ESMA
European Securities and Markets Authority

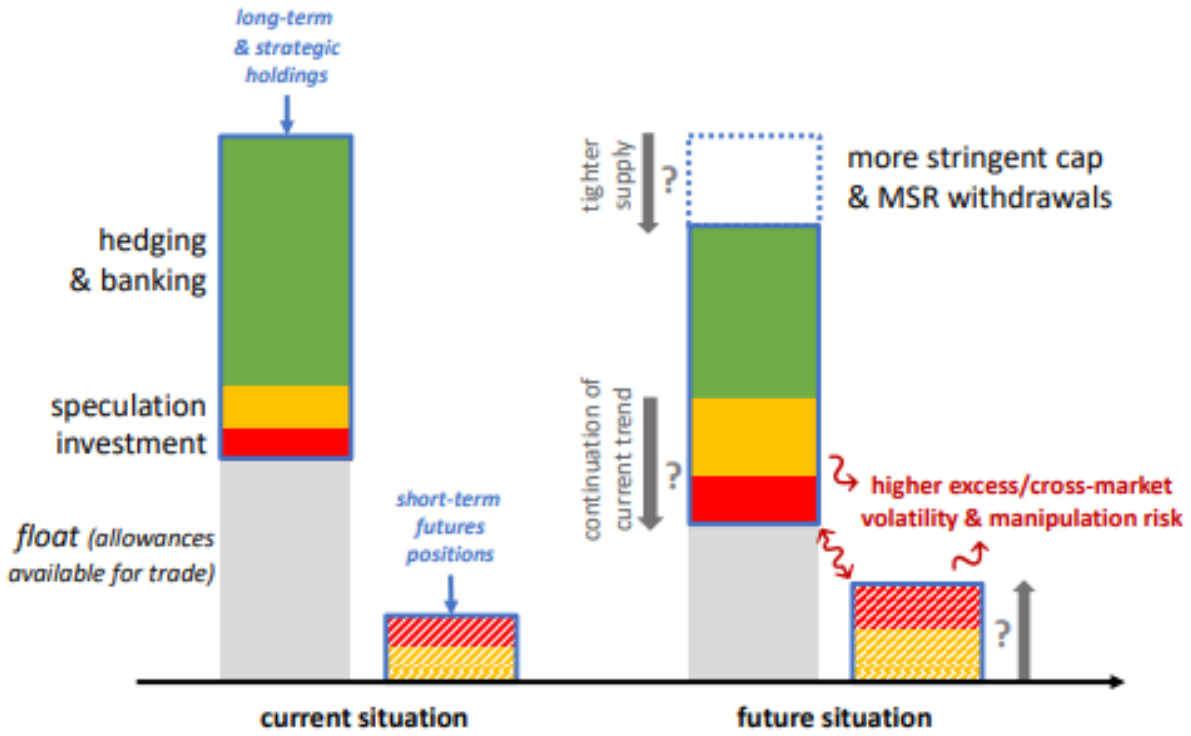
Measuring the ‘float’ – from theory to application

EU ETS workshop, 8 December 2025

Motivation

- A cap-and-trade system involves a decreasing supply of allowances over time
- In efficient markets, ETS participants can be expected to hoard EUAs to make a future profit
- Futures markets allow participants to lock in a price *before* allowances even made it to the market
- Price and volatility monitoring requires development of forward-looking indicators for ETS market integrity

Reminder: What is the 'float'?



- A smaller 'float' implies
  - Increased risks of market 'squeeze'
  - Price signals becoming less reliable
  - Excess volatility and price distortions

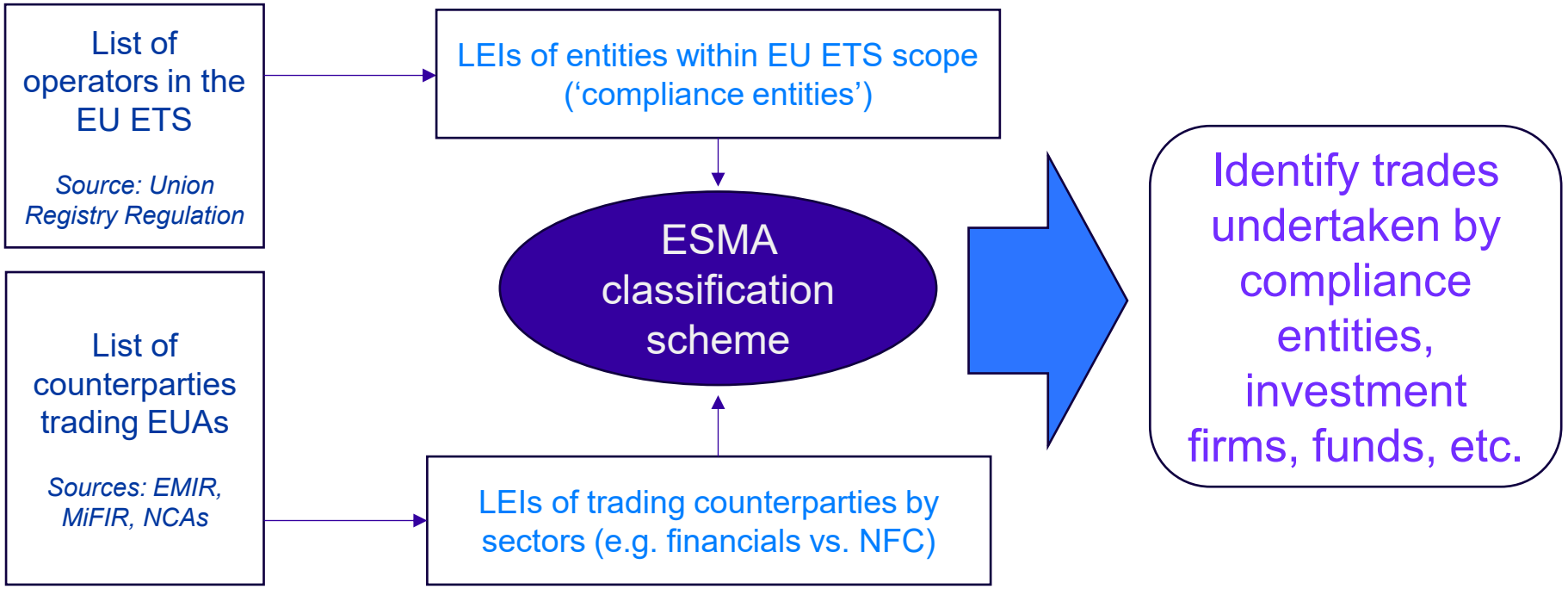
Quemin & Pahle (2023), Financials threaten to undermine the functioning of emissions markets, *Nature Climate Change 13, 22-31.*

Decomposing the ‘float’

- The ‘float’ is a residual value based on the TNAC
- Calculating this residual requires understanding
  - Current and future commitments of ETS participants
  - The impact of trading strategies of non-ETS participants on EUA supply and demand
- Concretely, this involves
  i. A classification system for participants
  ii. Identifying trading strategies
  iii. Developing accurate volume-based measures
- All three aspects present major challenges

Challenge #1: Classification

- **Issue #1 –** Identification of counterparties in regulatory financial data



Challenge #1: Classification

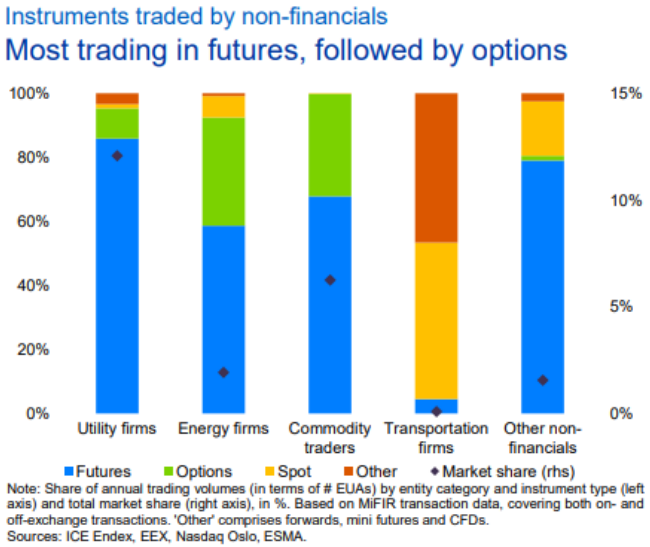
- Entities report transactions using the same LEI

➢ Issue #2 – Group trading: some ETS participants trade for hedging *and* for speculative purposes

➢ Issue #3 – Financial subsidiaries: some financial participants trade on behalf of clients (ETS participants) *and* on their own account

Challenge #2: Trading strategies

- **Issue #1 – Market segment:** some trading strategies rely on both spot and derivatives markets



Note: Share of annual trading volumes (in terms of # EUAs) by entity category and instrument type (left axis) and total market share (right axis), in %. Based on MiFIR transaction data, covering both on- and off-exchange transactions. 'Other' comprises forwards, mini futures and CFDs.
Sources: ICE Endex, EEX, Nasdaq Oslo, ESMA.

ETS participants mainly rely on futures contracts (except transportation firms), but some combine this with trading in spot contracts

- **Issue #2 – Market making:** No easy way to identify financials' market-making activities

Challenge #3: Volume-based measures

- Issue #1 – Future commitments: Futures can be rolled over, options are not always exercised → derivatives are not a perfect measure of future commitments
- Issue #2 – Data gaps: No information available on spot OTC trading in regulatory financial data
- Issue #3 – Algos: Algorithmic trading increases trading volumes but the effects on EUA availability are unclear

In a nutshell

- Estimating the ‘float’ is a complex exercise which will require the development of accurate volumes-based measures

- The vast majority of EUA trading takes place in futures markets. These are key to understanding future commitments

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