

Data Quality Engagement Framework

Money Market Fund data (MMFR) data

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1 Executive Summary

Reasons for publication

This document is an update of the last version of the Data Quality Engagement Framework¹ (DQEF) approved in 2022. It specifies the allocation of tasks between National Competent Authorities (NCAs) and the European Securities and Markets Authority (ESMA) in relation to the quality work of the information submitted by Money Market Fund Managers (MMFM) on the managed MMF(s) under the Money Market Fund Regulation (MMFR).

¹ ESMA50-164-6808 MMFR Data Quality Engagement Framework

2 Introduction

1. The Money Market Fund Regulation (MMFR) lays down rules for money market funds (MMFs) established, managed, or marketed in the Union. Among others, Article 37 of the Regulation introduces a reporting obligation for managers on the MMFs they manage to their NCAs and for the NCAs to report such information to ESMA.
2. In March 2021, ESMA Board of Supervisors approved a Data Quality Engagement Framework (DQEF) that specifies the allocation of tasks between the NCAs and ESMA in relation to the assessment of data quality of the information received in the systems built under the umbrella of the aforementioned legal framework.
3. The latest amendment to this document in 2024 introduces (i) a risk-based approach that identifies the most relevant issues affecting the data (ii) a change of the timelines for executing the data quality tests, sharing the quality tests with NCAs and expect feedback from the latter (iii) a change in the granularity of the results shared with the NCAs and (iv) a change in the ways in which the level of engagement by the relevant parties, the assessment of the quality of the data and lessons learned are reported to the Board.

2.1 Background

4. The work on the MMFR-DQEF is driven by the following key documentation:
 - Regulation 2017/1131/EU on money market funds ([link](#)) containing the high-level information on the framework, process, and the definitions of the fields of interest. The Implementing Regulation 2018/708 ([link](#)) L2 contains the reporting template.
 - Guidelines ([link](#)) containing reporting instructions.
 - Technical Reporting Instructions including the validation rules ([link](#)).
 - IT system containing in-depth description of the fields and their validation rules.
 - DSC and RWG terms of reference.

2.2 Objectives of the DQEF

5. The objective of the DQEF is to detect and correct quality shortcomings in the data reported by MMF managers to NCAs and then submitted by the latter to ESMA. The DQEF sets out the procedures agreed by NCAs and ESMA to verify and communicate data quality issues pertaining to the information reported to ESMA and to apply the relevant corrective measures. It outlines the process to share the relevant information and agree on best practices to assess and enhance MMFR data quality.
6. The data quality is evaluated by checking if the data fits its intended purpose for:
 - NCAs and EU authorities, investors, and other market participants to use the central public register (Article 4);
 - NCAs, ESMA and ECB for statistical purposes;
 - NCAs to support their monitoring and supervision of entities for their own discharge of duties;
 - ESMA to perform the tasks and powers foreseen under Directives 2009/65/EC, 2011/61/EU, and 2017/1131/EU with respect to MMFR.
7. To achieve these quality objectives, the DQEF foresees the following actions:
 - a. Monitoring the quality of the data as transmitted by NCAs to ESMA for several key dimensions / scope selected considering both the relevance for the intended uses and the feasibility of their execution. This monitoring will be executed through the agreed tests to be performed under this DQEF.
 - b. Apply corrective measures to known/detected specific issues to correct the transmitted data (including the lack of it).
 - c. Forward-looking, providing input to promote and support:
 - existing processes to support individual NCAs when transmitting the data to ESMA;
 - common definition of the reported data within individual jurisdictions when this is relevant for the consistent quality as defined in the previous paragraph;

- the definition and implementation of national data quality actions and contribute to the definition of best practices;
- IT infrastructure and MMFR specific systems, to support the timely transmission of high-quality data, including the review of validation rules on the data;
- supervisory convergence initiatives and guidance (guidelines, Q&A) and reporting instructions in the area of data reporting; and
- process to review MMFR and its implementing technical standards in the area of data reporting.

2.3 Principles applicable to the development and implementation of the DQEF

8. **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.
9. **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 informed of the issue.
10. **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.
11. **Risk-based approach:** To achieve a balance between benefits and cost, the issues that will bring the most value added in terms of data quality² will be prioritised, at the same time minimising the overall workload for ESMA and

² i.e. issues with relevant impact on the quality of the information reported at EU level.

NCA. This will have as an effect, diminishing the number of entities that will be captured under each data quality cycle.

12. **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

13. The DQEF is based on a set of tests defined for detecting data quality issues in the MMFR database and register. The tests are performed individually by ESMA staff. The results of the tests are shared with each NCA through its representative at RWG, 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.
14. The risk-based approach is calibrated to maximize the quality of the reported data with a proportional effort by NCAs. The risk-based approach applied to the MMFR DQEF is outlined in detail in section 3.3.
15. The tests are thoroughly defined and documented (in the non-technical documents annexed to this DQEF) to ensure consistent estimation of the most relevant issues and the entities impacted. To achieve this, the details on inputs, ancillary data, output formats, reference periods and scope in term of entities are ex-ante agreed and commonly defined with NCAs. In particular, all details on the data quality checks are included in the technical documents that are shared with NCAs in every data quality cycle.
16. The tests of the DQEF are classified according to their nature and the necessary steps to execute these checks. Table 1 below presents the four distinct flow types in which the tests were grouped according to the relevant data quality dimensions.

17. The DQEF should be read in conjunction with the technical documents³, and NCAs should be aware that any new additions, deletions, and improvements may be applied to the tests as part of the review process detailed in Section 4.

³ ESMA501605533872-8343 MMFR Technical Document

| Quality dimension | Description | Examples of analyses | Step 1 | Step 2 |
|---------------------|--|---|--|---|
| Completeness | Refers to the actual provision of the data both at record level and for individual fields within the records (completeness of specific reference data fields) | 1) List of funds not reporting in the period of reference (i.e., quarterly). 2) Completeness of the ECB code | ESMA provides the number (or list) of records for which the information is expected but not received | NCA applies the remedial actions to achieve the submission of the missing data. |
| 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. | (1) Consistency in investors concentration (professional, retail) with investors' breakdown (2) Inconsistent LEI in the system and in the register | ESMA provides the list of records for which the information is not consistent | NCA applies the remedial actions to achieve a consistent submission of the data. |
| Accuracy | Refers to the faithful representation of the data against the reality it shall reflect. | (1) Sum of the value of individual assets against reported NAV (2) Funds for which the value of NAV is considered to be suspicious | ESMA provides the number (or list) of records for which the suspicious value was detected | NCA applies the remedial actions to achieve the correction of the flawed data if necessary, or sends a feedback file to ESMA, in the predefined format, flagging false positives. |

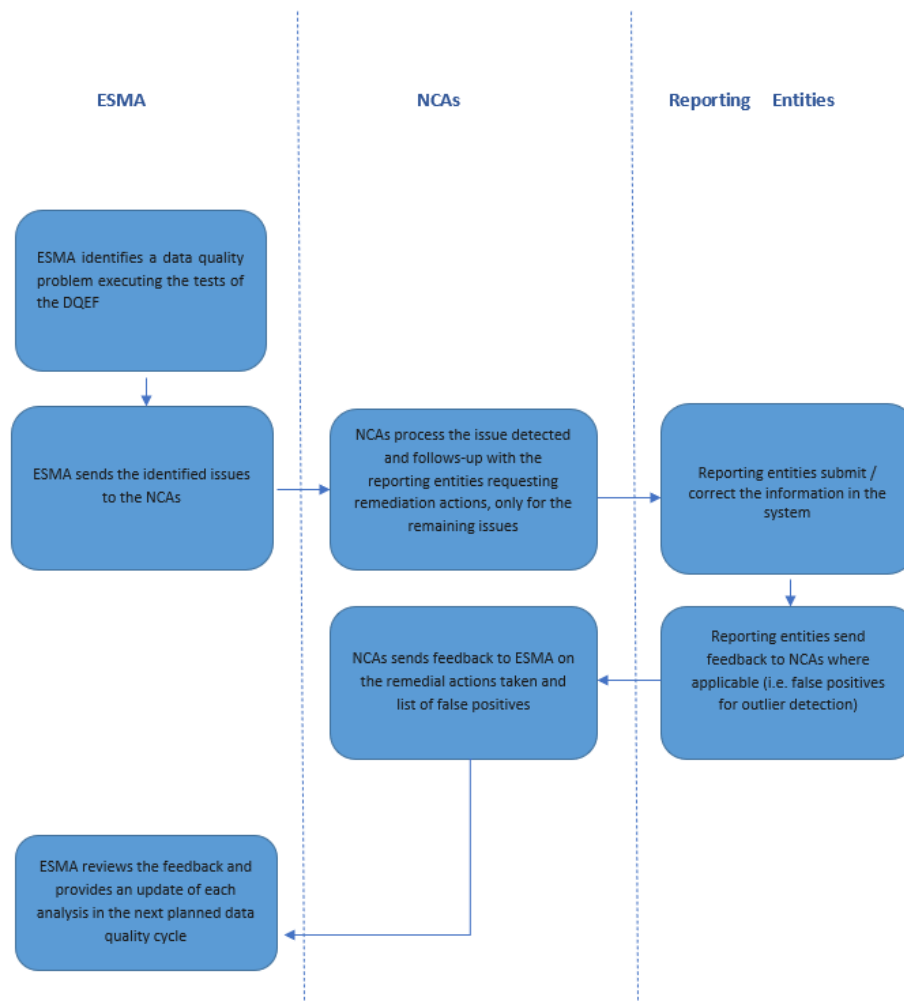
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|-------------------|---|--|---|--|
| Timeliness | Refers to the availability of up to date information according to the requirements to ensure that both NCAs and ESMA can rely on data that properly reflects the latest developments. | (1) Lag in reporting of funds as reported to MMFR system | ESMA provides indication on the number of days between the end of the reporting and the effective submission. | NCAs take into account the information to investigate possible issues in the transmission of the data and take where needed remedial actions |
|-------------------|---|--|---|--|

Table 1. Data quality dimensions covered by the DQEF

3.2 Allocation of responsibilities

18. 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 (RWG, DSC, IMSC).
19. 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 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.
20. ESMA staff will execute all analyses with uttermost care, and it will test both the analyses and results 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.
21. 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.
22. 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).
23. 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



24. ESMA shall receive feedback from NCAs related to the false positives in the case of outlier detection and on the remedial actions taken to solve the data quality issues.

3.3 Risk-based approach

25. This framework will be applied to the resolution of significant data quality issues in MMFR reporting, affecting the use of data at the EU-level. The risk-based

approach is conceived to capture at the same time relevant issues affecting a consistent number of records and entities contributing in a relevant manner to the issues identified.

26. In this context, it is proposed that reporting entities that submit potential erroneous or incomplete information, affecting the scope or accuracy of the data, are flagged by ESMA if certain criteria are met. The criteria and the relevant threshold are included in the Technical Document.
27. The previously described risk-based approach framework does not apply to data quality tests that can be calibrated through their own methodology (i.e., outlier detection in AuM, NAV).
28. ESMA may provide NCAs with the full set of data files including all issues, upon request of NCAs, maximum once per year, on a best effort basis.
29. In some cases, the identified issues are very specific and concern a given reporting entity or a small number of entities but still may have an important impact on the analysis of values at EU level. This could be e.g. a case when a specific entity suddenly starts to report abnormal and completely unrealistic values for AuM, NAV, exposures, etc.
30. It is therefore proposed that in similar cases ESMA shares with the respective NCA(s): (i) the identification of the fund(s) or manager(s) concerned and a (ii) short description of the issue. NCA(s) would be expected to revert to ESMA within 12 weeks, confirming if the issue has been resolved.

3.4 Timeline for test execution

31. The MMFR DQEF is applied on a quarterly basis according to the timeline detailed in the technical documents. This will enhance the quality of the data reported in any submitting period. At the same time, it will allow sufficient time to monitor the progress of issues' resolution and to perform and submit the necessary changes.
32. At the same time, the periodic execution allows to operate critical amendments in due time (e.g., threshold changes to reduce the number of false positives). This is especially relevant when new tests are introduced.
33. Given the nature of data quality issues, it is important to reiterate that no other feedback is expected to be provided to ESMA, outside the provision of the false

positives detected for any of the analyses, and an overview of the actions that were undertaken to resolve the data quality issues.

Timeliness and data quality

The MMF Regulation provides that the data submitted to the NCAs under article 37 shall be transmitted to ESMA no later 30 days after the end of the reporting quarter.

For such reason, each iteration of the DQEF will start not earlier than 30 days after the end of each quarter. ESMA will provide the data within 2 weeks after such deadline. NCAs will have 2 months to revert to ESMA to report false positives or detail the remedial actions put in place.

The timelines defined, which are applicable throughout the year for each of the above activities, are detailed in the technical documents approved every year.

4 Governance and review process during the execution

34. After the initial approval of the DQEF, if the NCAs or ESMA observe that a particular approved test included in the technical document is affected by fundamental shortcomings, the following actions can be proposed to the RWG / DSC⁴:
- 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.
35. 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

36. The NCA and ESMA provide the relevant contact details to ensure the communication needed to execute the DQEF, through the RWG.
37. 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.
38. 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.
39. 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.

⁴ The issues may also be discussed within IMSC, where applicable

40. 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.
41. In the case that no review is proposed following the DQEF execution, the version of the DQEF here outlined will be applicable by default in the subsequent year.

6 Annual report on quality and use of Data

42. The results of the execution of the DQEF will be included in the ESMA annual Report on Quality and Use of Data⁵. This public report will include general metrics of data quality at country level, the observed shortcomings in data quality and will detail the main feedback received from NCAs to overcome these issues and remedial actions put in place.

⁵ See 2023 Report on Quality and Use of Transaction Data (https://www.esma.europa.eu/sites/default/files/2024-04/ESMA12-1209242288-852_2023_Report_on_Quality_and_Use_of_Data.pdf)