

MiFIR Art.26 Transaction Data DQEF

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1 Executive Summary

Reasons for publication

This document introduces a new Data Quality Engagement Framework (DQEF) for MiFIR Article 26 transaction data (transaction data). This framework builds on existing ESMA's transaction data validation rules and the TREM DQEF tests¹, introducing new completeness, accuracy and consistency tests to enhance data quality.

The key trigger behind the establishment of the DQEF follows the decision of ESMA Board of Supervisors (BoS) to use MiFIR transaction data for transparency calculations, leading to the decommissioning of the Financial Instruments Transparency System (FITRS), Double Volume Cap (DVC) and related data quality processes. However, the DQEF is intended of general purpose supporting all end use-cases at ESMA and NCAs. The document defines the risk-based methodology, roles and responsibilities of National Competent Authorities (NCAs) and the European Securities and Markets Authority (ESMA) in monitoring and improving the quality of data reported.

¹TREM DQEF methodology: ESMA74-362-938
TREM DQEF report: ESMA74-362-1011

2 Introduction

1. Article 26 of MiFIR establishes the obligation for investment firms which execute transactions in financial instruments to report complete and accurate details of such transactions to the competent authority. While the transaction data has been intended to be primarily used for the purposes of market abuse monitoring, the data is used for a wide-variety of use-cases and, as such, is among the most relied-upon datasets of NCAs.
2. This dataset play also a critical role for ESMA. The dataset is used to support supervision of DRSPs and market analyses². Furthermore, in December 2024, ESMA Board of Supervisors (BoS) decided to use the transaction data for transparency calculations³, leading to the decommissioning of FITRS, DVC and related data quality processes.
3. While the decision to establish the DQEF has been triggered by the of use the dataset for the purposes of the transparency calculations, ESMA intends for the DQEF to be a general-purpose framework to support all analytical uses of the data by NCAs and ESMA.
4. The intended audience of this document is ESMA policy, data and IT staff in addition to the Reporting Working Group (RWG) and Data Standing Committee (DSC).

2.1 Background

5. The work on the Article 26 MiFIR DQEF is driven by the following key provisions and legislative texts:
 - Directive 2014/65/EU ([link](#)) and the supplementing Regulation 600/2014/EU ([link](#)) containing the high-level information on the framework
 - linklink RTS 22 ([link](#)) containing the definitions of the fields of interest and the reporting technical standards

2.2 Objectives of the DQEF

6. The objective of the DQEF is to continuously improve the quality of the transaction data, by focusing on the most important issues and the essential elements of the

² Namely in the context of carbon markets, retail risk indicators and production intervention.

³ MiFIR (Regulation (EU) No 600/2014) introduces rules with respect to transparency obligations that require the publication of transparency thresholds applicable to each financial instrument requiring the collection and processing of data

transaction data. In addition, all information shared as part of this framework can be used by NCAs as additional input to their supervisory activity.

7. This framework builds on existing MiFIR validation rules and TREM tests, introducing new accuracy and consistency tests to enhance data quality.
8. The DQEF sets out the procedures agreed by NCAs and ESMA to verify and communicate data quality issues pertaining to the information reported and to apply the corrective measures. It outlines the process to share the relevant information and agree on best practices that would improve data quality.
9. To achieve these data quality objectives and properly assess the calculations, the DQEF foresees the following actions:
 - Monitoring the quality of the data as transmitted by reporting entities to NCAs (and subsequently from NCAs to ESMA) for several key dimensions / scope selected considering both the relevance for the intended uses and the feasibility of their execution, given their technical complexity. This monitoring will be executed through the tests to be performed under the DQEF. A detailed description of the tests is available in a separate technical document that will be subject to periodic revision according to the different needs that might rise in the processing of checks or final calculation ahead of the publication, and the overall evolution of the quality of the submitted data.
 - Reaching out to the relevant reporting entities to ask for corrective measures to specific known/detected issues affecting the transmitted data (including cases where the data are missing).
10. The results of the activities under the DQEF may also inform the following broader activities and processes, i.e., assess and propose the creation, modifications and clarifications regarding the:
 - existing processes to support entities when transmitting the data to ESMA;
 - common definition of the reported data across all jurisdictions when this is relevant for the consistent quality as defined in the previous paragraph;
 - definition and implementation of national data quality actions and contribute to the definition of best practices;
 - IT infrastructure and MiFID specific systems, to support the timely transmission of high-quality data, including the review of validation rules on the data;

- supervisory convergence documents (guidelines, Q&A) and reporting instructions in the area of data reporting; and
- process to review MiFID II/MiFIR and its implementing technical standards in the area of data reporting.

11. In addition to the data quality issues addressed through the DQEF, data quality issues could also be identified and communicated to NCAs and ESMA by ARMs , as well as ad hoc analysis performed on the data by NCAs or ESMA.
12. Furthermore, this is without prejudice to the possibility for ESMA to follow up on a given data quality problem, on an ad hoc basis, outside this framework, if the issue is deemed as having a high priority and/or a significant impact on the transparency calculations.

2.3 Principles applicable to the development and implementation of the DQEF

13. **Cooperation:** NCA and ESMA staff cooperate with each other providing information on internal procedures, methods and data supporting the objectives of the DQEF and supports the activities of all other relevant working groups.
14. **Interaction with supervised entities:** A specific entity can only be contacted by its supervisor, whenever this is needed for the execution of the DQEF. In the cases where the entity under NCA's supervision is contacting ESMA directly, the supervisor will be informed⁴ of the issue.
15. **Protection of sensitive information:** The protection of sensitive information is achieved by avoiding, when possible, the exchange of sensitive information and, if that is needed, by the application of clear rules on access rights and technical protection of the data, as well by strict adherence to the relevant data classification policies.
16. **Risk-based approach:** To achieve a balance between benefits and cost, the issues that will bring the most improvement will be prioritised, at the same time minimising the overall workload for ESMA and NCAs. This principle supports the risk-based approach, where a higher priority will be given to the resolution of issues that significantly affect the transparency calculation results. This will have as an

⁴ Included in the email exchange or IT ticketing tools, depending on the channel used.

effect, diminishing the number of entities that will be captured under each data quality cycle.

17. **Common methodology:** The DQEF is implemented through commonly agreed and defined methodologies to allow its comparability across jurisdictions.

3 Methodology, allocation of responsibilities and execution timeline

3.1 Methodology

18. The DQEF is based on a set of tests defined for detecting transaction data quality issues.
19. All DQ tests are designed to ensure the uniqueness, integrity, and completeness of transaction data under Article 26 MiFIR, by verifying that each combination of relevant fields corresponds to a unique value. Besides performing checks on the level of individual records, DQ tests are also designed to verify consistency between records (e.g. in the case of reporting of duplicated records for on-venue transactions).
20. Concrete set of tests, including dimensions covered, agreed to be executed by listed in the technical document. The technical document is designed such that additional DQ tests can be added overtime as priorities of ESMA and NCAs may evolve.
21. The tests are performed individually by ESMA staff. The results of the tests are shared with NCAs, to monitor the quality of the data and execute specific corrections. The submission of those results by ESMA to NCAs follows a risk-based approach in which only the most impactful data quality issues are communicated in order to be resolved.

3.2 Risk-based approach

22. The risk-based approach is calibrated to maximize the quality of the regulatory publications with a proportional effort by NCAs.
23. To ensure this risk-based approach, a set of predefined thresholds are set to limit the impact on the number of records, of entities and NCAs to the most critical and impactful issues. These thresholds categorize transactions based on their

monetary value. Concrete thresholds are agreed on a test-by-test basis as well as the number of most impactful entities that should be subject to follow up by NCAs and are included in the associated technical document.

Table 1. Data quality dimensions covered by the DQEF

Quality dimension	Description
Completeness	Refers to the actual provision of the data both at record level or for individual fields within the records (completeness of specific reference data fields)
Consistency	Refers to the inner consistency of the data as provided to the ESMA systems. A problem of inconsistency among the information provided by a unique entity reveals in general a problem of accuracy, but as the methods to detect it differ, they are considered in a separate dimension.
Accuracy	Refers to the faithful representation of the data against the reality it shall reflect.
Timeliness	Refers to the availability of up to date information according to the requirements to ensure that both NCAs and ESMA can rely on data that properly reflects the latest developments.

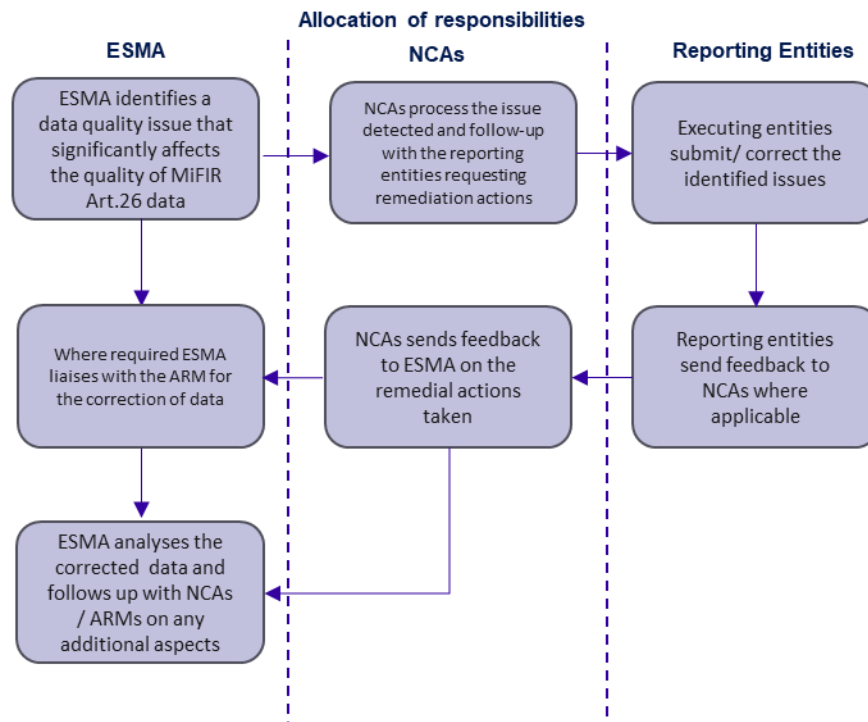
3.3 Allocation of responsibilities

24. The different tasks are allocated among NCAs and ESMA staff. ESMA staff will aggregate the data and process the tests based on all available information and present the results to the relevant ESMA groups.
25. In particular, ESMA staff execute the data quality tests presented in the technical document, applying the risk-based approach, and deliver the outcome to NCAs and ARMs (under ESMA supervision) according to the timeline included in the same document. NCAs will check the data identified as flawed and undertake the necessary actions to correct it. These remedial actions differ depending on the test performed and are detailed also in the technical document. This may require the

NCA to conduct further investigative actions and to contact the concerned reporting entity as well as acting in such a way to receive corrections where necessary.

26. ESMA will review data quality issues involving firms under its direct supervisory mandate.
27. ESMA staff will execute all analyses with uttermost care, and it will test it alongside with the members of the RWG / DSC. Any errors in its results caused, among others, by the existence of false positives due to the agreed methodology, wrong application of the agreed methodology, infrastructure issues and latency in the analyses, will be taken into full consideration for the following iterations.
28. In any case, individual NCAs will maintain full responsibility for reviewing the information provided by ESMA staff using their own means, in particular in the context of contacting reporting entities in their own jurisdiction for enforcing data quality actions. It is the responsibility of the NCA to decide on the best way to handle the information received from ESMA on the failing tests and how to communicate the findings to the reporting entities.
29. The NCAs shall inform ESMA promptly on the effectiveness of the centrally performed tests and, in particular, on the observed errors in its implementation (in addition to the false positives).
30. The NCAs concerned by failing tests, shall act in such a way to achieve remedial actions for the identified issue(s) for the data in the scope of the DQEF. An overview of the process can be seen in Figure 1.

Figure 1. Overview on the allocation of responsibilities and process



31. ESMA will actively monitor and deliver updates on analyses to NCAs and ARMs (under its supervision) on the correction of data.
32. ESMA has provided NCAs with the necessary tools⁵ to monitor all data submitted by reporting entities under their jurisdiction. Furthermore, ESMA shall receive feedback from NCAs only related to the false positives in the case of outlier detection and on the remedial actions taken to solve the data quality issues.

3.4 Timeline for test execution

33. The transaction data DQEF is applied according to the timeline detailed in the technical documents. This will allow sufficient time to monitor the progress of issues' resolution and to perform and submit the necessary changes.

⁵ Since 2022, NCAs have extranet access to all reference and quantitative data submitted by entities under their jurisdiction into the FITRS system.

34. ESMA will disseminate results to NCAs via the ESMA Data Platform (EDP) on a frequency agreed with the NCAs and specified in technical document.

4 Governance and review process during the execution

35. After the initial approval of the DQEF, if the NCAs or ESMA observe that a particular approved test is affected by fundamental shortcomings, the following actions can be proposed to the RWG / DSC⁶:
- a. Exclude the test from the DQEF scope proceeding to inform all relevant parties, or
 - b. recalibrate the technical specifications of the test where appropriate.
36. For this purpose, exclusively a revision of the technical document will occur at the end of each year and may include: (i) revisions in methodologies for the current analyses, (ii) addition of tests to be added in the data quality cycle of the following year, (iii) removal of tests that are no longer relevant.

5 Communication between participants and escalation process

37. The NCA and ESMA provide the relevant contact details to ensure the communication needed to execute the DQEF, through the RWG.
38. By default, the members of the RWG will be the main point of contact for the NCAs they represent. In case that an NCA is not represented in the RWG, its member in the DSC shall be the main point of contact. In all other cases, ESMA shall contact the NCA to request such information.
39. NCAs are expected to have their own escalation process in place to ensure that the appropriate remedial actions are taken vis a vis the submitting entities that are systematically failing to submit complete and accurate data and/or inadequately cooperating to correct the submitted data in due time.
40. Without prejudice to the different actions established or carried out by the NCAs at the national level, ESMA will monitor certain specific actions, which may need some coordination at EU level in order to improve the quality of the data and increase its usability for the purposes of the transparency regime.

41. The DSC will be kept informed on the status of the data quality tests on a regular basis and the BoS on an annual basis, through a data quality report.
42. The report to BoS and the experience gathered during the execution of the DQEF plan in the previous year will support the possible review of the DQEF for its subsequent execution. In the case that no review is proposed following the DQEF execution, the last version of the DQEF will be applicable by default in the subsequent year.

6 Annual report

43. After the execution of the defined quality checks, ESMA will report the results to BoS following the review of the DSC at the end of each year, and in the annual report on quality and use of data. These results will contain an overview of tests' results. The report will also detail the observed shortcomings in data quality and summarise the main feedback received from NCAs to overcome these issues and remedial actions in place.
44. Considering the results of the DQEF, if applicable, the annual report to BoS could also include proposals on how to further improve the data quality through the existing tools (e.g. Q&As, Opinion, IT system and supervisory best practices).

Annex. Documents relevant for the DQEF

- 45. MiFID – DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL⁷
- 46. MiFIR – REGULATION (EU) No 600/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL⁸
- 47. RTS22 – COMMISSION DELEGATED REGULATION (EU) 2017/590⁹

⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0065>

⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014R0600>

⁹ [Delegated regulation - 2017/590 - EN - EUR-Lex](#)