

Data quality and data integrity

General principles

Various controls and procedures are implemented to collect data of sufficient quality and preserved integrity.

All data submitted to ARIS must be generated by reporting entities as valid data that complies with the technical requirements for data generation:

- All data files must comply with the file naming convention,
- All data must be correctly formatted in accordance with the XSD schema for the data type being submitted,
- All data must be correctly signed and encrypted in accordance with the secure data exchange protocols.

If the data submitted to ARIS complies with the technical requirements content validation will be performed by ARIS based on set of pre-defined business rules.

Data that does not pass the validation process or for which the integrity cannot be confirmed is marked as invalid or rejected. The receipt is generated with the error message describing the reason for failure.

Data quality

The quality of data reported to the Agency is assured in the following ways:

- (a) The required XML schemas constrain the values and data types that can be submitted; and
- (b) Submitted data is subject to business validation rules as described in the ACER Technical Specifications for RRM's so that erroneous data is rejected/invalidated.

A summary of the business validation rules applicable for the reporting of trade data is provided in the ANNEX below.

Not all the validation according to business validation rules will be performed at the time of submission of the report and the Agency may request additional information or correction and re-submission of the report even if, upon initial submission, the validity and acceptance of the report was confirmed by ARIS.

Data integrity

Reporting entities must meet the specified standards when reporting trade data to the Agency in terms of the submission of reports and their content as per the defined specifications in the "Technical Specifications for RRM". To ensure accuracy and completeness, reporting entities

must have appropriate systems and controls in place to enable them to comply with their regulatory obligations.

Reporting entities' obligations under Article 8(1) of REMIT are to make sure that they have successfully provided their transaction data reports to the Agency. Reporting entities and third parties reporting on their behalf must comply with the RRM requirements defined by the Agency.

The Commission's Implementing Acts will detail the obligation Reporting entities have to ensure their transaction reporting contain the required information and are provided in the correct format.

Data integrity will be specified in the RRM requirements and the technical specifications document.

Data integrity will be ensured by digital signature of the reports sent by the RRM. The Agency will issue digitally signed receipts for every report.

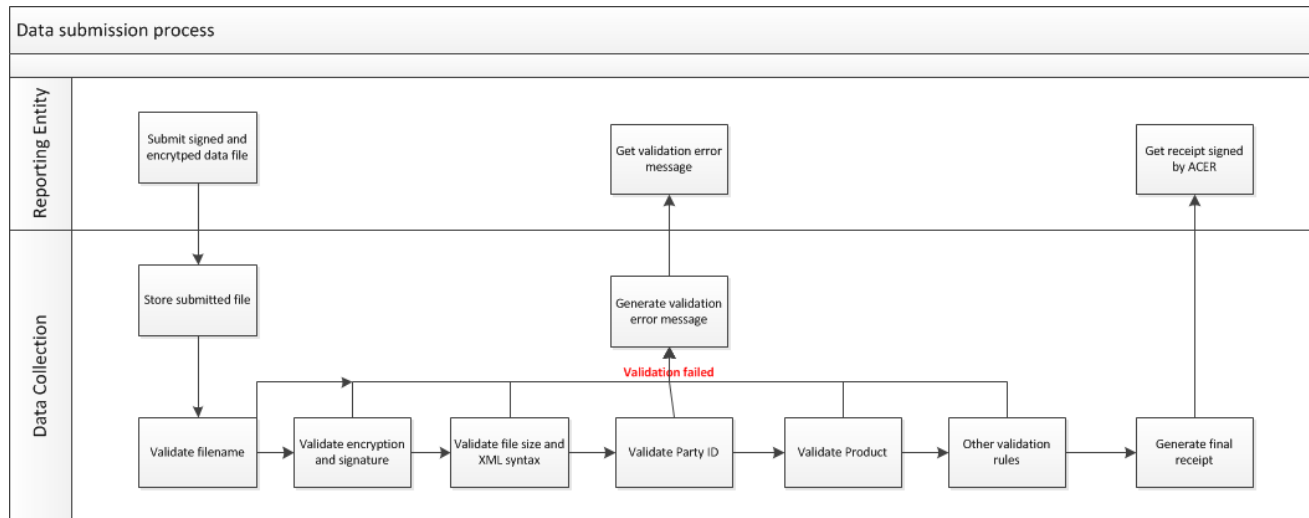
Data integrity will be preserved in the following way:

1. On Agency side the RRM's electronic signature of the submitted file will guarantee that it is always possible to verify the integrity of the reported data and the source of the data, provided that the submitted file and public PGP key of the reporting entity are kept.
2. On RRM side the Agency's electronic signature of the receipt issued for a submitted file will guarantee that it is always possible to verify the integrity of the reported data, provided that the original file, the receipt and the public PGP key of the Agency are kept.

ANNEX: Data validation

Data submission process

The following workflow applies to processing of submitted data:



Error codes and messages for standardised trade and order data

The following table shows the list of error codes and messages that the system may generate for standard trade and order data:

Error code	Error message
R1CTCITRAIDE	Transaction does not reference an existing Contract
R2CTCIOMPUNQ	Duplicated contract in Contract List
R2CLDXTOT	Transaction time greater than last trading time
R2CLDXTDXTOT	Transaction time greater than contract delivery start date
R2TRTDCONDND	Trade termination date greater than contract delivery end date
R5CTCIDLCUNQ	Contract with same identifier overlaps previous contracts
R6CLDXTDXTST	Contract last trading time greater than contract delivery start date
R1CDUTIDRCIMPDTUQ	Duplicated trade: a trade with same UTI, ContractID, Organised Market Place Identifier, TransactionTime[Day] and Market Participant Identifier already exists
R1ODOSOPTM	Contract Type OPT must have Option Style defined
R1ODOTOPTM	Contract Type OPT must have Option Type defined
R1ODOEDOPT	Contract Type OPT must have Option Exercise Date defined
R2ODOEDOPT	Contract Option Exercise Date must be prior to the Delivery Start Date
R1ODOSPOPT	Contract Type OPT must have Option Strike Price defined
R1DPDPZMUL	Delivery Point or Zone is not registered
R1DPDSDCHK	Contract start date not equal to contract end date

R1DPDEDCHK	Contract start date greater or equal to contract end date
R1DPLDINTCHK	Load delivery start time greater than load delivery end time
R2DPLDINTCHK	Load delivery end time overlaps next load delivery start time
R1PTCMPCOIT	Market Participant for trade does not match Market Participant for order
R1PTCBSIOMPUQ	Trade with invalid buy/sell Indicator
R2PTCBSICMOM	Order with invalid buy/sell Indicator
R2ODOICIMPIUQ	Order with action type New duplicated
R1CDTTTRABSSNEW	Trade transaction timestamps do not match
R1CDUTIDRCIMPDTUQ	Duplicated Transaction Identifier
R2CDUTIDRCIMPDTUQ	Trade UTIs do not match
R1CDLOIOIBSIM	Invalid linked Orders
R2CDLOIOICIM	Contract of trade order does not match Contract of linked order
R1CDPRBSTRSP	Trade prices do not match
R2CDPRCMOSP	Order price zero or not defined
R3CDPRBSPM	Order price and trade price do not match
R1CDPCBSCM	Trade with invalid notional currency
1CDQVBSTSV	Trade with invalid quantity
R3CDQVCMSV	Order with invalid quantity
R1DPPTIQORTRM	Trade Price Time Interval Quantity invalid
R1LIATTRNEW	Trade New Duplicated
R1LIATORNEW	Order New Duplicated
R1REOMPCON	Invalid Id of Market Participant
R1REOTHMPCER	Invalid Id of other Market Participant
R1REPENTCON	Invalid Id of Reporting Entity
R1BENMPCON	Invalid Id of Beneficiary
R1OIOMPTRAN	Invalid Order ID
R1ORDSTACT	Invalid Order Status
R1CTOPTOSTS	Invalid Contract Type
R1CTHSTEDSN	Invalid Contract Trading Hours
R1REOOGMP	Invalid OrganisedMarketPlaceID
R2ORTMACTYPEM	Invalid Trade
R3ORTTMTHSNCLD	Invalid Order