



European Securities and
Markets Authority

Technical Reporting Instructions

MiFIR Transaction Reporting

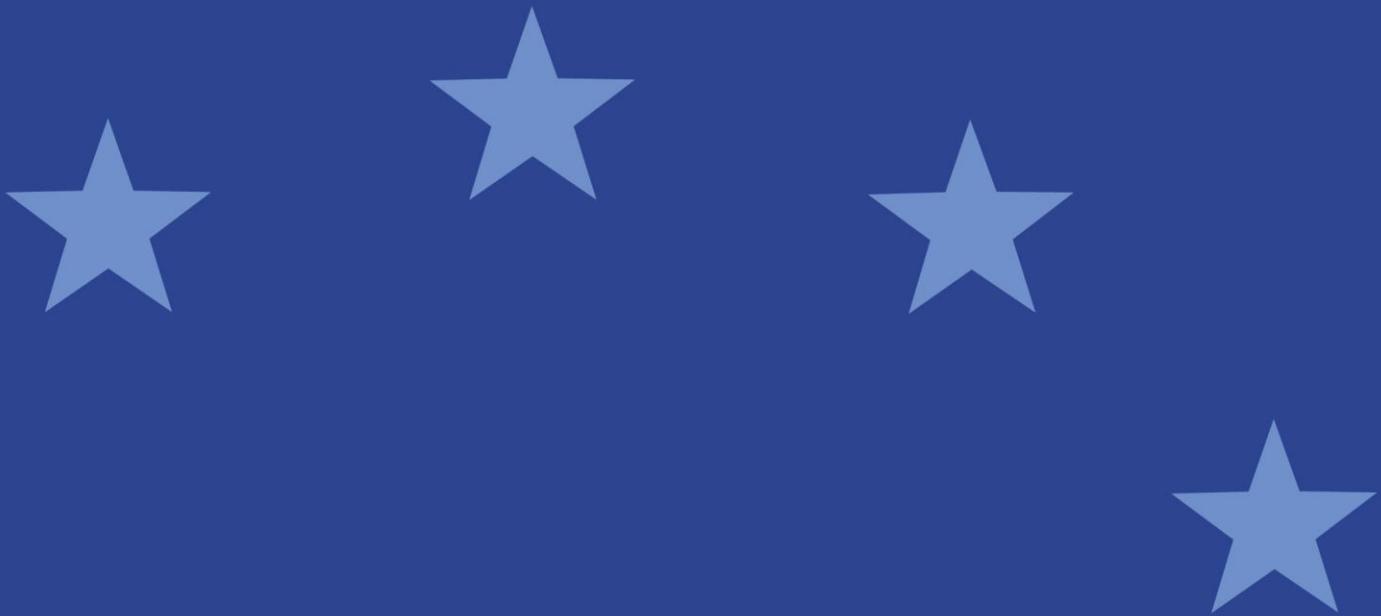




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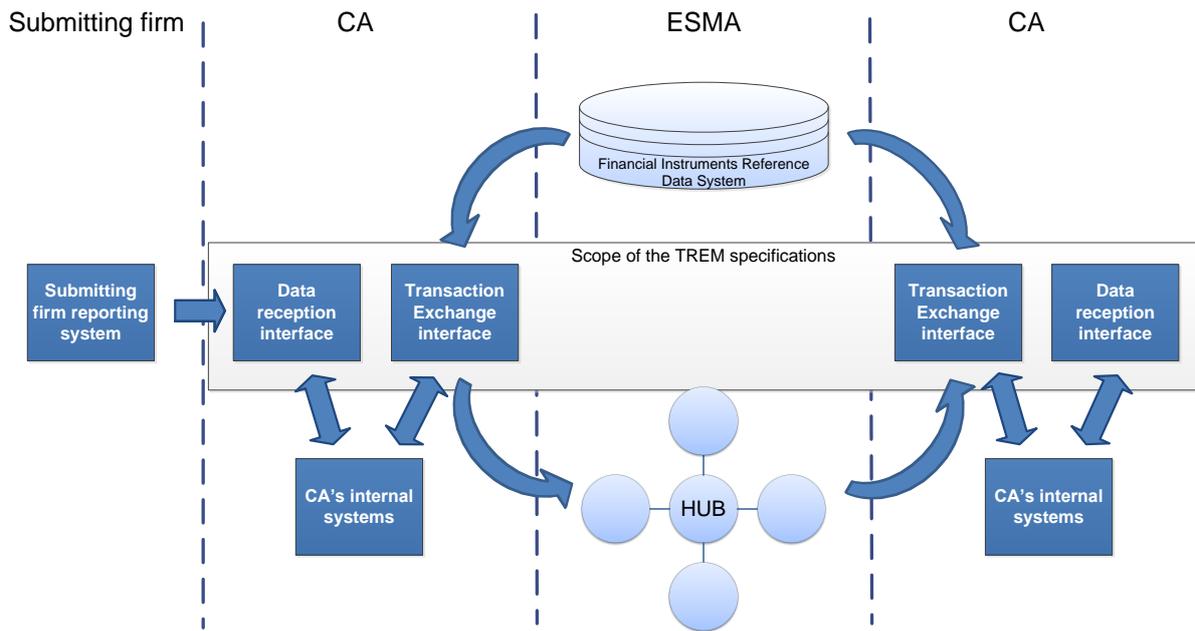
1 Introduction

1.1 Background

1. MiFID was introduced to help provide a level playing field for financial firms across the European Economic Area. This Directive impacted national regulators in a large number of ways, one of which being the changes in the requirements for collecting and distributing transaction reports.
2. Following the implementation of MiFID, regulators were required to collect transaction reports not only from domestic investment firms and domestic subsidiaries of foreign firms, but also from branches of overseas EU investment firms based in their area of jurisdiction. The regulator collecting such reports was required to transfer elements of them, in an agreed format, to other relevant CAs.
3. In November 2007, CESR implemented an IT system to facilitate the exchange of transaction reports amongst regulators. This system, called the Transaction Reporting Exchange Mechanism (TREM), was built based on the specifications of the Regulation (EC) No 1278/2006 implementing MiFID to organize the exchange of transaction reports amongst European financial regulators. TREM was initially limited to the scope of the MIFID Level 2 Regulation, i.e. exchange of transaction reports on instruments admitted to trading in Europe. In the following years it was extended to cover transactions in Exchange Traded Derivatives (ETD) and Over the Counter Derivatives (OTC).
4. The introduction of MiFIR in 2014 extends the transaction reporting requirements in terms of the scope of instruments in which transactions should be reported as well as the scope of information that should be provided per each transaction. Further details on the transaction reporting regime are defined in the RTS on reporting obligations under Article 26 of MiFIR.
5. Further to that, MiFIR is a maximum harmonisation legislative act which means that, unlike for MiFID, all Member States shall follow the rules prescribed by the Level 1 and Level 2 without the right to exercise any national discretion in regards of their implementation.
6. In their meeting in March 2015, the ESMA Board of Supervisors decided that a common specification for transaction reporting between competent authorities and reporting entities shall be developed by ESMA. Therefore, this document covers the elements of the interface that shall be built between CAs and market participants in their Member States. This in particular refers to the common technical format for transaction reporting and common set of data quality rules.

1.2 Project context

7. The below diagram shows the context and the key logical components of the transaction reporting and exchange architecture:



8. The overall transaction reporting system is composed of the following logical components:

- a. Each submitting entity will need to implement a **reporting system** that will be preparing and submitting transaction reports to CAs in the requested format.
- b. CAs shall implement a **data reception interface** that will receive data from the submitting entities. This interface shall validate the compliance of the transaction reports with the common format and common validation rules as well as providing feedback to the submitting entities.
- c. **Transaction reporting exchange interface (TREM)**: this component shall implement the common set of rules with regards to transaction reports exchange between CAs. The data format and validation rules should be the same as for the data reported by submitting entities (except for minor technical differences).
- d. Depending on the needs, CAs may also build **internal systems** that will store and analyse the received transaction data. This is not included in the scope of this document.
- e. The **Hub**: the aim of the Hub is to allow authorities to have a secure, central and common facility to exchange their data. The Hub is the network layer of TREM. The Hub is also reused for the purpose of data exchange between other systems developed by ESMA and CAs.
- f. The **Financial Instruments Reference Data System**: in order to process transaction reports (validation and routing), each national authority needs to have the name of the relevant CA for all instruments for which transaction reports are required, as well as common shared reference data. Instrument reference data will be published by ESMA.

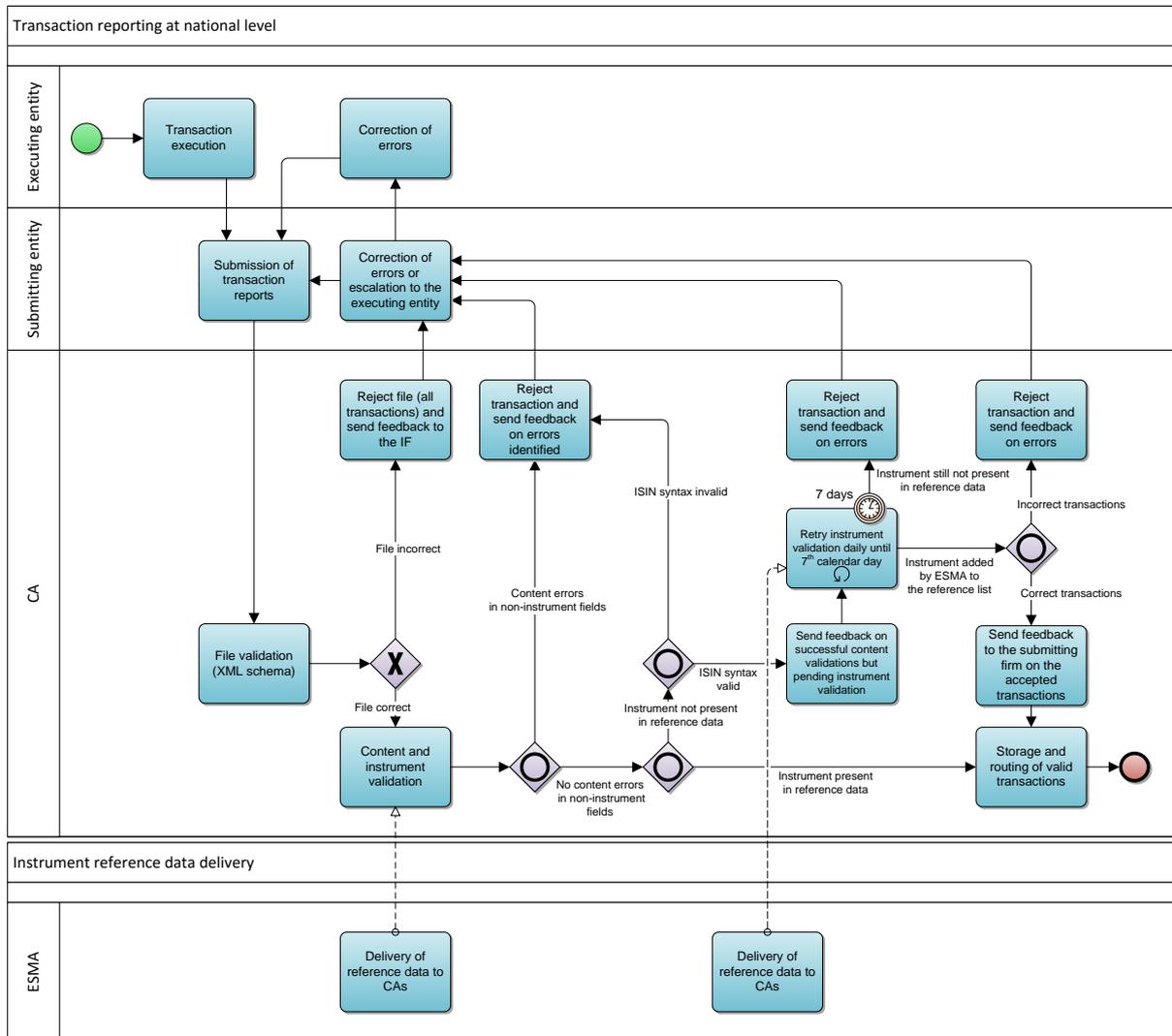


1.3 Scope of this document

9. This document describes the elements of the interface that shall be built between CAs and submitting entities in their Member States that should be implemented in the same way by all CAs. This in particular refers to:
 - a. Overall process for transaction data reporting;
 - b. Common technical format for data submission;
 - c. Common set of data quality controls to be applied to each transaction report.
10. Any operational and technical arrangements that are not covered in this chapter shall be defined and implemented by CAs at their discretion.
11. In particular, the following aspects of the process will be defined and developed by each CA:
 - a. Applications/Platforms used to collect data from submitting entities;
 - b. Conventions for packaging and naming files submitted to CAs (only the content of the files should be harmonised and compliant with the ISO 20022 specifications);
 - c. Data security arrangements (e.g. encryption of files or the submission channel);
 - d. Restrictions with regards to the file size / number of records within a file.

2 Overall process

12. The below diagram presents the transaction reporting process at the national level:



13. The following table summarises deadlines for the key events in the process:

Notation	Task	Deadline
T	Transaction execution	
R	Submission of transaction reports by reporting entity	T+1 working day
	Provision of feedback to the reporting entities	R+1 calendar day

		Maximum of R+7 in case of instrument missing in reference data
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14. Transaction reports are submitted to CAs by:

- a. Investment firms which execute transactions in financial instruments;
- b. ARMs acting on behalf of investment firms;
- c. Operators of trading venues through whose system the transaction was completed.

15. Transactions executed on day T are reported no later than the close of the following working day, i.e. T+1.

16. It is left to each CA's discretion to prescribe detailed technical procedures and schedules for reports submissions.

17. The incoming reports are run through mandatory validations:

- a. **File validation** – verify compliance of the file with the XML schema (syntax of the whole file and specific transaction reports). If the file is not compliant, the whole file (all transactions included in the file) is rejected.
- b. **Content validation** – a set of validation rules that are executed for each transaction report and verify the content of specific fields. Incorrect transaction reports are rejected whereas correct transactions are processed in further steps. These validation rules include validations dependant on instrument reference data.

18. Each CA should apply file validations as defined in section 3.1. Those validation rules check whether the syntax of the XML file is correct. In case of any file error the whole file (all transaction reports included in the file) must be rejected.

19. After the successful file validation the content validation rules should be executed for each transaction report included in the file. Because of dependencies between the rules, they should be applied in a specific order. The objective is to execute all validation rules for each transaction report. However, it may happen that due to errors identified by some rules the following rules cannot be executed (e.g. if the reported CFI code is incorrect, the validation rules based on the CFI code should not be executed because it is not possible to unambiguously say whether the CFI-based validation has been passed or not if the CFI code itself was incorrect). In such cases, the validation should stop after performing all rules that can be executed for this specific transaction report and the transaction report should be rejected.

20. The content rules in particular include the validation of whether the instrument which the transaction was executed in or the underlying instrument (in case of OTC transactions or transactions executed on organised trading platforms outside EEA) is included in the reference data if the reported ISIN code is correct in terms of syntax / check digit. The following cases can be considered:

- a. If the transaction report is correct (all content rules including the instrument validation are OK), the transaction report is accepted;
- b. If there are no content errors related to fields other than instrument / underlying but the check digit of the reported ISIN is incorrect, the transaction should be rejected;
- c. If there are no content errors related to fields other than instrument / underlying but reported instrument / underlying is missing in the reference data and the syntax / check digit of the reported ISIN is correct, the following steps should be undertaken:
 - i. the CA shall inform the submitting entity that the transaction is pending the instrument / underlying validation;
 - ii. the CA shall execute the instrument / underlying validation every day until the 7th calendar day after the report reception from the submitting entity;
 - iii. if the instrument / underlying reference data becomes present in the reference data on or before 7 calendar days have elapsed and there are no content errors as a result of instrument validation, the transaction should be accepted;
 - iv. If the instrument / underlying becomes present in the reference data on or before 7 calendar days have elapsed and there is a content error(s) as a result of instrument validation, the transaction should be rejected;
 - v. if after 7 calendar days the instrument / underlying is still not present in the reference data, the CA should reject the transaction report and send a relevant message to the submitting entity;
- d. If there are no content errors related to fields other than instrument / underlying but reported instrument is missing in the reference data and the check digit of the reported ISIN is incorrect, the transaction should be rejected immediately;
- e. If there are content errors related to fields other than instrument / underlying, the transaction should be rejected immediately, i.e. without waiting for an additional 7 days. The feedback on all identified errors should be provided.

21. The following rules shall apply to the instrument validation described in the above paragraph:

- a. In case the transaction was executed on a EEA trading venue or a systematic internaliser or XOFF, the instrument in field 41 shall be validated and shall be present in the reference data;
 - b. In case the transaction was executed on an organised trading platform outside the EEA, the instrument in both, field 41 and field 47 shall be validated and one of them shall be present in the reference data (field 41 is validated first and if the instrument is present in the reference data, field 47 is ignored);
 - c. In case the transaction is an OTC transaction (trading venue populated with XXXX), the instrument in field 47 shall be validated and shall be present in the reference data;
 - d. In case the transaction was executed on an organised trading platform outside the EEA or OTC (trading venue populated with XXXX) and the underlying instrument is an index, the instrument (i.e. the ISIN of the index) shall not be validated against the instrument reference data.
22. If a transaction report is not compliant with one or more validation rules, such report shall be rejected. Correct reports shall be accepted. It may happen that some of the transaction records included in one file are accepted and some are rejected.
23. The content validation rules cannot be implemented in the XML schema. Therefore, they shall be implemented directly in the CAs' applications.
24. For validating transactions executed between 00:00 and 23:59:59 UTC on day T CAs use the reference data as of day T, except for the case when a transaction or an instrument is submitted late (see also paragraph 25). The instrument reference data for day T is provided by FIRDS no earlier than on day T+1, by 8am CET.
25. In order to cope with issues related to late reporting of transactions or reference data, for transactions validated or routed later than on T+1 CAs shall use the latest reference data available on the day the validation / routing takes place but in this reference data they should check whether according to the version of reference data used the relevant reference record (instrument, MIC code, Currency code, etc.) was valid on day T.
26. Feedback files shall be produced and sent to submitting entities no later than one day after the report submission (i.e. R+1 where R is the reporting day). However, there might be delays of feedback for some transactions due to different circumstances, e.g. incomplete instrument reference data used for validations.
27. The feedback files include acknowledgements of correct submission of transaction reports as well as error messages in case submitted transaction reports or whole files are incorrect. All identified errors are reported in the feedback, even if there is more than one error per transaction report.

28. With relation to the pending status, the feedback that a transaction is pending is provided only once on the first day when the instrument validation fails. If the transaction remains in the pending status on the following days, it should not be included in the file. Only when the status of the transaction changes (accepted or rejected) shall the transaction be included again in the feedback file to inform the submitting entity on the status change.
29. Fully validated correct transaction reports might be sent by the CA that received them from submitting entities to other CAs within the EEA, as required by Article 26(1) of MiFIR and agreed between CAs.

3 Error handling

3.1 Overview

30. As a transaction is reported, it is passing through systems of the executing/submitting entity and the CA. Each time the transaction goes through a system, errors can occur, and once this has been discovered, the whole chain should be informed and corrections made.
31. Compliance of the transaction reports with the defined data quality controls / validation rules is ensured via the use of feedback files.
32. One to several feedback files are sent by the CA for each file received from a submitting entity. This file provides information on the outcome of the file and transaction validation.
33. Two cases can be observed when the CA sends a feedback file to the submitting entity:
 - a. File sent is correct (without any errors)
 - i. A feedback file is then exchanged to confirm that the file has been received and there are no errors.
 - b. File sent has errors:
 - i. A feedback file is exchanged to inform that the file has been received and some errors have been discovered
 - ii. The submitting entity shall send corrections to the errors specified in the feedback file.
34. If the submitting entity does not receive feedbacks for previously submitted transactions, it should continue to report. Lack of feedback files is not a reason to stop reporting.
35. The following types of errors can occur:
 - a. **File errors:** errors detected by the receiving authority which prevents it reading files received, e.g. incorrect XML format;

- b. **Content errors:** errors concerning transaction records, e.g. trading dates in the future, a duplicate record or an incorrect ISIN code, etc.

36. From the point of view of the CA:

- a. If file errors are detected, the CA generates a feedback file and must not load any records of the file (the whole file is rejected);
- b. If content errors are detected, records with errors shall not be used in regular data analysis/processing, e.g. they shall not be used in market abuse investigations and shall not be routed to other NCAs.

37. It is the responsibility of the submitting entity to ensure that all feedback files are analysed and all reports are corrected:

- a. If a feedback containing file errors is received, the entire file should be corrected and sent again;
- b. If a feedback containing content errors is received, only the incorrect transaction reports should be corrected and included in a new file sent to the CA (the new file may contain both new transaction reports and corrections of previously rejected transactions);
- c. If a feedback contains transactions status "RECEIVED" or "PENDING", no action related to these transaction is required by the submitting entity.

38. In case of rejected files/reports, the cancellation process should not be used to send corrected file/reports because the CA has not loaded the incorrect file/reports. The submitting entity should send the corrected file/report as if it was a regular file/report. In case an accepted transaction needs to be corrected, the submitting entity shall send the cancellation first and then the corrected new transaction report.

39. If a transaction report is accepted by the CA who receives it from the Submitting Entity but errors are identified by another CA after the transaction has been routed, such cases should be subject to manual processing by the sending CA (i.e. the sending CA shall undertake any relevant actions in order to identify the reason for the error and correct it).

3.2 File errors

40. This chapter deals with errors corresponding to the file and any other kind of error which implies that the file is unreadable or unreliable (as explained below). These controls will be run by the CA and the corresponding feedback file will be generated by this CA, and sent to the reporting entity. In addition, once a file error has been discovered, even if the file is readable, the whole file is rejected and the CA shall not process the records.

41. These errors related to the XML schema validations only. The XML schema for transaction reports will include a number of syntax controls, therefore it is important for the data quality purposes that the application of correct schema by reporting entities is controlled by CAs.

Control	Error Reference	Error Message	Corrective action
The ISO 20022 Message Identifier in the BAH (*.xsd) is not valid.	FIL-104	The ISO 20022 Message Identifier in the BAH must refer to the latest schema approved	Correct the Message Identifier according to the latest XSD schema
Validate that the file received fits to the corresponding XML schema.	FIL-105	The file structure does not correspond to the XML schema : [result of XML validation]	Check the result of the validation, it should correspond to formats defined in this document see <i>XML chapter</i> and resend the file.

42. The last control (FIL-105) requires particular attention. In order to run it, CAs will use a XML validator to check the file received against the XML schema provided by ESMA. The XML validator will provide either a list of error or an 'OK' message. If it is OK, the last control is valid. If not, the CA should populate the error message of the XML validator within the Error Message of the feedback in place of [\[result of XML validation\]](#).

43. This last control is very important as it checks the whole XML structure and all fields' format. If one field is not in the right format, the whole file is rejected. This is a very strong validation. In order to avoid too many difficulties, submitting entities are strongly advised to use the XML schemas to generate their and validate their files before submitting them to CAs.

44. The consequence of having identified these errors is an unreliable file. **The CA which identifies one of these errors should not load the file.** It should send a feedback message including the error details (see above) and wait for another file. The submitting entity must process the transaction feedback file, correct the problem and send a correct file without using a cancellation process.

45. In case of file errors the CA should not proceed with the content validations described in section 3.3 and should wait for the submission of the corrected file.

46. Where applicable, CAs may prescribe additional file validation rules that are specific for the data submission processes implemented in their countries. These additional rules shall be limited to technical controls of the submission process (e.g. file name, encryption, etc.)



and shall not validate the content of transaction reports. If such rules are introduced by a CA, the convention for the error code shall be as follows:

AAX-NNN

where AA is the country code of the CA and NNN is the sequence number of the rule (e.g. the codes for rules added by the French authority would be as follows: FRX-001, FRX-002, FRX-003, ...).

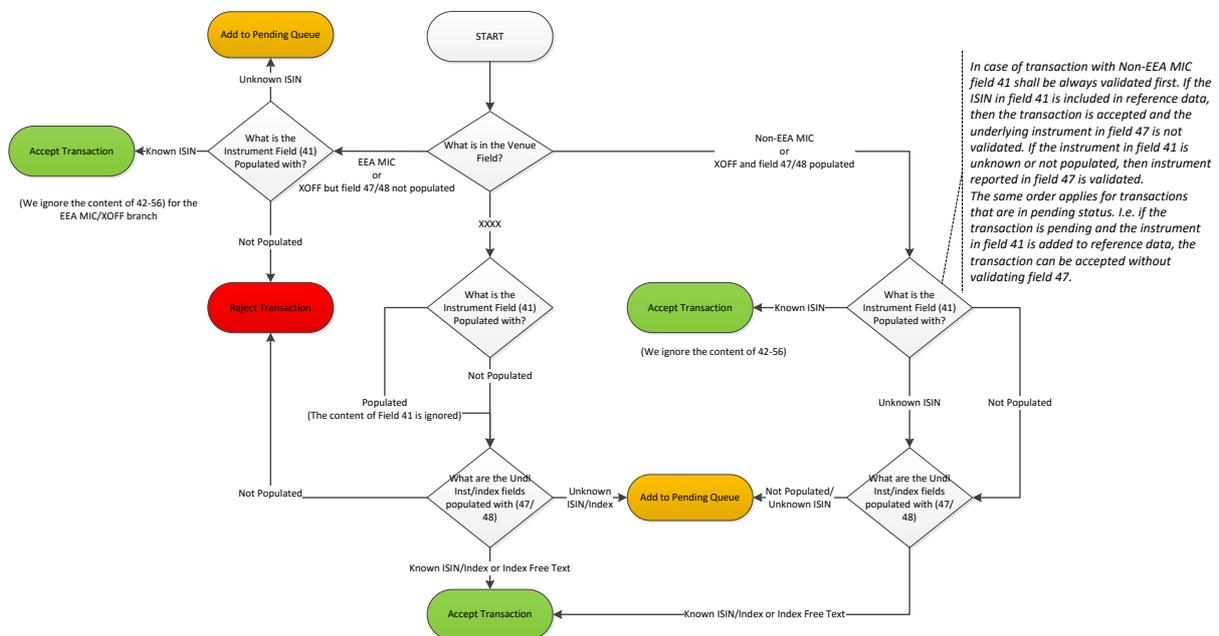
3.3 Content errors

47. Even when the file validations have been executed, errors may still be detected as not all data quality rules can be implemented in the XML schema. In such a case, all CAs will validate all received transaction reports within their applications with additional content validation rules.
48. The list of content validation rules that that should be implemented by all CAs is described in Annex 1.
49. Each of the transactions included in the file should be checked against all the applicable validation rules. If the report is incompliant with one or more of the rules, this report will be rejected.
50. The validation rules related to the instrument reference data should be considered as a specific case.
51. It may happen that the instrument which the transaction was executed in or the underlying instrument (in case of transactions in instruments not admitted to trading where the underlying is admitted to trading or is an index/basket of instruments admitted to trading) is not included in the reference data that is provided to CAs by ESMA (e.g. due to late transmission of reference data by the trading venue).
52. If that happens, the CA shall execute the file validation and also other (not related to instrument reference data) content validation rules and if the transaction is correct, the CA should inform the submitting entity on successful syntax validations (but not on the acceptance of the report yet). In case any errors are identified at this stage, the transaction should be rejected.
53. The CA should continue executing instrument validation until the 7th calendar day after the report reception from the submitting entity. If the instrument in question is included in the reference data by that time and there are no content errors, the record should be accepted. Otherwise, after 7 calendar days the CA should reject the transaction report and send relevant message to the submitting entity.
54. This pending process applies only to the instrument reference data but not to other types of reference data that can be used for the transaction reports validation. E.g. if a transaction report includes in one of the fields a currency code that is not included in the reference list

of currencies, such transaction should be rejected immediately, without waiting for additional 7 days for addition of the currency reference data.

55. Another topic related to the instrument information is the population of fields 42-56. The RTS state that these fields are not populated for transactions that are executed on a trading venue or with an investment firm acting as a SI, or where field 41 is populated with an ISIN that exists on the reference data list from ESMA. However, even if the above conditions are met and all or some of the fields 42-56 are populated, such transaction report will not be rejected. If such report has to be routed to other CAs, it should be routed with all the information provided in the original report, including fields 42-56.

56. The below diagram summarises the validation of the instrument:



57. The transaction reports will not be loaded to CAs' systems before the full validation (including instrument validation) is successfully completed. This implies that CAs will need to store transactions that are waiting for the instrument validation in a temporary queue.

58. Please note that in the case of cancellation reports¹ only fields 2, 4 and 6 are reported; therefore only content rules related to these fields should be executed.

3.3.1 Example – instrument validation

59. The following example lays out how the reference data validation should work within each CA's Transaction reporting system.

¹ further details on the cancellation process are described in section 4.



60. To keep the examples simple and focused on the principles of validating transaction reports against the instrument reference data that was valid on the trade date the following assumptions have been made:

- a. Any logic around validating the content of the underlying instrument field is the same as the instrument field;
- b. All other validation rules have been successfully passed for all transaction reports;
- c. The type of instrument is not relevant – all we are focused on are the start (date of admittance) and the end (expiry date) dates of an instrument;
- d. All instrument Identifiers are well formed and pass the check-digit.

Day 1 (05/01/2016)

Reference Data received by ESMA on 04/01/16 (Provided to NCAs 8am 05/01/16)		
Instrument Id	Date of Admittance	Expiry Date
Inst1	01/01/1980	
Inst2	01/01/2015	31/12/2030
Inst3	05/01/2016	
Inst4	04/01/2016	31/12/2030

This is the reference data that has been provided by ESMA. Each instrument has a validity period (i.e. the period between the data of admittance and the expiry date)

Transaction File 1		
Txn Reference	Instrument	Trade Date
Txn1-1	Inst1	31/12/2015
Txn1-2	Inst2	31/12/2015
Txn1-3	Inst3	04/01/2016
Txn1-4	Inst4	05/01/2016
Txn1-51	Inst5	04/01/2016
Txn1-52	Inst5	31/12/2015
Txn1-61	Inst6	04/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 31/12/15
Accepted	Instrument was valid on 31/12/15
Rejected	instrument was not valid on 04/01/16
Accepted	Instrument was valid on 05/01/16
Pending	instrument is Unknown
Pending	instrument is Unknown
Pending	instrument is Unknown

Day 2 (06/01/2016)

Reference Data received by ESMA on 05/01/16 (Provided to NCAs 8am 06/01/16)		
Instrument Id	Date of Admittance	Expiry Date
Inst1	01/01/1980	
Inst2	01/01/2015	31/12/2030
Inst3	04/01/2016	
Inst4	04/01/2016	04/01/2016
Inst5	04/01/2016	

Trading Venue had previously provided wrong start date for Inst3

Trading Venue adds an Expiry Date as this was a 1 day listing.

Trading Venue adds instrument late due to internal error. This allows Pending Transactions on this instrument to be validated.

Holding table (unprocessed transactions from File 1)		
Txn Reference	Instrument	Trade Date
Txn1-51	Inst5	04/01/2016
Txn1-52	Inst5	31/12/2015
Txn1-61	Inst6	04/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 04/01/16
Rejected	Instrument was not valid on 31/12/15
Pending	instrument is Unknown

Transaction File 2		
Txn Reference	Instrument	Trade Date
Txn2-1	Inst1	04/01/2016
Txn2-2	Inst2	04/01/2016
Txn2-3	Inst3	04/01/2016
Txn2-4	Inst4	05/01/2016
Txn2-5	Inst5	05/01/2016
Txn1-3	Inst2	04/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 04/01/16
Accepted	Instrument was valid on 04/01/16
Accepted	Instrument was valid on 04/01/16
Rejected	Instrument was not valid on 05/01/16
Accepted	Instrument is valid on 05/01/16
Accepted	Instrument is now valid on 04/01/16

Resent by Submitting Firm due to establishing that the previous rejection was caused by reference data error

This instrument is still in pending status. But the NCA should not include it in the feedback to be sent on Day 2 as this transaction was included in feedback sent on Day 1 and the status has not changed.

Day 8 (12/01/2016)

Reference Data received by ESMA on 05/01/16 (Provided to NCAs 8am 12/01/16)		
Instrument Id	Date of Admittance	Expiry Date
Inst1		01/01/1980
Inst2		01/01/2015 31/12/2030
Inst3		04/01/2016
Inst4		04/01/2016 04/01/2016
Inst5		04/01/2016
Inst7		10/01/2016

Holding table (unprocessed transactions from File 1)		
Txn Reference	Instrument	Trade Date
Txn1-61	Inst6	04/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Rejected	Instrument not added to reference data within 7 days

Transaction File 8		
Txn Reference	Instrument	Trade Date
Txn8-1	Inst1	11/01/2016
Txn8-2	Inst2	11/01/2016
Txn8-3	Inst3	12/01/2016
Txn8-5	Inst5	12/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 11/01/16
Accepted	Instrument was valid on 11/01/16
Accepted	Instrument was valid on 12/01/16
Accepted	Instrument was valid on 12/01/16

4 Cancellation process

61. In case the submitting entity needs to cancel a previously submitted transaction report, it shall send a cancellation report containing the following fields:

- a. Transaction reference number (field 2);
- b. Executing entity identification code (field 4);

c. Submitting entity identification code (field 6).

62. Fields 2 and 4 together form the unique key identifying the transaction report. They must be the same as in the original transaction report.
63. The cancellation can be submitted only for transaction reports that have been accepted or are pending instrument validation. Therefore, cancellation reports must not be sent for transaction reports that have been rejected by the CA.
64. If a cancellation is sent for a transaction report that is pending instrument validation, the validation of such report is aborted without waiting for the addition of the instrument record to the reference data and the transaction report is considered as cancelled.

4.1 Update of a record

65. In case a transaction report needs to be updated, the submitting entity should cancel the original record and send the updated version of the report as a new transaction report. If a modified report is sent for a transaction that has not been cancelled before, such report will be rejected.
66. Where the original transaction report is being corrected, the same transaction reference number shall be used for the replacement report as for the original report that is being amended.

4.2 Cancellation record in the XML schema

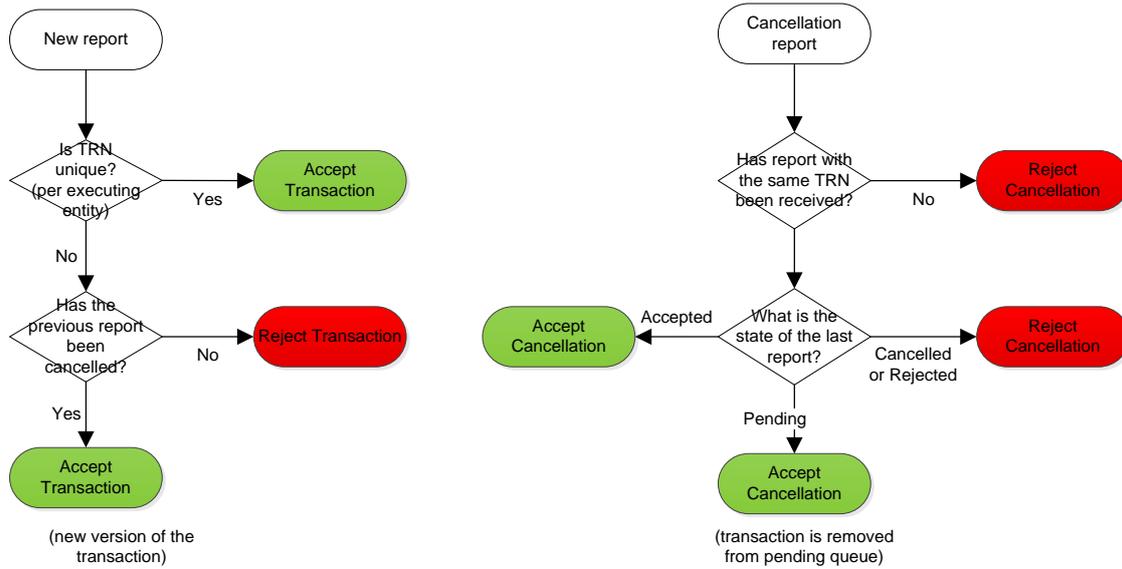
67. The XML files can contain two types of records:
- a. New transaction records;
 - b. Cancellation records.
68. A file may contain new transaction records, cancellation records or both.
69. A new transaction record contains a report on a trade from an investment firm. A cancellation record contains a cancellation of a transaction record which has already been sent or was included in the same file before the cancellation record. It implies that transaction reports should be included in the file in the respective order and processed in the same order they are included in the file.
70. The specification of the XML schema for both, the new and the cancellation record is provided in Annex 2.
71. The below table present examples of cancellation scenarios:

Scenario	Day	TRN	Report type	Feedback status	Comment
1. Cancellation of accepted transaction	T+1	Txn1-62	New	ACPT	
	T+2	Txn1-62	Cancellation	ACPT	
2. Cancellation of rejected transaction	T+1	Txn1-62	New	RJCT	
	T+2	Txn1-62	Cancellation	RJCT	New transaction with the same TRN was rejected, thus the cancellation should be also rejected.
3. Cancellation of pending transaction	T+1	Txn1-62	New	PNDG	If the reference data on the instrument is not available, the transaction may remain in the pending status for 7 days.
	T+2	Txn1-62	Cancellation	ACPT	After receiving a cancellation report for a pending transaction the CA should accept the cancellation report (and send relevant feedback to the submitting entity) and remove the transaction from the pending queue.
4. Cancellation of received transaction	T	Txn1-62	New	RCVD	Transaction Txn1-62 is received and will be processed on T+1 when reference data will be available.
	T	Txn1-62	Cancellation	RCVD	Cancellation of Txn1-62 is received and will be processed on T+1 according to one of the above scenarios (1, 2, 3).

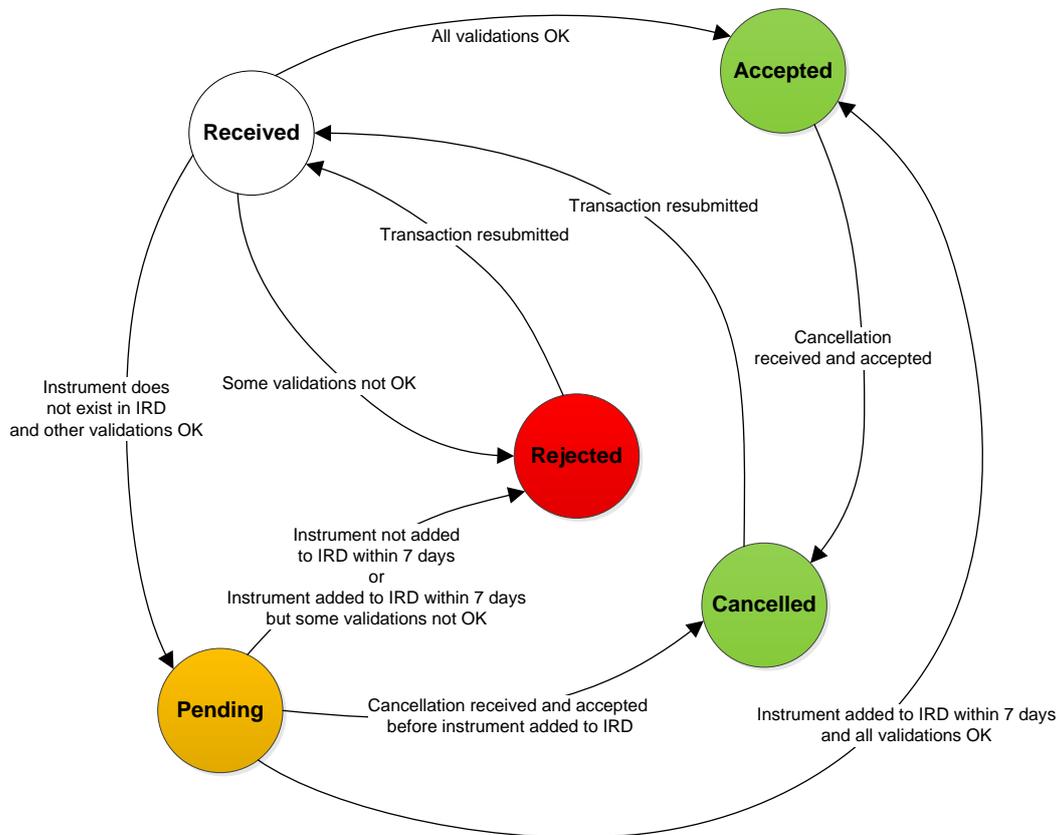
4.3 Transaction report lifecycle

72. The below diagrams summarise the process of submission of new reports / cancellations and the transaction lifecycle:

New report / cancellation report processing



Transaction lifecycle



5 Technical protocols for data collection from submitting entities

73. CAs should ensure sufficient level of security for the interface for data reception from submitting entities. In particular, the following (one or more) secure protocols can be used by CAs to receive transaction reports from submitting entities:

- a. SFTP;
- b. HTTPS.

74. All relevant technical details related to data submission by submitting entities will be specified by each CA.

6 ISO 20022 messages

75. This section describes rules for using the ISO 20022 messages.

76. In addition to the principles described in this section, detailed technical specification of messages is provided in Annex 2.

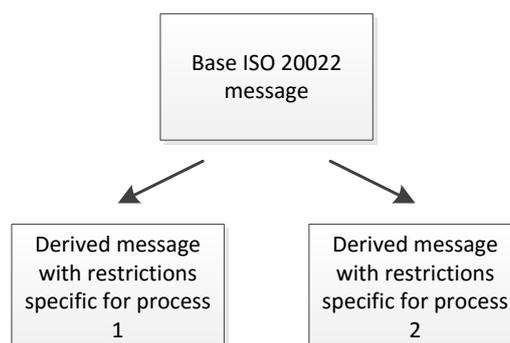
6.1 Overview

77. The format of all messages used for the purpose of MiFIR transaction reporting follows the ISO 20022 methodology. A set of new messages has been created for the purpose of this reporting requirement. However, where applicable, components of already existing ISO 20022 have been reused.

78. There are four types of messages

- a. Transaction data message;
- b. Status advice / feedback message (to be used for the application and the HUB feedback);
- c. Business Application Header;
- d. Business file header.

79. In order to ensure the highest level of alignment of the messages with the specific needs of the MiFIR transaction reporting and transaction exchange processes, the ISO 20022 XML messages have been further customised. A set of messages that are derived from the base ISO 20022 messages has been created.



80. This customisation was related in particular to the following aspects of the messages:

- a. Removing elements that are not applicable for specific process;
- b. Restricting the number of occurrence of some elements, e.g. making elements that are optional in the base message mandatory for specific process;

- c. Restricting lists of allowed codes;
- d. Restricting allowed characters in text fields and introducing specific patterns;
- e. Restricting set of values allowed for numeric fields.

81. The derived schemas have always the same overall structure as the base schema but may have more restrictive validations. An instance XML file created using one of the derived schemas is always compliant with the base schema.

82. E.g. the XML element related to the exchange reason is relevant only to the process of transaction data exchange between CAs. This element is optional in the base message. In the derived messages it was removed from the message to be used by submitting entities to report to CAs whereas it was made mandatory in the message to be used by CAs to exchange transaction reports to other CAs.

83. The XML schema version that is used in all messages is 1.0.

84. The UTF-8 character set should be used in all messages. It is capable to represent a wide set of characters. Additionally, it is backwards compatible to ASCII and provides compact representation (1 byte per character) for the majority of characters used in MiFIR messages. The character set used in a message should be specified in the encoding parameter of the XML document.

85. It should be noted that '&' and '<' characters are not allowed to be populated in the value of XML attributes. Messages including these characters will be rejected.

86. The derived schema will be prepared using the MyStandards platform provided by SWIFT and will be published in usage guidelines on this portal.

6.2 Transaction data message

87. The transaction data message allows reporting transaction data as specified in RTS on reporting obligations under Article 26 of MiFIR.

88. It should be underlined that the structure of message allows reporting two types of transaction report:

- a. A new report (tag <New>) – all fields as specified in the RTS are applicable;
- b. A cancellation report (tag <Cxl>) – only limited number of fields is applicable (further details on the cancellation process are provided in section 4).

The reporting part should use one of

89. In addition to the fields specified in the RTS, the message also includes technical attributes that are required to for the exchange of transaction data between CAs.



90. A number of restrictions were added to the base ISO 20022 message by ESMA. As there are some differences between the message to be used by submitting entities when reporting to CAs and for the exchange between CAs, two separate messages were created for these processes.
91. The XML schemas for both, the base ISO 20022 message and restricted messages are provided in Annex 2.

6.3 Status advice / feedback message

92. The status advice message contains two blocks:
- a. The header containing information related to the status of the whole file (report);
 - b. Detailed feedback related to each transaction.
93. As any other ISO 20022 message, the status advice message should be sent together with the Business Application Header. The complex element Related of the Business Application Header shall contain the reference to the original message which the feedback message is related to.
94. If a file or a record is rejected, the status code should be complemented with specific error code indicating the validation rule that has been performed and the nature of the error. The error code should be complemented with relevant error message.
95. The errors related to specific transactions should be identified by the concatenation of the executing entity identifier (field 4) followed by the transaction reference number (field 2), no additional characters between them.
96. The tables in the following two sections present detailed rules for the usage of status codes for files and transactions.



6.3.1 File status

97. The below table presents the list of statuses and error codes that can be used:

Status code	Name	Definition	Usage in reporting by submitting entities
ACPT	Accepted	Report has been accepted.	This status is used in case all transactions within a report have been accepted.
PART	Partially Accepted	Report has been partially accepted. A number of transactions have been accepted, whereas another number of transactions have not yet been accepted.	This status is used in case some of transactions included in a file have been accepted and some of them have been received, rejected or are pending validation. In such case the status and error code for rejected (or pending) transaction should be also provided in the RcrdSts complex element.
PDNG	Pending	Processing of transaction or report is pending.	Not used.
RCVD	Received	Report has been received.	Not used.
RJCT	Rejected	Whole report has been rejected.	This status is used in case the whole file has been rejected with the following error codes FIL-103, FIL-104 (and potentially other file errors implemented at national level), or if all transactions in a file have been rejected. In the latter case, the rejected status and respective error codes should be provided for each rejected transaction in the RcrdSts complex element.

RMDR	Reminder	Reminder of a non-received report.	Not used.
INCF	Incorrect Filename	File containing the report has an incorrect filename.	Optional. This status can be used together with error codes related to naming conventions implemented at national level.
CRPT	Corrupted File	File containing the report is corrupted.	This status code is used in case the whole file is considered erroneous and cannot be opened, together with error codes related to the whole file correctness that can be implemented at national level (e.g. file cannot be opened or decrypted).
WARN	Warning	File has been accepted with warning	Not used

6.3.2 Transaction status

98. The below table presents the list of statuses and error codes that can be used:

Status code	Name	Definition	Usage in reporting by submitting entities
ACPT	Accepted	Transaction has been accepted.	During the first validation of a file, ACPT status code is reported only in the message statistics of the status advice file. This status should be explicitly provided for a transaction in case it was in the PDNG status before.

ACPD	Accepted After Pending	Transaction that was pending in previous report has been accepted.	Not used.
PDNG	Pending	Processing of transaction is pending.	<p>This status code is used in case the transaction report cannot be validated due to missing instrument reference data.</p> <p>The following error code should be provided in the RcrdSts complex element: CON-411 (pending instrument validation), CON-471 (pending underlying instrument validation).</p> <p>If this status is used, in one of the following feedback messages sent within no more than 7 days the transaction should be reported as rejected or accepted.</p>
WARN	Warning	Transaction has been accepted with warning	Not used.
RJCT	Rejected	Transaction has been rejected.	This status code is used in case the transaction report is incorrect. Error codes indicating validation rules that failed should be provided in the RcrdSts complex element (codes CON-NNN except for CON-411 and CON-471).
RJPD	Rejected After Pending	Transaction that was pending in previous report has been rejected.	Not used.



RCVD	Received	Transaction that has been received and is awaiting validation.	<p>This status code is used in case the transaction report cannot be validated, in particular in the case when the transaction report was submitted on day T and the reference data is not yet available for this day (reference data for day T is provided on day T+1).</p> <p>RCVD status code is reported only in the message statistics of the status advice file.</p>
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99. The status advice file shall also include statistical information on:

- a. The total number of records received in the original file;
- b. The number of records per status after the validation.

This information shall be included in the Sttstcs element and shall be populated for all files that have passed the file validation. In case the whole file is rejected due to a file error, the Sttstcs element should not be included in the Status Advice message.

6.3.3 Example 1

100. The below figures present the scenario considered in this example:

Day 1 (05/01/2016)

Reference Data received by ESMA on 04/01/16 (Provided to NCAs 8am 05/01/16)		
Instrument Id	Date of Admittance	Expiry Date
Inst1	01/01/1980	
Inst2	01/01/2015	31/12/2030
Inst3	05/01/2016	
Inst4	04/01/2016	31/12/2030

Transaction File 1		
Txn Reference	Instrument	Trade Date
Txn1-1	Inst1	31/12/2015
Txn1-2	Inst2	31/12/2015
Txn1-3	Inst3	04/01/2016
Txn1-4	Inst4	05/01/2016
Txn1-51	Inst5	04/01/2016
Txn1-52	Inst5	31/12/2015
Txn1-61	Inst6	04/01/2016
Txn1-2	Inst2	31/12/2015



Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 31/12/15
Accepted	Instrument was valid on 31/12/15
Rejected	instrument was not valid on 04/01/16
Accepted	Instrument was valid on 05/01/16
Pending	instrument is Unknown
Pending	instrument is Unknown
Pending	instrument is Unknown
Rejected	Instrument is valid but another transaction with the same reference number has been reported before (CON-020)

101. The status advice message sent on day 1 will be as follows:

Transaction Reference Number	Transaction status	Error code	Error message
Txn1-3	RJCT	CON-412	Instrument is not valid in reference data on transaction date
Txn1-51	PDNG	CON-411	Pending instrument validation
Txn1-52	PDNG	CON-411	Pending instrument validation
Txn1-61	PDNG	CON-411	Pending instrument validation



Txn1-2	RJCT	CON-023	Transaction report with the same transaction reference number has already been sent for the firm
--------	------	---------	--

102. XML representation of the status advice messages:

```
<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 auth.031.001.01.xsd">
  <FinInstrmRptgStsAdv>
    <MsgStsAdv>
      <MsgRptldr>TrasnactionFile1</MsgRptldr>
      <MsgSts>
        <RptSts>PART</RptSts>
        <Sttstcs>
          <TtlNbOfRcrds>8</TtlNbOfRcrds>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>3</DtldNbOfTxs>
            <DtldSts>PDNG</DtldSts>
          </NbOfRcrdsPerSts>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>2</DtldNbOfTxs>
            <DtldSts>RJCT</DtldSts>
          </NbOfRcrdsPerSts>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>3</DtldNbOfTxs>
            <DtldSts>ACPT</DtldSts>
          </NbOfRcrdsPerSts>
        </Sttstcs>
      </MsgSts>
      <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn1-3</OrgnlRcrdId>
        <Sts>RJCT</Sts>
        <VldtnRule>
          <Id>CON-412</Id>
          <Desc>Instrument Inst1 is not valid in reference data on
transaction date</Desc>
          <Issr>Entity</Issr>
        </VldtnRule>
      </RcrdSts>
      <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn1-51</OrgnlRcrdId>
        <Sts>PDNG</Sts>
        <VldtnRule>
          <Id>CON-411</Id>
          <Desc>Pending instrument Inst5 validation</Desc>
        </VldtnRule>
      </RcrdSts>
      <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn1-52</OrgnlRcrdId>
        <Sts>PDNG</Sts>
        <VldtnRule>
          <Id>CON-411</Id>

```



```

                <Desc>Pending instrument Inst5 validation</Desc>
            </VldtnRule>
        </RcrdSts>
    </RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-61</OrgnlRcrdId>
    <Sts>PDNG</Sts>
    <VldtnRule>
        <Id>CON-411</Id>
        <Desc>Pending instrument Inst5 validation</Desc>
    </VldtnRule>
</RcrdSts>
<RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-2</OrgnlRcrdId>
    <Sts>RJCT</Sts>
    <VldtnRule>
        <Id>CON-023</Id>
        <Desc>Transaction report with the same transaction
reference number has already been sent for the firm</Desc>
        <Issr>Entity</Issr>
    </VldtnRule>
</RcrdSts>
</MsgStsAdvc>
</FinInstrmRptgStsAdvc>
</Document>

```

103. Transactions Txn1-1, Txn1-2 and Txn1-4 are not included in the status advice message. If there is no error reported for a given transaction, it shall be assumed that this transaction was accepted.

104. For day 2 we have the following reports:

Day 2 (06/01/2016)

Reference Data received by ESMA on 05/01/16 (Provided to NCAs 8am 06/01/16)			
Instrument Id	Date of Admittance	Expiry Date	
Inst1		01/01/1980	
Inst2		01/01/2015	31/12/2030
Inst3		04/01/2016	
Inst4		04/01/2016	04/01/2016
Inst5		04/01/2016	

Holding table (unprocessed transactions from File 1)		
Txn Reference	Instrument	Trade Date
Txn1-51	Inst5	04/01/2016
Txn1-52	Inst5	31/12/2015
Txn1-61	Inst6	04/01/2016



Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 04/01/16
Rejected	Instrument was not valid on 31/12/15
Pending	instrument is Unknown

Transaction File 2		
Txn Reference	Instrument	Trade Date
Txn2-1	Inst1	04/01/2016
Txn2-2	Inst2	04/01/2016
Txn2-3	Inst3	04/01/2016
Txn2-4	Inst4	05/01/2016
Txn2-5	Inst5	05/01/2016
Txn1-3	Inst3	04/01/2016



Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 04/01/16
Accepted	Instrument was valid on 04/01/16
Accepted	Instrument was valid on 04/01/16
Rejected	Instrument was not valid on 05/01/16
Accepted	Instrument is valid on 05/01/16
Accepted	Instrument is now valid on 04/01/16

105. The status advice message sent on day 2 will be as follows:

Transaction Reference Number	Transaction status	Error code	Error message
Txn1-51	ACPT		
Txn1-52	RJCT	CON-412	Instrument is not valid in reference data on transaction date
Txn2-4	RJCT	CON-412	Instrument is not valid in reference data on transaction date

106. XML representation of the status advice file:

```

<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 auth.031.001.01.xsd">
  <FinInstrmRptgStsAdv<
    <MsgStsAdv<
      <MsgRptldr>TransactionFile2</MsgRptldr>
      <MsgSts>
        <RptSts>PART</RptSts>
        <Sttstcs>
          <TtlNbOfRcrds>6</TtlNbOfRcrds>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>1</DtldNbOfTxs>
            <DtldSts>RJCT</DtldSts>
          </NbOfRcrdsPerSts>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>5</DtldNbOfTxs>
            <DtldSts>ACPT</DtldSts>
          </NbOfRcrdsPerSts>
        </Sttstcs>
      </MsgSts>
      <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn2-4</OrgnlRcrdId>
        <Sts>RJCT</Sts>
        <VldtnRule>
          <Id>CON-412</Id>
          <Desc>Instrument Inst4 is not valid in reference data on
transaction date</Desc>
        </VldtnRule>
      </RcrdSts>
    </MsgStsAdv>
  </FinInstrmRptgStsAdv>
  <MsgStsAdv<
    <MsgRptldr>TransactionFile1</MsgRptldr>
    <MsgSts>
      <RptSts>PART</RptSts>
      <Sttstcs>
        <TtlNbOfRcrds>3</TtlNbOfRcrds>
        <NbOfRcrdsPerSts>
          <DtldNbOfTxs>1</DtldNbOfTxs>
          <DtldSts>ACPT</DtldSts>
        </NbOfRcrdsPerSts>
      </Sttstcs>
    </MsgSts>
  </MsgStsAdv>
</Document>

```

```

        </NbOfRcrdsPerSts>
        <NbOfRcrdsPerSts>
            <DtldNbOfTxS>1</DtldNbOfTxS>
            <DtldSts>RJCT</DtldSts>
        </NbOfRcrdsPerSts>
        <NbOfRcrdsPerSts>
            <DtldNbOfTxS>1</DtldNbOfTxS>
            <DtldSts>PDNG</DtldSts>
        </NbOfRcrdsPerSts>
    </Sttstcs>
</MsgSts>
<RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-51</OrgnlRcrdId>
    <Sts>ACPT</Sts>
</RcrdSts>
<RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-52</OrgnlRcrdId>
    <Sts>RJCT</Sts>
    <VldtnRule>
        <Id>CON-412</Id>
        <Desc>Instrument Inst5 is not valid in reference data on
transaction date</Desc>
    </VldtnRule>
</RcrdSts>
</MsgStsAdv<
</FinInstrmRptgStsAdv<
</Document>

```

107. Transaction Txn1-51 is accepted but it should be included in the status advice file because it was reported with status PDNG before. The ACPT code should be used.
108. Transactions Txn2-1, Txn2-2, Txn2-3 and Txn2-5 are not included in the status advice message as they were accepted and there was no other report feedback for these transactions before. Transaction Txn1-3 is also not included in the status advice because it was resubmitted and even there was the PDNG status for this transaction during the previous submission, if a transaction is resubmitted, it should be validated as it was a new transaction report.
109. Transaction Txn1-61 is not included in the status advice message. The status of this transaction was included in the file sent on Day 1 and has not changed since then.
110. For day 8 we have the following reports:



Day 8 (12/01/2016)

Reference Data received by ESMA on 05/01/16 (Provided to NCAs 8am 12/01/16)		
Instrument Id	Date of Admittance	Expiry Date
Inst1	01/01/1980	
Inst2	01/01/2015	31/12/2030
Inst3	04/01/2016	
Inst4	04/01/2016	04/01/2016
Inst5	04/01/2016	
Inst7	10/01/2016	

Holding table (unprocessed transactions from File 1)		
Txn Reference	Instrument	Trade Date
Txn1-61	Inst6	04/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Rejected	Instrument not added to reference data within 7 days

Transaction File 8		
Txn Reference	Instrument	Trade Date
Txn8-1	Inst1	11/01/2016
Txn8-2	Inst2	11/01/2016
Txn8-3	Inst3	12/01/2016
Txn8-5	Inst5	12/01/2016

Result of instrument Validation	
Acc/Rej/Pend	Comment
Accepted	Instrument was valid on 11/01/16
Accepted	Instrument was valid on 11/01/16
Accepted	Instrument was valid on 12/01/16
Accepted	Instrument was valid on 12/01/16

111. The status advice message sent on day 8 will be as follows:

Transaction Reference Number	Transaction status	Error code	Error message
Txn1-61	RJCT	CON-412	Instrument is not valid in reference data on transaction date

112. XML representation of the status advice file:

```
<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 auth.031.001.01.xsd">
  <FinInstrmRptgStsAdv>
    <MsgStsAdv>
      <MsgRptldr>TransactionFile8</MsgRptldr>
      <MsgSts>
        <RptSts>ACPT</RptSts>
        <Sttstcs>
          <TtlNbOfRcrds>4</TtlNbOfRcrds>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>4</DtldNbOfTxs>
            <DtldSts>ACPT</DtldSts>
          </NbOfRcrdsPerSts>
        </Sttstcs>
      </MsgSts>
    </MsgStsAdv>
    <MsgStsAdv>
      <MsgRptldr>TransactionFile1</MsgRptldr>
      <MsgSts>
        <RptSts>PART</RptSts>
        <Sttstcs>
```



```

        <TtlNbOfRcrds>1</TtlNbOfRcrds>
        <NbOfRcrdsPerSts>
            <DtldNbOfTxS>1</DtldNbOfTxS>
            <DtldSts>RJCT</DtldSts>
        </NbOfRcrdsPerSts>
    </Sttstcs>
</MsgSts>
<RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-61</OrgnlRcrdId>
    <Sts>RJCT</Sts>
    <VldtnRule>
        <Id>CON-412</Id>
        <Desc>Instrument Inst6 is not valid in reference data on
transaction date</Desc>
    </VldtnRule>
</RcrdSts>
</MsgStsAdvc>
</FinInstrmRptgStsAdvc>
</Document>

```

113. Transaction Txn1-61 is rejected because the instrument cannot be found in the reference data and the period of 7 days from the transaction submission has passed. The RJPD status should be used.

114. The other transactions are accepted and they are not included in the status advice message as there was no PDNG status for any of them before.

6.3.4 Example 2

115. The status advice message containing information on the messages received on day T and pending instrument validation for which reference data will be provided on day T+1. XML representation of the status advice file for a 100 transactions with following status:

- a. 50 are accepted
- b. 45 are received
- c. 3 are pending (Txn1-51, Txn1-52, Txn1-61)
- d. 2 are rejected (Txn1-3, Txn1-2)

```

<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 auth.031.001.01.xsd">
    <FinInstrmRptgStsAdvc>
        <MsgStsAdvc>
            <MsgRptldr>TrasactionFile1</MsgRptldr>
            <MsgSts>
                <RptSts>PART</RptSts>
                <Sttstcs>
                    <TtlNbOfRcrds>100</TtlNbOfRcrds>
                    <NbOfRcrdsPerSts>
                        <DtldNbOfTxS>45</DtldNbOfTxS>

```

```

        <DtldSts>RCVD</DtldSts>
    </NbOfRcrdsPerSts>
    <NbOfRcrdsPerSts>
        <DtldNbOfTxs>3</DtldNbOfTxs>
        <DtldSts>PDNG</DtldSts>
    </NbOfRcrdsPerSts>
    <NbOfRcrdsPerSts>
        <DtldNbOfTxs>2</DtldNbOfTxs>
        <DtldSts>RJCT</DtldSts>
    </NbOfRcrdsPerSts>
    <NbOfRcrdsPerSts>
        <DtldNbOfTxs>50</DtldNbOfTxs>
        <DtldSts>ACPT</DtldSts>
    </NbOfRcrdsPerSts>
</Sttstcs>
</MsgSts>
<RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-3</OrgnlRcrdId>
    <Sts>RJCT</Sts>
    <VldtnRule>
        <Id>CON-411</Id>
        <Desc>Instrument Inst1 is not valid in reference data on
transaction date</Desc>
        <Issr>Entity</Issr>
    </VldtnRule>
</RcrdSts>
<RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-51</OrgnlRcrdId>
    <Sts>PDNG</Sts>
    <VldtnRule>
        <Id>CON-412</Id>
        <Desc>Pending instrument Inst5 validation</Desc>
    </VldtnRule>
</RcrdSts>
    <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn1-52</OrgnlRcrdId>
        <Sts>PDNG</Sts>
        <VldtnRule>
            <Id>CON-412</Id>
            <Desc>Pending instrument Inst5 validation</Desc>
        </VldtnRule>
    </RcrdSts>
    <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn1-61</OrgnlRcrdId>
        <Sts>PDNG</Sts>
        <VldtnRule>
            <Id>CON-412</Id>
            <Desc>Pending instrument Inst5 validation</Desc>
        </VldtnRule>
    </RcrdSts>
<RcrdSts>
    <RcrdSts>
        <OrgnlRcrdId>00987654321009876543Txn1-2</OrgnlRcrdId>
        <Sts>RJCT</Sts>
        <VldtnRule>
            <Id>CON-023</Id>
            <Desc>Transaction report with the same transaction reference
number has already been sent for the firm</Desc>
            <Issr>Entity</Issr>

```



```

</VldtnRule>
</RcrdSts>
</MsgStsAdv<
</FinInstrmRptgStsAdv<
</Document>

```

6.4 Business Application Header

116. The Business Application Header (BAH) is a header that has been defined by the ISO 20022 community that can form part of an ISO 20022 business message. Specifically, the BAH is an ISO20022 message definition (head.001.001.01) which can be combined with any other ISO20022 message definition to form a business message.
117. It gathers together, in one place, data about the message, such as which organisation has sent the business message, which organisation should be receiving it, the identity of the message itself, a reference for the message and so on.
118. The purpose of the BAH is to provide a consistent and predictable way for this data to be conveyed with the message, regardless of implementation factors such as the choice of network.
119. The use of the BAH in transaction reporting messages is mandatory.
120. The below table presents the list of mandatory elements of the BAH that should be included in all messages and how they should be populated:

Element	Description	Usage in reporting by submitting entities
From	The sender of the message	OrganisationIdentification/Identification/OrganisationIdentification/Other/Identification: LEI of the submitting entity
To	The recipient of the message	OrganisationIdentification/Identification/OrganisationIdentification/Other/Identification: Country code of the CA
Business Message Identifier	Unique identification of the message	Rules for populating this identifier to be specified at national level
Message Definition Identifier	Identification of the type of the message (ISO 20022 message identifier).	The identifier of relevant ISO 20022 message using base name only, e.g. auth.016.001.01 (e.g. and not auth.016.001.01_national_reporting) for transaction data message, auth.031.001.01 for status advice message, etc.

Creation Date	Date and time when this Business Message was created	Date and time in ISO 8601 format.
Related	Specifies the Business Application Header of the Business Message to which this Business Message relates.	In the case of status advice message, the copy of the BAH of the referred data message (it allows to link the status advice and the data message).

121. The detailed documentation of the structure of the message is included in Annex 2.

6.5 Business file header

122. As explained before, each ISO 20022 business message (in the case of MiFIR transaction reporting it will be transaction data message or feedback message) shall be sent together with the Business Application Header (BAH) message. These are separate messages and should be packaged within additional structure ('envelope') in order to constitute a single XML file.

123. The business file header is a simple XML file that encapsulates the BAH and the business message:

Business file header (envelope)

```

<?xml version="1.0" encoding="UTF-8"?>
<BizData xmlns="urn:iso:std:iso:20022:tech:xsd:head.003.001.01">
  <Hdr>
    <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
      <Fr>
        ...
      </AppHdr>
    </Hdr>
    <Pyld>
      <Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.016.001.01">
        <FinInstrmRptgTxRpt>
          <TxRpt>
            ...
          </TxRpt>
        </FinInstrmRptgTxRpt>
      </Document>
    </Pyld>
  </BizData>

```

124. XML representation of business file header including BAH and transaction report indicating ISIN (in this case, "Related" element is not used):

```
<?xml version="1.0" encoding="UTF-8"?>
```



```
<BizData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.003.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.003.001.01 head.003.001.01.xsd">
  <Hdr>
```

```
<AppHdr xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.001.001.01
head.001.001.01_ESMA_restricted.xsd">
```

```
  <Fr>
    <OrgId>
      <Id>
        <OrgId>
          <Othr>
            <Id>09876543210987654321</Id>
            <SchmeNm>
              <Prtry>LEI</Prtry>
            </SchmeNm>
          </Othr>
        </OrgId>
      </Id>
    </OrgId>
  </Fr>
  <To>
    <OrgId>
      <Id>
        <OrgId>
          <Othr>
            <Id>PL</Id>
            <SchmeNm>
              <Prtry>Authority code</Prtry>
            </SchmeNm>
          </Othr>
        </OrgId>
      </Id>
    </OrgId>
  </To>
  <BizMsgIdr> </BizMsgIdr>
  <MsgDefIdr>auth.016.001.01</MsgDefIdr>
  <CreDt>2018-12-17T09:30:47Z</CreDt>
</AppHdr>

</Hdr>
<Pyld>
```

```
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.016.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.016.001.01 auth.016.001.01.xsd">
  <FinInstrmRptgTxRpt>
    <Tx>
      <New>
        <TxId>ABCDEFGH123456</TxId>
        <ExctgPty>12345678901234567890</ExctgPty>
        <InvstmtPtyInd>true</InvstmtPtyInd>
        <SubmitgPty>09876543210987654321</SubmitgPty>
        <Buyr>
```



```
        <AcctOwvr>
          <Id>
            <LEI>00987654321009876543</LEI>
          </Id>
        </AcctOwvr>
      </Buyr>
      <Sellr>
        <AcctOwvr>
          <Id>
            <LEI>00098765432100098765</LEI>
          </Id>
        </AcctOwvr>
      </Sellr>
      <OrdTrnsmssn>
        <TrnsmssnInd>false</TrnsmssnInd>
      </OrdTrnsmssn>
      <Tx>
        <TradDt>2017-07-01T13:40:23Z</TradDt>
        <TradgCpcty>MTCH</TradgCpcty>
        <Qty>
          <Unit>1</Unit>
        </Qty>
        <Pric>
          <Pric>
            <MntryVal>
              <Amt Ccy="EUR">32.5</Amt>
            </MntryVal>
          </Pric>
        </Pric>
        <TradVn>XMIC</TradVn>
      </Tx>
      <FinInstrm>
        <Id>XX0000000001</Id>
      </FinInstrm>
      <ExctgPrsn>
        <Prsn>
          <CtryOfBrnch>PL</CtryOfBrnch>
          <Othr>
            <Id>HU19800413ADAM#JONES</Id>
            <SchmeNm>
              <Prtry>CONCAT</Prtry>
            </SchmeNm>
          </Othr>
        </Prsn>
      </ExctgPrsn>
      <AddtlAttrbts>
        <SctiesFincgTxInd>true</SctiesFincgTxInd>
      </AddtlAttrbts>
    </New>
  </Tx>
</FinInstrmRptgTxRpt>
</Document>
</Pyld>
</BizData>
```

125. XML representation of business file header including BAH and transaction report indicating financial instrument reference data (in this case, "Related" element is not used):



```
<BizData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.003.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.003.001.01 head.003.001.01.xsd">
  <Hdr>
```

```
<AppHdr xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:n1="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.001.001.01
head.001.001.01_ESMA_restricted.xsd">
```

```
  <Fr>
    <OrgId>
      <Id>
        <OrgId>
          <Othr>
            <Id>09876543210987654321</Id>
            <SchmeNm>
              <Prtry>LEI</Prtry>
            </SchmeNm>
          </Othr>
        </OrgId>
      </Id>
    </OrgId>
  </Fr>
  <To>
    <OrgId>
      <Id>
        <OrgId>
          <Othr>
            <Id>PL</Id>
            <SchmeNm>
              <Prtry>Authority code</Prtry>
            </SchmeNm>
          </Othr>
        </OrgId>
      </Id>
    </OrgId>
  </To>
  <BizMsgIdr>FILE49019</BizMsgIdr>
  <MsgDefIdr>auth.016.001.01</MsgDefIdr>
  <CreDt>2018-12-17T09:30:47Z</CreDt>
</AppHdr>
</Hdr>
<Pyld>
```

```
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.016.001.01"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.016.001.01 auth.016.001.01.xsd">
<FinInstrmRptgTxRpt>
  <Tx>
    <New>
      <TxId>ABCDEFGH123456</TxId>
      <ExctgPty>12345678901234567890</ExctgPty>
      <InvstmtPtyInd>true</InvstmtPtyInd>
      <SubmitgPty>09876543210987654321</SubmitgPty>
```

```

<Buyr>
  <AcctOwnc>
    <Id>
      <LEI>00987654321009876543</LEI>
    </Id>
  </AcctOwnc>
</Buyr>
<Sellr>
  <AcctOwnc>
    <Id>
      <LEI>00098765432100098765</LEI>
    </Id>
  </AcctOwnc>
</Sellr>
<OrdTrnsmssn>
  <TrnsmssnInd>>false</TrnsmssnInd>
</OrdTrnsmssn>
<Tx>
  <TradDt>2017-07-01T13:40:23Z</TradDt>
  <TradgCpcty>MTCH</TradgCpcty>
  <Qty>
    <Unit>1</Unit>
  </Qty>
  <Pric>
    <Pric>
      <MntryVal>
        <Amt Ccy="EUR">32.5</Amt>
      </MntryVal>
    </Pric>
  </Pric>
  <TradVn>XMIC</TradVn>
</Tx>
<FinInstrm>
  <Othr>
    <FinInstrmGnlAttrbts>
      <FullNm>FUTURE CONTRACT</FullNm>
      <ClssfctnTp>FFSCSX</ClssfctnTp>
    </FinInstrmGnlAttrbts>
    <DerivInstrmAttrbts>
      <PricMltplr>1</PricMltplr>
      <UndrlygInstrm>
        <Othr>
          <Sngl>
            <ISIN>GB0000000000</ISIN>
          </Sngl>
        </Othr>
      </UndrlygInstrm>
      <DlvryTp>CASH</DlvryTp>
    </DerivInstrmAttrbts>
  </Othr>
</FinInstrm>
<ExctgPrsn>
  <Prsn>
    <CtryOfBrnch>PL</CtryOfBrnch>
    <Othr>
      <Id>HU19800413ADAM#JONES</Id>
      <SchmeNm>

```



```

        <Prtry>CONCAT</Prtry>
      </SchmeNm>
    </Othr>
  </Prsn>
</ExctgPrsn>
<AddtlAttrbts>
  <SctiesFincgTxInd>true</SctiesFincgTxInd>
</AddtlAttrbts>
</New>
</Tx>
</FinInstrmRptgTxRpt>
</Document> </Pyld>
</BizData>

```

126. XML representation of business file header including BAH and feedback on the single file transactions (in this case, “Related” contains BAH information of this file and “MsgRptIdr” in the advice file is not used):

```

<?xml version="1.0" encoding="UTF-8"?>
<BizData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:n2="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xmlns:n1="urn:iso:std:iso:20022:tech:xsd:head.003.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.003.001.01 head.003.001.01.xsd">
  <Hdr>

```

```

    <AppHdr xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:n1="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.001.001.01
head.001.001.01_ESMA_restricted.xsd">

```

```

    <Fr>
      <Orgld>
        <Id>
          <Orgld>
            <Othr>
              <Id>PL</Id>
              <SchmeNm>
                <Prtry>Authority code</Prtry>
              </SchmeNm>
            </Othr>
          </Orgld>
        </Id>
      </Orgld>
    </Fr>
    <To>
      <Orgld>
        <Id>
          <Orgld>
            <Othr>
              <Id>09876543210987654321</Id>
              <SchmeNm>
                <Prtry>LEI</Prtry>
              </SchmeNm>
            </Othr>
          </Orgld>
        </Id>
      </Orgld>

```



```
</To>
<BizMsgIldr>FDB49019</BizMsgIldr>
<MsgDefIldr>auth.031.001.01</MsgDefIldr>
<CreDt>2018-12-18T14:11:03Z</CreDt>
<Rltd>
  <Fr>
    <OrgId>
      <Id>
        <OrgId>
          <Othr>
            <Id>09876543210987654321</Id>
            <SchmeNm>
              <Prtry>LEI</Prtry>
            </SchmeNm>
          </Othr>
        </OrgId>
      </Id>
    </OrgId>
  </Fr>
  <To>
    <OrgId>
      <Id>
        <OrgId>
          <Othr>
            <Id>PL</Id>
            <SchmeNm>
              <Prtry>Authority code</Prtry>
            </SchmeNm>
          </Othr>
        </OrgId>
      </Id>
    </OrgId>
  </To>
<BizMsgIldr>FILE49019</BizMsgIldr>
<MsgDefIldr>auth.016.001.01</MsgDefIldr>
<CreDt>2018-12-17T09:30:47Z</CreDt>
</Rltd>
</AppHdr>
</Hdr>
<Pyl>

<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 auth.031.001.01.xsd">
  <FinInstrmRptgStsAdv>
    <MsgStsAdv>
      <MsgSts>
        <RptSts>PART</RptSts>
        <Sttstcs>
          <TtlNbOfRcrds>8</TtlNbOfRcrds>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>2</DtldNbOfTxs>
            <DtldSts>RJCT</DtldSts>
          </NbOfRcrdsPerSts>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>3</DtldNbOfTxs>
            <DtldSts>PDNG</DtldSts>
          </NbOfRcrdsPerSts>
        </Sttstcs>
      </MsgSts>
    </MsgStsAdv>
  </FinInstrmRptgStsAdv>
</Document>
```



```
</Sttstcs>
</MsgSts>
<RcrdSts>
  <OrgnlRcrdId>Txn1-3</OrgnlRcrdId>
  <Sts>RJCT</Sts>
  <VldtnRule>
    <Id>CON-411</Id>
    <Desc>Instrument Inst1 is not valid in reference data on
transaction date</Desc>
    <Issr>Entity</Issr>
  </VldtnRule>
</RcrdSts>
<RcrdSts>
  <OrgnlRcrdId>00987654321009876543Txn1-51</OrgnlRcrdId>
  <Sts>PDNG</Sts>
  <VldtnRule>
    <Id>CON-412</Id>
    <Desc>Pending instrument Inst5 validation</Desc>
  </VldtnRule>
</RcrdSts>
  <RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-52</OrgnlRcrdId>
    <Sts>PDNG</Sts>
    <VldtnRule>
      <Id>CON-412</Id>
      <Desc>Pending instrument Inst5 validation</Desc>
    </VldtnRule>
  </RcrdSts>
  <RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-61</OrgnlRcrdId>
    <Sts>PDNG</Sts>
    <VldtnRule>
      <Id>CON-412</Id>
      <Desc>Pending instrument Inst5 validation</Desc>
    </VldtnRule>
  </RcrdSts>
  <RcrdSts>
    <OrgnlRcrdId>00987654321009876543Txn1-2</OrgnlRcrdId>
    <Sts>RJCT</Sts>
    <VldtnRule>
      <Id>CON-023</Id>
      <Desc>Transaction report with the same transaction
reference number has already been sent for the firm</Desc>
      <Issr>Entity</Issr>
    </VldtnRule>
  </RcrdSts>
</MsgStsAdvc>
</FinInstrmRptgStsAdvc>
</Document>

  </Pyld>
</BizData>
```

127. XML representation of business file header including BAH and feedback on the multiple files (in this case, “Related” contains BAH information of the last received file, “MsgRptldr” is used to identify each of the received file).



```
<?xml version="1.0" encoding="UTF-8"?>
<BizData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.003.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.003.001.01 head.003.001.01.xsd">
  <Hdr>
```

```
<AppHdr xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:head.001.001.01
head.001.001.01_ESMA_restricted.xsd">
```

```
    <Fr>
      <OrgId>
        <Id>
          <OrgId>
            <Othr>
              <Id>DE</Id>
              <SchmeNm>
                <Prtry>Authority code</Prtry>
              </SchmeNm>
            </Othr>
          </OrgId>
        </Id>
      </OrgId>
    </Fr>
    <To>
      <OrgId>
        <Id>
          <OrgId>
            <Othr>
              <Id>09876543210987654321</Id>
              <SchmeNm>
                <Prtry>LEI</Prtry>
              </SchmeNm>
            </Othr>
          </OrgId>
        </Id>
      </OrgId>
    </To>
    <BizMsgIdr>FeedbackFile2</BizMsgIdr>
    <MsgDefIdr>auth.031.001.01</MsgDefIdr>
    <CreDt>2018-12-16T11:24:33Z</CreDt>
    <Rltd>
      <Fr>
        <OrgId>
          <Id>
            <OrgId>
              <Othr>
                <Id>09876543210987654321</Id>
                <SchmeNm>
                  <Prtry>LEI</Prtry>
                </SchmeNm>
              </Othr>
            </OrgId>
          </Id>
        </OrgId>
      </Fr>
```



```
<To>
  <Orgld>
    <Id>
      <Orgld>
        <Othr>
          <Id>DE</Id>
          <SchmeNm>
            <Prtry>Authority code</Prtry>
          </SchmeNm>
        </Othr>
      </Orgld>
    </Id>
  </Orgld>
</To>
<BizMsgLdr>TransactionFile2</BizMsgLdr>
<MsgDefLdr>auth.016.001.01</MsgDefLdr>
<CreDt>2018-12-15T22:16:41Z</CreDt>
</Rltd>

</AppHdr>
</Hdr>
<Pyld>

<Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 "
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:auth.031.001.01 auth.031.001.01.xsd">
  <FinInstrmRptgStsAdv<
    <MsgStsAdv<
      <MsgRptLdr>TransactionFile2</MsgRptLdr>
      <MsgSts>
        <RptSts>PART</RptSts>
        <Sttstcs>
          <TtlNbOfRcrds>6</TtlNbOfRcrds>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>1</DtldNbOfTxs>
            <DtldSts>RJCT</DtldSts>
          </NbOfRcrdsPerSts>
          <NbOfRcrdsPerSts>
            <DtldNbOfTxs>5</DtldNbOfTxs>
            <DtldSts>ACPT</DtldSts>
          </NbOfRcrdsPerSts>
        </Sttstcs>
      </MsgSts>
      <RcrdSts>
        <OrgnlRcrdId>09876543210987654321Txn2-4</OrgnlRcrdId>
        <Sts>RJCT</Sts>
        <VldtnRule>
          <Id>CON-411</Id>
          <Desc>Instrument Inst4 is not valid in reference data on
transaction date</Desc>
        </VldtnRule>
      </RcrdSts>
    </MsgStsAdv>
  </MsgStsAdv>
  <MsgRptLdr>TransactionFile1</MsgRptLdr>
  <MsgSts>
    <RptSts>PART</RptSts>
    <Sttstcs>
```



```
<TtlNbOfRcrds>3</TtlNbOfRcrds>
<NbOfRcrdsPerSts>
  <DtldNbOfTxs>1</DtldNbOfTxs>
  <DtldSts>ACPT</DtldSts>
</NbOfRcrdsPerSts>
<NbOfRcrdsPerSts>
  <DtldNbOfTxs>1</DtldNbOfTxs>
  <DtldSts>RJCT</DtldSts>
</NbOfRcrdsPerSts>
<NbOfRcrdsPerSts>
  <DtldNbOfTxs>1</DtldNbOfTxs>
  <DtldSts>PDNG</DtldSts>
</NbOfRcrdsPerSts>
</Sttstcs>
</MsgSts>
<RcrdSts>
  <OrgnlRcrdId>09876543210987654321Txn1-
51</OrgnlRcrdId>
  <Sts>ACPD</Sts>
</RcrdSts>
<RcrdSts>
  <OrgnlRcrdId>09876543210987654321Txn1-
52</OrgnlRcrdId>
  <Sts>RJCT</Sts>
  <VldtnRule>
  <Id>CON-411</Id>
  <Desc>Instrument Inst5 is not valid in reference data
on transaction date</Desc>
  </VldtnRule>
</RcrdSts>
  </MsgStsAdv<
  </FinInstrmRptgStsAdv<
</Document>
  </Pyld>
</BizData>
```

128. The detailed documentation of the structure of the business file header is included in Annex 2.



7 Annexes

7.1 Annex 1

Data validation rules

The attached document includes the list of syntax and content validation rules and relevant error codes.

7.2 Annex 2

Messages schemas

The attached zip file includes documentation and XSD files for messages to be used to report data.