European Securities and Markets Authority

Data standardisation: reducing compliance burden and ensuring market integrity

IFSC, 14 November 2024
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ESMA12-766636679-477

Overview

- **Burden reduction**
  - Streamlining and optimising existing reporting flows
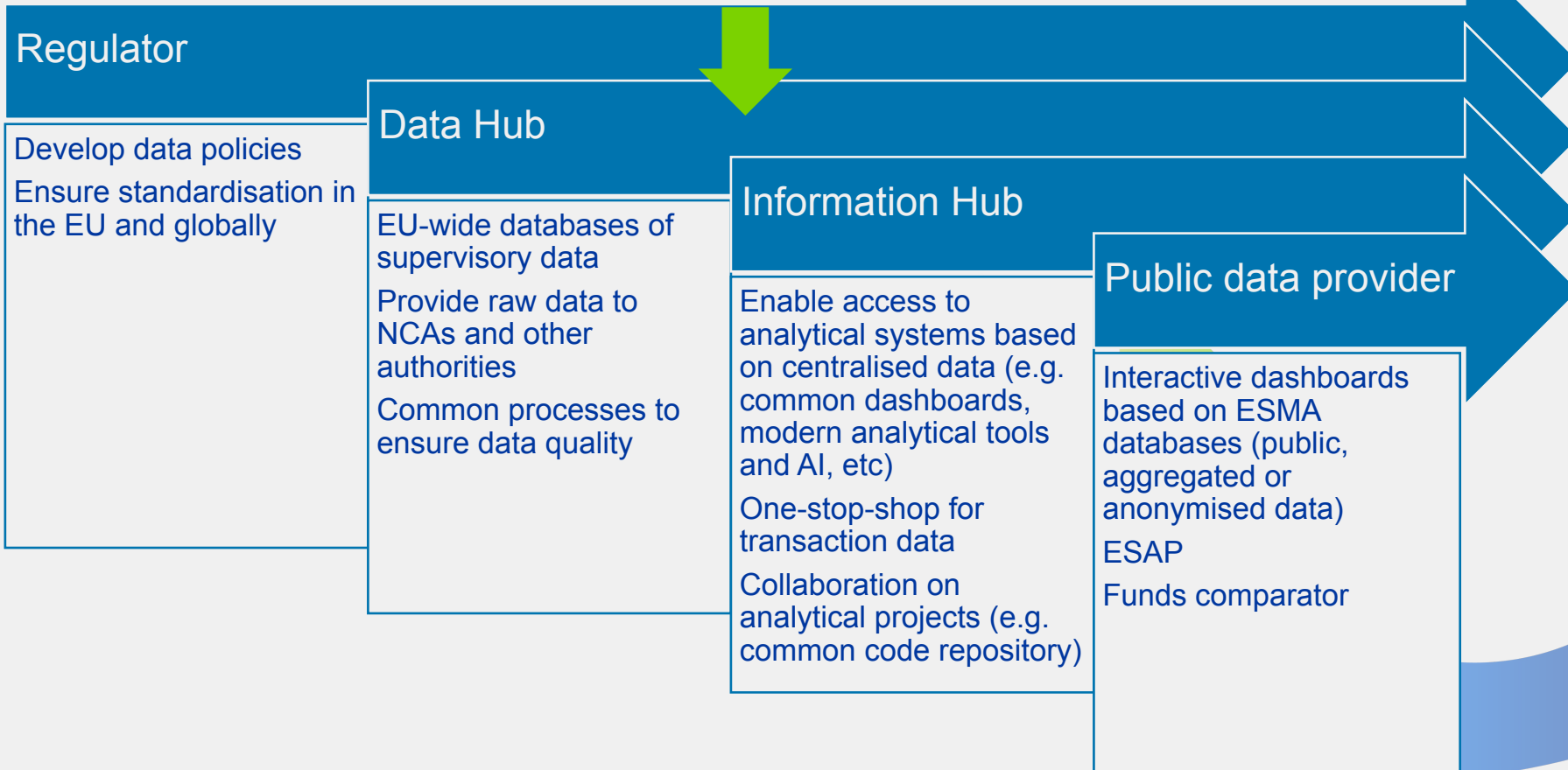 - Centralising new flows & building capacity in new technologies

- **Market integrity**
  - Data driven supervision & cross-sectoral analysis
    - Monitoring carbon markets
  - Encouraging technological adoption & Suptech
    - Use of AI for market abuse supervision

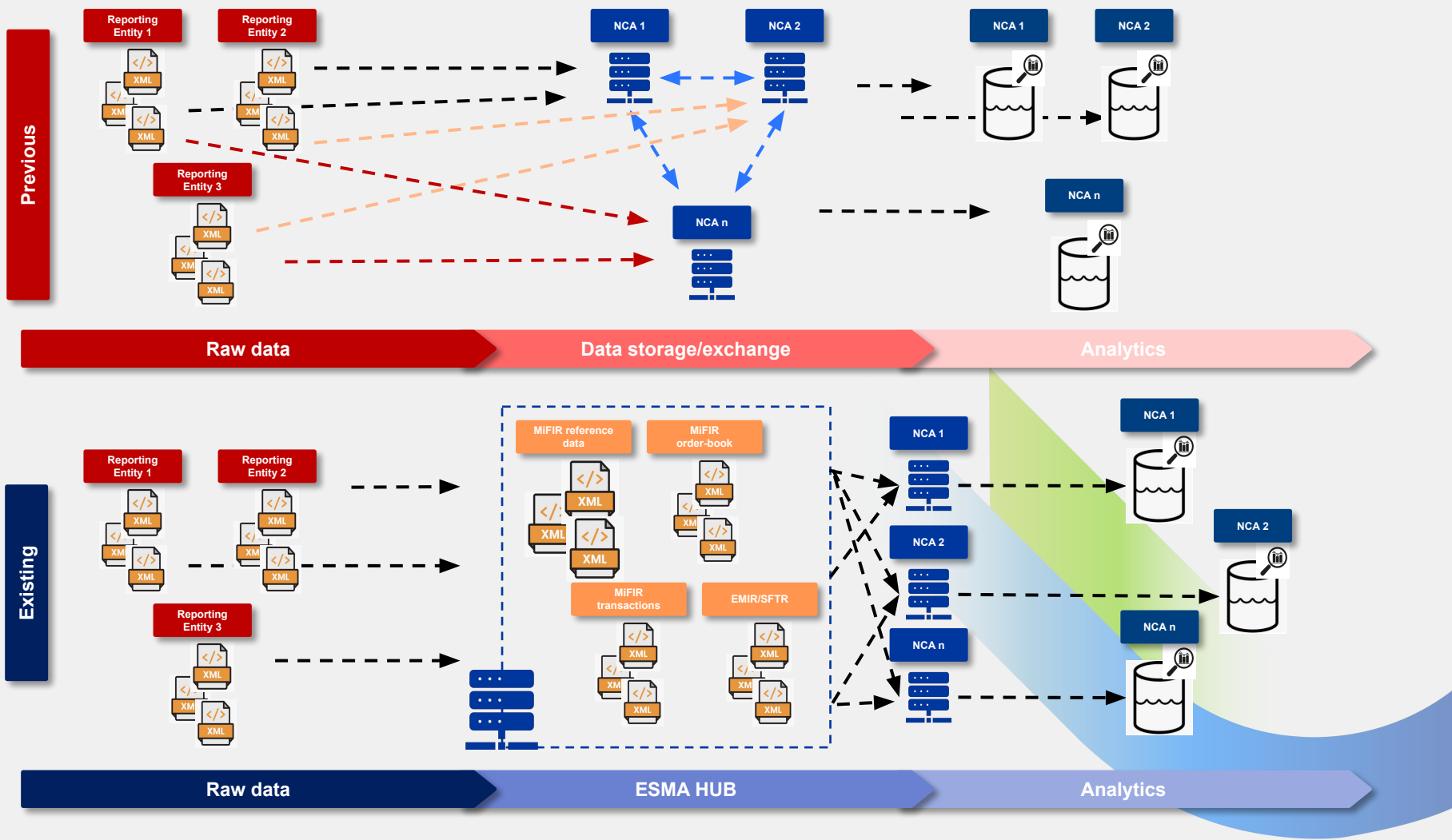# Part 1_the power of data standards for burden reduction

ESMA evolution

We are here today

Regulator

Develop data policies

Ensure standardisation in the EU and globally

Data Hub

EU-wide databases of supervisory data

Provide raw data to NCAs and other authorities

Common processes to ensure data quality

Information Hub

Enable access to analytical systems based on centralised data (e.g. common dashboards, modern analytical tools and AI, etc)

One-stop-shop for transaction data

Collaboration on analytical projects (e.g. common code repository)

Public data provider

Interactive dashboards based on ESMA databases (public, aggregated or anonymised data)

ESAP

Funds comparator

Streamlining existing data flows
From data policy to data integration

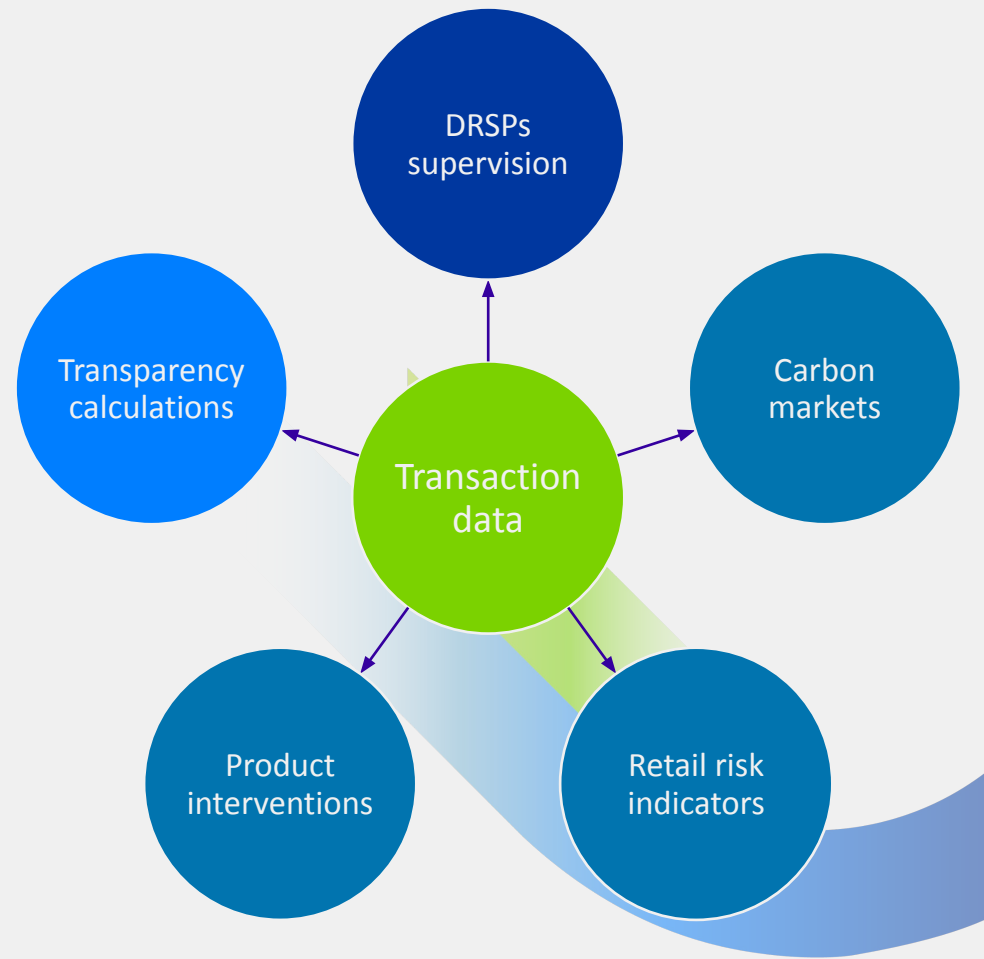# Reducing the burden with data standards

As it evolves as data driven supervisor, ESMA is undertaking further steps to reduce the burden with the use of data standards

1) ACTION 1: gradually reduce reporting flows by reusing centrally collected granular transaction data

2) ACTION 2: further centralise new reporting flows in the absence of existing national systems
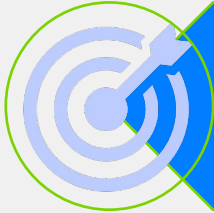
ACTION 1: reduce reporting flows by reusing the most granular datasets

- MiFIR transaction data is granular and rich source of information on financial markets
- The use of this data is increasing
- So far, the access to this data has been limited due to security concerns (inclusion of personal data)
- The implementation of the mechanism to anonymise this data enables its use for new use cases which

  - **Minimises the need for ad-hoc data request by national supervisors**
 - **Minimises reporting flows**

DRSPs supervision

Transparency calculations

Carbon markets

Transaction data

Product interventions

Retail risk indicators

Case study: PoC on MiFIR transparency calculations
Objective, scope, timelines

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Objective
- Verify whether it is feasible to use transaction data for the purpose of the transparency and volume cap regime
- Identify challenges and potential changes required in L2
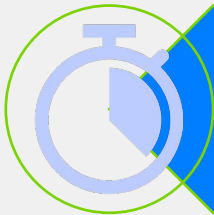
Timeline
- Started in April
- Outcomes to be considered in the ongoing work on L2 (RTS 1, 2, 3 and 22)

Scope
- Reproduce transparency and volume cap indicators
- Focus on equity initially, could be expanded in the next steps if relevant

Expected benefit
- Reduced reporting burden by removing the obligation to report quantitative data to FITRS and DVCAP
- Increased value added of already reported transaction data by reusing it for new purposes

Case study: PoC on MiFIR transparency calculations
Key takeaways

Policy indicator	Matching ratio* 2022	Matching ratio* 2023	Statistical indicator
Liquidity status	97.5%	98.1%	Traded on a regulated market, market capitalisation (ADT, ADNTE)
Tick-size	96.3%	97.2%	Average daily number of transaction on the most relevant market in terms of liquidity (ADNTE on the MRMTL)
SMS, standard market size	95.1%	95.1%	Average value of transaction (AVT)
MRMTL	94.1%	95.5%	Most relevant market in terms of liquidity (MRMTL)
LIS, large in scale threshold	70.1%	70.5%	Average daily turnover (volume) (ADT)

Key take-aways:

- As of today, the data is good enough to obtain high matching ratios on the key policy indicators

- Results are consistent over time (2022 and 2023)

- Identifying pure OTC transactions is a challenge, hence lower matching ratios on the LIS threshold are obtained.

- Lower matching ratios on LIS threshold for some foreign instruments might be caused by under reporting from trading venues.

ACTION 2: centralise new dataflows

- Where no data collection process exists for a given dataset, establishing a new reporting flow for each NCA is significantly more costly than setting up a single, centralised reporting flow to ESMA.

- Streamlining operations by centralising the data collection function to ESMA could result in substantial savings for both NCAs and market stakeholders as it will result in only one reporting flow.

- The new requirements stemming from ESAP and the Digital Finance Package (**MiCA** and **DORA**) provide the opportunity to achieve better economy of scale and reduce the compliance burden.

Case study: crypto assets monitoring, the next level
One-stop shop for crypto data

Centralizes all data access, eliminate duplicative reporting and remove need for development of individual national data analytics systems.

- ✔ Centralise and simplify reporting and data access
- ✔ Leverage and reuse common analytics
- ✔ Create synergies in supervisory activities
- ✔ Offer scalability of use
- ✔ Build capacity in new technologies
- ✔ Support enhanced cooperation among authorities
- ✔ Provide for an efficient use of public resources

MiCA Templates

ISO 20022

Blockchain

DTI

Social media

NCA1

NCA2

NCA3

✔ Cost for ESMA: Each data point is received and stored only once

✔ Cost for NCAs: NCAs do not need to build and maintain its own unique data analytics system

Raw crypto data | **ESMA central monitoring solution** | **Analytics**
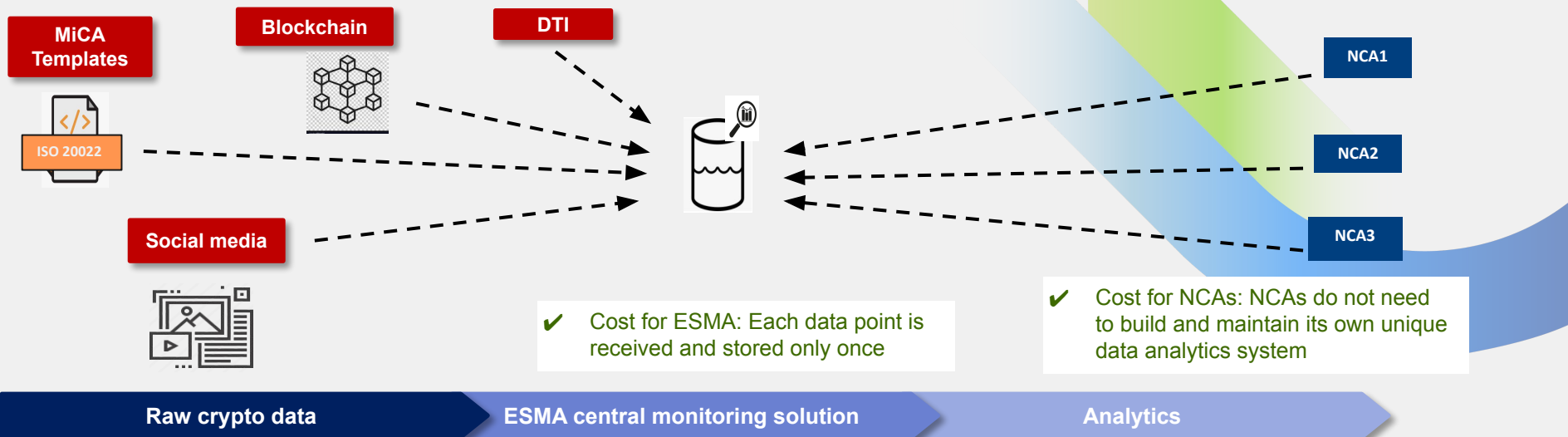
Part 2_safeguarding market integrity

ISO standards: connecting dots

Legend:

ISO 20022
ISO identifiers (*LEI, ISIN, UPI, CFI, UTI, MIC*)
No standard across datasets

Waiver flag

Algo ID

Decision maker, client and trader natural person ID

Repo

Exercise of option
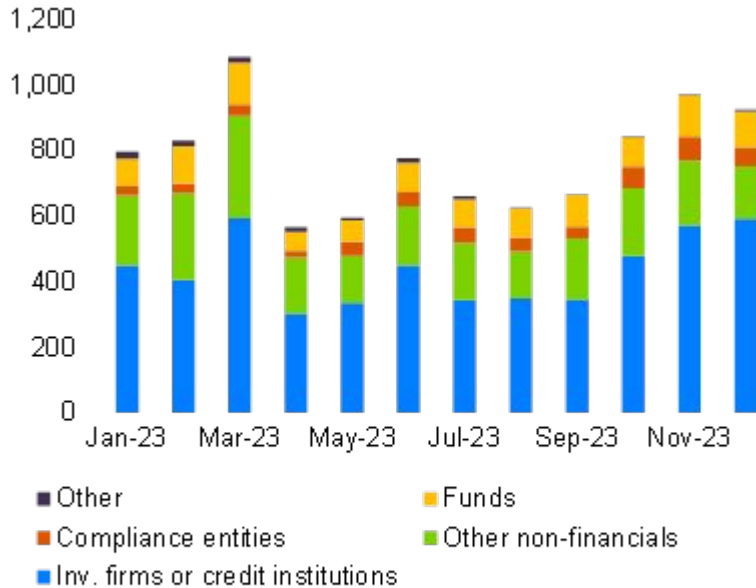
Transmission

SSR exemption

Branch

Consideration

Delivery type

Strike price *(no ISIN for instrument)*

OTC post trade flag

Client **LEI**

Compression

Price

Quantity notation

Trader **LEI**

Underlying instrument **ISIN** *(no ISIN for main instrument)*

Quantity

Option type/style

Price multiplier

Trade ID (TVTIC)

Maturity

Financial instrument **ISIN**

Underlying **ISIN**

Buy/Sell

Notional currency

Venue identification **MIC**

Corporate sector

Price notation

Trading time **UTC**

Commodity /EUA D flag

Early termination date

Up-front payment

Instrument classification **CFI**

Effective date

Reporting date & time

Trading capacity

Reporting firm **LEI**

Positions business day

Ultimate parent **LEI**

Clearing threshold

Settlement date

Beneficiary

Position quantity

Position long or short

Notional amount

Product **UPI**

Position holder **LEI**

Financial/non-financial counterparty **LEI**

Broker **LEI**

Trade **UTI**

Clearing member **LEI**

(*) Non exhaustive list of fields

MiFIR transaction reporting

EMIR Refit reporting

MiFIR Post transparency

Commodities derivs position reporting

MiFIR reference data

Case study 1: use of LEI in carbon markets report
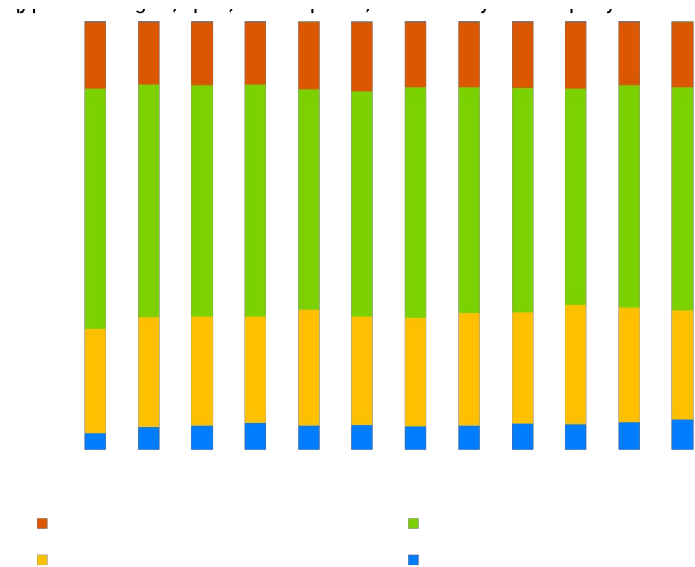
Positions and on-exchange volumes

Volumes by sector

1,200
1,000
800
600
400
200
0

Jan-23 Mar-23 May-23 Jul-23 Sep-23 Nov-23

■ Other
■ Compliance entities
■ Inv. firms or credit institutions
■ Funds
■ Other non-financials

Note: Monthly trading volumes by counterparty country, in million of tonnes of CO2-equivalent emissions
Sources: MiFIR, ESMA.
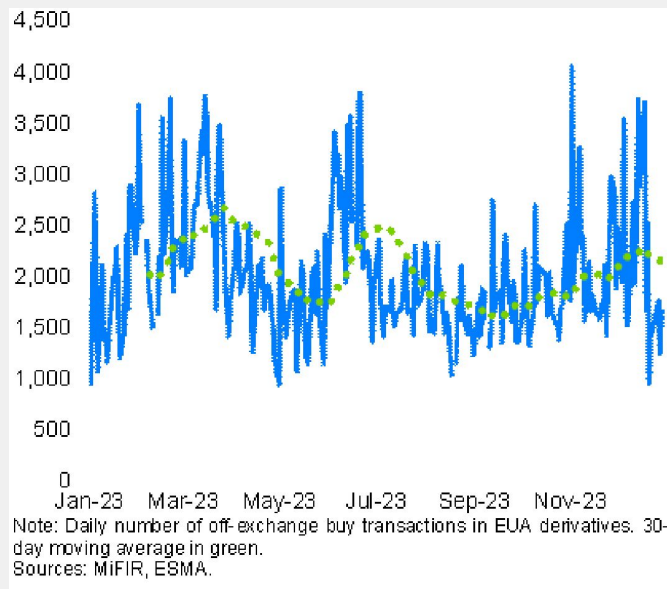
Share of positions held by sector

- Entity classification based on LEI enables to cross-analyse positions/transactions
- Investment firms and banks account for 65% of trading volumes
- Investment firms and credit institutions held 56% of derivatives positions
- Funds holding 5-6% of all positions

Case study 1: use of ISIN/CFI in carbon markets report
Year-end increase in OTC trading volumes
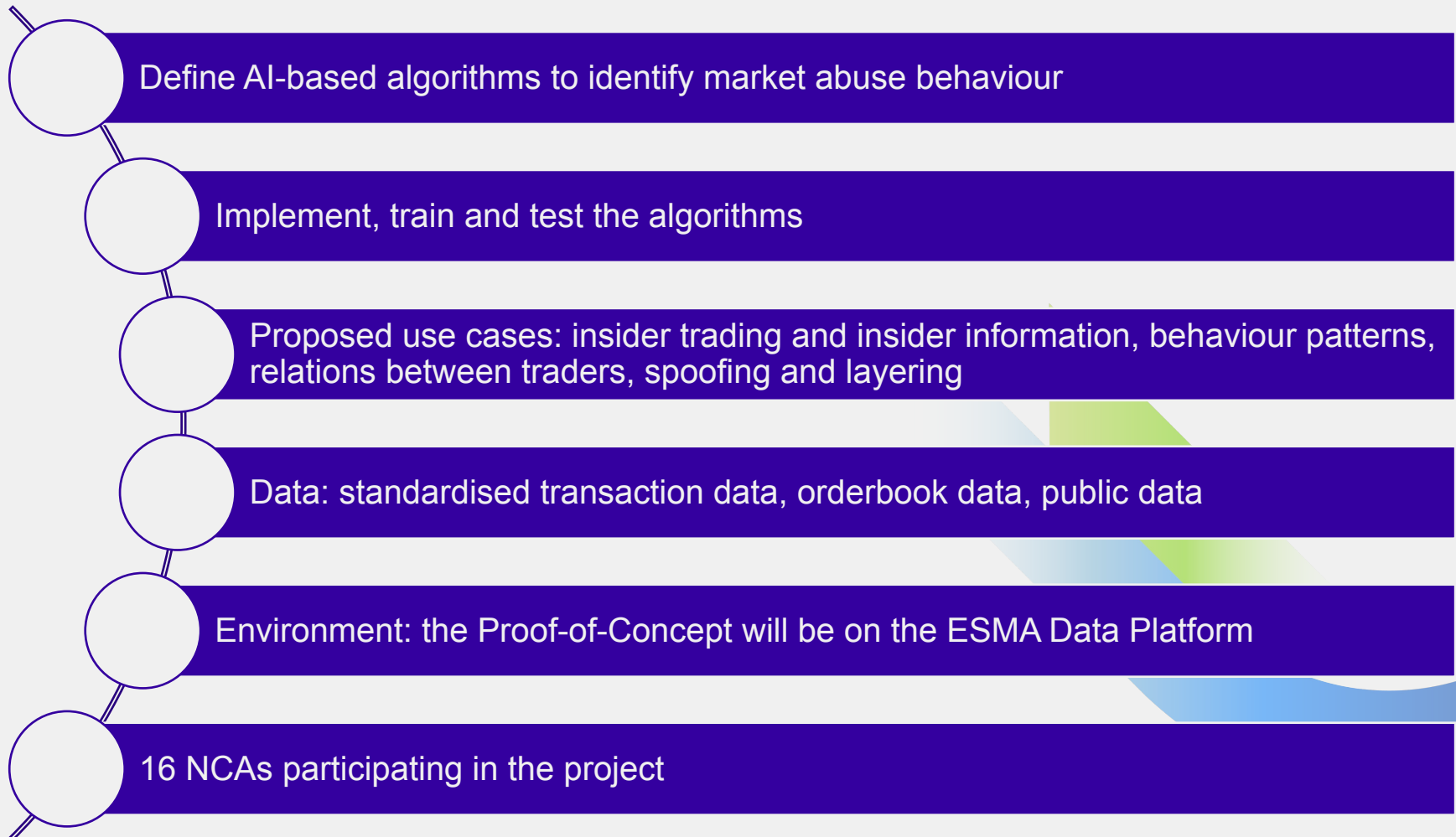
Daily number of transactions

Note: Daily number of off-exchange buy transactions in EUA derivatives. 30-day moving average in green.
Sources: MiFIR, ESMA.

Volumes by type of product

Note: Monthly off-exchange trading volumes by type of contracts, in million of tonnes of CO_2-equivalent emissions.
Sources: MiFIR, ESMA.
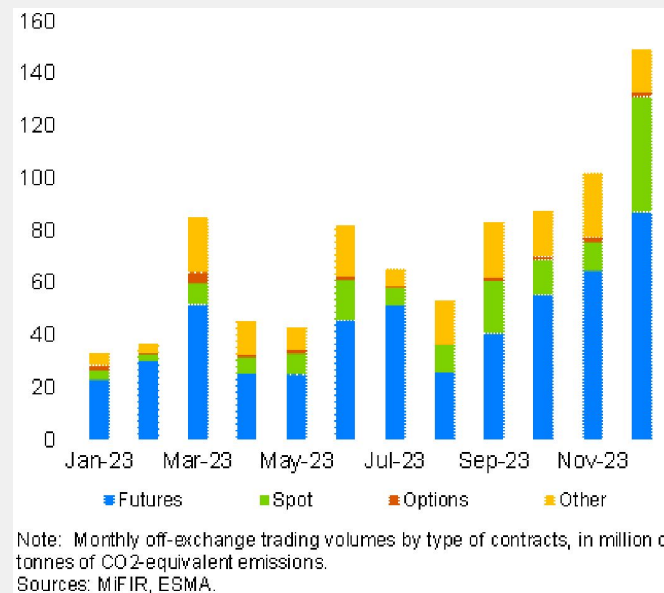
- Total off-exchange volumes of EUR 72.5 bn through 524,000 trades
- Volumes peaked in December, including large increases in spot and options trading
- High correlation (51%) with on-venue trading suggests some interconnection between on and off-exchange markets

Case study 2: PoC on common AI analytics
Market Abuse Monitoring

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- Define AI-based algorithms to identify market abuse behaviour
- Implement, train and test the algorithms
- Proposed use cases: insider trading and insider information, behaviour patterns, relations between traders, spoofing and layering
- Data: standardised transaction data, orderbook data, public data
- Environment: the Proof-of-Concept will be on the ESMA Data Platform
- 16 NCAs participating in the project

In God we trust,

all others must bring "standardised" data

Inspired by – W. Edwards Deming