Forward Contract Exclusion - Generally

- To fall within the forward exclusion, the transaction must include three components:
  - a nonfinancial commodity,
  - deferred shipment or delivery of the nonfinancial commodity, and
  - an intent to physically deliver the nonfinancial commodity.
- The CFTC interprets the forward exclusion for nonfinancial commodities in the swap definition in a manner consistent with its historical interpretation of the existing forward exclusion with respect to futures contracts.
- The CFTC's historical interpretation has been that forward contracts are "commercial merchandising transactions," the primary purpose of which is to transfer ownership of the commodity and not to transfer solely its price risk.

Forward Contract Exclusion - Environmental Commodities

- In 2011, the CFTC and the SEC adopted joint final rules further defining the term "swap" and other terms in the Dodd-Frank Act (Product Release). In the Product Release, the CFTC discussed whether certain instruments, including environmental commodities, are subject to regulation by the CFTC or the SEC (or both) or whether they fall outside of either agency's general regulatory authority under the CEA.
- The CFTC stated that a "nonfinancial commodity" is a "commodity that can be physically delivered and that is an exempt commodity or an agricultural commodity."
  - "[T]he CFTC is providing an interpretation that an intangible commodity . . . which can be physically delivered qualifies as a nonfinancial commodity *if ownership of the commodity can be conveyed in some manner and the commodity can be consumed*."

Forward Contract Exclusion - Environmental Commodities

- An example offered by the CFTC was that of environmental commodities:
  - "Those two features—*ownership transfer and consumption*—distinguish environmental commodity transactions from other types of intangible commodity transactions that cannot be delivered, such as temperatures and interest rates.
  - The ownership transfer and consumption features render such environmental commodity transactions similar to tangible commodity transactions that clearly can be delivered, such as wheat and gold."

Forward Contract Exclusion - Environmental Commodities

- Thus, the three elements for intangible, nonfinancial commodities to qualify for the forward exclusion are:
  - Intent to deliver;
  - Transfer of ownership; and
  - Consumption.
- CFTC: Intent to deliver should be readily determinable, delivery failures generally would result from frustration of the parties' intentions, and cash-settlement would be insufficient because delivery of the commodity is necessary for compliance purposes.
- Electronic settlement or contractual attestation is acceptable.

Forward Contract Exclusion - Environmental Commodities

- **What is consumption?**
  - The CFTC does not define the term, but make several references to its application
  - The CFTC acknowledges in the Product Release, but does not directly address, a comment letter explaining that, "purchasers of environmental commodities intend to take delivery of RECs or carbon offsets *for either compliance purposes or in order to make an environmental claim regarding their renewable energy use or carbon footprint*"

Forward Contract Exclusion - Environmental Commodities

- **Consumption element**
  - The CFTC also notes that market participants may engage in environmental commodity transactions "in order to transfer ownership of the environmental commodity (and not solely price risk), so that the buyer can *consume the commodity in order to comply with the terms of mandatory or voluntary environmental programs*."
  - The CFTC also states that, "[o]ne example of an intangible nonfinancial commodity that qualifies under this interpretation . . . is an environmental commodity . . . that *can be physically delivered and consumed (e.g., by emitting the amount of pollutant specified in the allowance*).
  - Transactional vs. ultimate consumption?

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Additional Resources

Read more:

- IOSCO Report Highlights ESG Data Deficiencies, Calls for Oversight and Makes Remedial Recommendations
- Now It's Going to Happen: As Expected, EU Council Formally Adopts Framework for Carbon Neutrality
- European Commission Presents Proposal for Carbon Border Adjustment Mechanism ("CBAM")
- US SCALE Act of 2021 (Storing CO_2 and Lowering Emissions Act)
- Biden Administration Asserts Climate Leadership and Releases Long-Term Strategy for Net-Zero GHG by 2050
- US CFTC Releases "Managing Climate Risk in the US Financial System" Report

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