



Description of electronic reporting of RATI reports

1 Overview

This document describes the data structures of the MFI data collection (RATI) and the transfer of the data to the Bank of Finland. The RATI schema files and RATI validation file referred to in this document are available on the website of the reporting system reform, under Instructions and recordings: <https://www.suomenpankki.fi/en/statistics2/to-the-reporter/raportointijarjestelman-uudistus/ohjeet/>. Reporting instructions for the MFI data collection (RATI) and other material related to reporting is available on the Bank of Finland website at <https://www.suomenpankki.fi/en/statistics2/to-the-reporter/mfi-data-collection/>.

Data for RATI reporting is generated and submitted to the Bank of Finland in accordance with the descriptions provided in this document when reporting for the first time the data for the period 2024M09.

2 Transfer of data to the Bank of Finland

The data for RATI reporting is submitted to the Bank of Finland via the eRegulatory data collection service provided by Regnology France. The system is the same used in reporting to the FIN-FSA. Entities under the reporting obligation may either use the service themselves or authorize a reporter of their choosing to submit the data on their behalf. The eRegulatory data collection service is logged in via suomi.fi authentication. Before logging into the data collection service, the obliged entity must authorize the reporting persons to report the RATI data collection in the suomi.fi portal's authorization service. Without authorization, reporting is not possible. More detailed instructions on Suomi.fi authorizations can be found [here](#).

There are two reporting methods available for submitting RATI reports:

- Reporting in a web template
- Submitting a file as a file upload (https upload)
- Direct, secure data connection between the reporter and the data collection service (SFTP Secure File Transfer Protocol).

Reporting in a web template suits best for the entities under the reporting obligation with little to report. The transfer of a file as file upload is suitable for obliged entities that have a possibility to generate the report file from their own systems. Reporting using an SFTP connection is suitable for obliged entities with a lot of reportable data or reporting they want to automate. When using the SFTP data transfer, the reporter and the data collection service establish an SFTP connection between themselves to conduct the report file transfer. To order an SFTP identifier, the reporter must contact the Bank of Finland by email at [ReportingSupport\(at\)bof.fi](mailto:ReportingSupport(at)bof.fi).

The data is submitted in the production environment of the data collection service, in addition to which reporting can be tested in a separate test environment. The date for the opening of environments will be announced later.

The data collection service checks the technical integrity and structural validity of submitted report files and forwards valid report files to the Bank of Finland. Erroneous reports will not



be forwarded to the Bank of Finland, but automatic feedback is given on detected errors. Any errors must be corrected, and the entire report must be sent again. The same named file can only be sent once. A new submission is identified with an updated timestamp (see more about naming the report in section 3.1. Naming files). The timestamp must be updated both in the file name and in the Header section of the report.

3 Report file

The file must be in the XML format (Extensible Markup Language), and the character set used is UTF-8.

The technical format of the file is defined in the schema files and content validations. The data content is defined in the reporting instructions.

When using the manual web template for data submission, the data will be automatically in the correct format.

The following paragraphs present the naming of the file and the main aspects of the structure of the file, using examples.

3.1 File naming

The file name consists of six elements: reporter's identifier, type of reporter's identifier, frequency, survey code, reporting period and the creation date and time of the report. The separator of the elements is the underscore ("_").

Example 1: FI12345678_MFI_M_RATI_2024-03-31_20240404104924000.XML

Meanings of the parts of the filename:

- **Reporter's ID:** valid MFI ID. In reporting, the MFI ID (MFI) is used as a unique identifier for the reporter. The ID consists of the country code and the company's business ID without a hyphen and should be written in the form FI<NNNNNNNN>. In the examples above, the reporter's ID is FI12345678.
- **Type of reporter's ID:** MFI. The type of ID is always marked as MFI in RATI.
- **Frequency:** M. Frequency in header is always M.
- **Survey code:** RATI.
- **Reporting period: the last day of the reference period.** The reporting period is the last day of the reporting (reference) period. In example 1 above is the data for March 2024, so the reporting period is entered as 2024-03-31.
- **Time of report formation: <yyyy><mm><dd><hh><mm><ss><000> (timestamp).** The timestamp is the time of data extraction for the report, which is unique for each transmission. When it comes to a correction file, the timestamp must be changed, as it is not possible to resend a file with the same name. The moment of extraction is in the form of year + month + day + hour + minute + second + 000. The last three numbers are always 000. (I.e. 17 characters, zeroes in the front where necessary).
- **Note:** The parts of the filename are separated from each other with an underscore ("_").



3.2 Structure of this report

The structure of the XML document is defined by the RATI schema, which consists of two separate XSD files: an XSD file defining the structure of the file, named RATI_1.0.xsd, and an XSD file defining the content of the file, named RATI_Types_1.0.xsd. In addition, the structure/data is defined by content validations, which are presented in the document RATI reporting - validations rules.

The file consists of general specifications at the beginning, one Header section and one or more so-called content sections.

3.2.1 General information

At the beginning of the report, there is a description of the XML version, character set used, schema information and description of the name universe. The schema version changes when changes are made to the RATI schema. One schema is valid on each reporting date. When revising an old report from a period with a different schema from that used on the revision date, the revision report must be based on the schema valid during the period of the report being revised (identifying the schema version by the version number of the RATI schema).

xml version	1.0
Character set used	utf-8
Schema instance	http://www.w3.org/2001/XMLSchema-instance
Schema	http://www.w3.org/2001/XMLSchema
Schema version	1.0 (version number of the RATI schema)
Definition of the name universe	xmlns="http://bof.fi/RATI"

Example 2. General information at the beginning of the report

```
<?xml version="1.0" encoding="utf-8"?>  
<ratiReport xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
  xmlns:xsd="http://www.w3.org/2001/XMLSchema" schemaVersion="1.0"  
  xmlns="http://bof.fi/RATI">
```

3.2.2 Header section

The first section of the report is a Header section, which always includes the mandatory meta data to be included in the report: These are the type of data provider's identifier, data provider's VAT code, type of reporter's identifier, reporter's MFI code, identifier of the data collection, last date of the reporting reference period, reporting frequency, report creation date and time and possibly a comment concerning the report. The elements contained in the Header section and their more detailed explanations are provided in Table 1, Elements contained in the Header section.

Table 2. Elements contained in the Header section.

Element name	Explanation
typeOfDataProviderIdentifier	Type of data provider's identifier, "VAT"
dataProviderIdentifier	Data provider's VAT number in format FI<NNNNNNNN>
typeOfReporterIdentifier	Type of reporter's identifier, "MFI"
reporterIdentifier	Reporter's MFI number in format FI<NNNNNNNN>
surveyCode	"RATI"



reportingPeriodEnd	Last day of the reportable month, YYYY-MM-D
frequency	"M"
creationDate	Creation date and time <YYYY>-<MM>-<DD>T<HH>:<MM>:<SS>
entitysComment	Possible short comment relating to the report.

Below is an example of the Header section of the XML report.

Example 3. Header section of the 2024Q01 report

```
<header>
  <typeOfDataProviderIdentifier>VAT</typeOfDataProviderIdentifier>
  <dataProviderIdentifier>FI12345671</dataProviderIdentifier>
  <typeOfReporterIdentifier>MFI</typeOfReporterIdentifier>
  <reporterIdentifier>FI12345671</reporterIdentifier>
  <surveyCode>RATI</surveyCode>
  <reportingPeriodEnd>2024-03-31</reportingPeriodEnd>
  <frequency>M</frequency>
  <creationDate>2024-04-04T10:49:24</creationDate>
  <entitysComment>Example</entitysComment>
</header>
```

3.2.3 Content sections of the report

The content sections are named in the structural part of the RATI schema file (RATI_1.0.xsd) as follows:

- IL = ilRecords
- LD = ldRecords
- REST = restRecords
- SBS = sbsRecords
- BS = bsRecords

Actual data contents are reported using content elements (records), comprising il, ld, rest, sbs and bs elements. The number of the content elements is presented in the following table.



Table 2. Number of content elements/records.

Report	Content section	Number of content sections	The content section contains the following content elements/records	Number of content elements/records
M/Q	IL (ilRecords)*	1-N	il	0 - unlimited
M/Q	LD (ldRecords)*	1-N	ld	0 - unlimited
M/Q	REST (restRecords)*	1-N	rest	0 - unlimited
M/Q	SBS (sbsRecords)*	1-N	sbs	0 - unlimited
M/Q	BS (bsRecords)*	1	bs	1

* The content section is always mandatory

Data items (elements) contained in the content elements/records have been listed in the tables at the end of this document. They are also found in the schema file RATI_TYPE.xsd and RATI validation rules, which also define the details of the data types, threshold values, content requirements, value accuracies, code lists used and required formats.

3.3 Comparison of CSV and XML reports

In the CSV file, data on the reporter and reporting period as well as other general information are provided in the batch record on the 000 row at the beginning of the report. In the XML report, the header section corresponds to the 000 row of the CSV report.

The actual reportable statistics i.e. individual records are reported in the CSV file as rows. The corresponding data in the XML report is reported i.e., within a ld element, which are placed inside the ldRecords element. Hence, each content element of the XML report corresponds to an individual row in the csv report.

If the reportable data element is not applicable to the reportable content element, the XML element concerned must be left altogether unreported. The reporting of empty XML elements is not allowed.

3.4 Further information

Further inquiries about the submission of the report should be sent by email at Reporting-Support(at)bof.fi. Further inquiries about the content should be sent by email at rahoitustilastot(at)bof.fi.



Appendix Elements contained in the content elements/records as a table.

Elements contained in an IL element (IL record)

XML element	Description
allocationOfBalanceSheetItem	Allocation of balance sheet items
transaction	Transaction
instrument	Instrument
purposeOfLoan	Purpose of loan
intraGroupItem	Intra-group items
syndicatedItem	Syndicated items
collateral	Collateral
internalIdentifier	Internal identifier
sector	Sector
ecbsAuxiliarySector	ECB's auxiliary sectors
industrialClassification	Industrial classification
countryCode	Country code
conversionCurrency	Conversion currency ISO 4217
nextInterestRateReset	Next interest rate reset
interestRateLinkage	Interest rate linkage
originalMaturity	Original maturity
sizeOfLoanToNonFinancialCorporation	Size of loan to non-financial corporation
collectiveImpairment	Collective impairments

Elements contained in an LD element (LD record)

XML element	Description
allocationOfBalanceSheetItem	Allocation of balance sheet items
transaction	Transaction
instrument	Instrument
notionalCashPooling	Notional cash pooling
securitisationAndLoanTransfer	Securitisation and loan transfers
transactionPeriod	Transaction period
purposeOfLoan	Purpose of loan
intraGroupItem	Intra-group items
syndicatedItem	Syndicated items
collateral	Collateral
internalIdentifier	Internal identifier
sector	Sector
creditInstitutionExemptFromMinimumReserve	Credit institution exempt from minimum reserves
nameOfCreditInstitutionExemptFromMinimumReserve	Name of credit institution exempt from minimum reserves



ecbsAuxiliarySector	ECB's auxiliary sectors
industrialClassification	Industrial classification
countryCode	Country code
counterpartySector	Sector (Securitisation and loan transfers)
ecbsAuxiliarySectorSecAndLoan	ECB's auxiliary sectors (Securitisation and loan transfers)
counterpartyHomeCountry	Counterparty's sector (securitisation and loan transfers)
conversionCurrency	Conversion currency ISO 4217
bookValue	Book value
bookValueCurrency	Book value currency
bookValueExclNonPerformingStock	Book value excl. nonperforming stock
annualisedAgreedRate	Annualised agreed rate (%)
annualPercentageRateOfCharge	Annual percentage rate of charge (%)
interestPayable	Interest payable
nextInterestRateReset	Next interest rate reset
interestRateLinkage	Interest rate linkage
initialPeriodOfFixation	Initial period of fixation
originalMaturity	Original maturity
remainingMaturity	Remaining maturity
sizeOfLoan	Size of loan to non-financial corporation
termOfNotice	Deposit account's term of notice
individualLoanLossesAndImpairment	Individual loan losses and impairments

Elements contained in an REST element (REST record)

XML element	Description
allocationOfBalanceSheetItem	Allocation of balance sheet items
transaction	Transaction
instrument	Instrument
intraGroupItem	Intra-group items
internalIdentifier	Internal identifier
sector	Sector
countryCode	Country code
conversionCurrency	Conversion currency ISO 4217
bookValue	Book value
bookValueCurrency	Book value currency



Elements contained in an SBS element (SBS record)

XML element	Description
allocationOfBalanceSheetItem	Allocation of balance sheet items
transaction	Transaction
instrument	Instrument
internalIdentifier	Internal identifier
isinCode	ISIN code
capitalCertainty	Capital certainty
numberOfInstrument	Number of instruments
totalNominalValue	Total nominal value
nominalValueCurrency	Nominal value currency ISO 4217
totalMarketValueDirtyPrice	Total market value (dirty price)
marketValueCurrencyDirtyPrice	Market value currency (dirty price)
accountingClassification	Classification according to recognition in financial statements
totalMarketValueCleanPrice	Total market value (clean price)
marketValueCurrencyCleanPrice	Market value currency (clean price)
intraGroupItem	Intra-group items
directInvestment	Direct investment
dividend	Dividends
dividendCurrency	Dividend currency
counterpartysSector	Counterparty's sector
counterpartysHomeCountry	Counterparty's home country
issueDate	Issue date
maturityDate	Maturity date
countryOfIssue	Country of issue
typeOfIssuersIdentifier	Type of issuer's identifier
issuersIdentifier	Issuer's identifier
issuersName	Issuer's name
issuersSector	Issuer's sector
issuersHomeCountry	Issuer's home country

Elements contained in an BS element (BS record)

XML element	Description
reportingFrequency	Reporting frequency
reportersName	Reporter's name
numberOfHousingLoanCustomersHouseholds	Number of housing loan customers (households)
numberOfOffices	Number of offices
numberOfEmployees	Number of employees
balanceSheetTotal	Balance sheet total