BX Swiss AG & SETURION AG

Transaction Reporting Specifications

«EU Format» 3.02

Classification:	Public
Version:	3.02
Released:	18.05.2026

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I.Introduction

1. Purpose and Background

This document describes how reporting participants can fulfil their Swiss reporting requirement according to Article 39 FMIA (Financial Market Infrastructure Act) to the Reporting Office of BX Swiss AG and Seturion AG (collectively referred to as “BX”) using the technical implementing standards of the European Union (RTS 22).

This description does not replace any existing European Securities and Markets Authority (ESMA) documentation. It rather complements it and focuses on specific parts important for the ability to assess all transaction reports equally (i.e. regardless of reporting standard used) for the purpose of trading supervision under Art. 31 para. 1 FinMIA.

2. Version table

Document version	Release date	Information
V1.0	20.07.2018	Initial publication of the RTS22 onboarding documentation
V2.0	31.10.2023	Complete update of document (including changes due to FinMIO-FINMA revision with go-live May 1st, 2024.
V3.0	01.05.2024	Go-live of all changes related to FinMIO-FINMA revision (Spec. version 2.0).
V3.01	25.11.2025	Formal review and minor edits.
V3.02	18.05.2026	Extended scope to include Seturion AG.

II. EU regulatory framework and technical documentation

3. References

Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014

http://data.europa.eu/eli/dir/2014/65/oj

ESMA Technical Reporting Instructions: MiFIR Transaction Reporting

https://www.esma.europa.eu/sites/default/files/library/esma65-8-2356_mifir_transaction_reporting_technical_reporting_instructions.pdf

Annex 1: Data validation rules

https://www.esma.europa.eu/sites/default/files/library/esma65-8-2594_annex_1_mifir_transaction_reporting_validation_rules.xlsx

Annex 2: Message Schema

https://www.esma.europa.eu/document/transaction-reporting-xml-schema-110

ESMA: Transaction reporting, order record keeping and clock synchronisation under MiFID II

https://www.esma.europa.eu/sites/default/files/library/2016-1452_guidelines_mifid_ii_transaction_reporting.pdf

Regulation (EU) 2017/590 supplementing Regulation (EU) No 600/2014

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0590

ISO 20022 Securities messages

BusinessDataHeaderV01
BusinessApplicationHeaderV01
FinancialInstrumentReportingTransactionReportV01
FinancialInstrumentReportingStatusAdviceV01

FINMA: Duty to report securities transactions

https://www.finma.ch/en/~/media/finma/dokumente/dokumentencenter/myfinma/rundschreiben/finma-rs-2018-02.pdf?la=en

III. Technical Information

4. Security Model

To successfully report trades over HTTPS the following security measures should be met:

a. SSL certificates at https://test.bxswiss.exchange/ and https://www.bxswiss.com/ should be accepted.
b. TLS 1.1 or TLS 1.2 is supported.
c. A reporter account should be obtained with username and password.

- **Supported protocols:** TLS 1.1, TLS 1.2
- **Supported ciphers:** Triple DES 168, AES 128/128, AES 256/256
- **Supported hashes:** MD5, SHA, SHA 256, SHA 384, SHA 512
- **Supported KeyExchanges:** Diffie-Hellman, PKCS, ECDH
- **Supported Cipher Suites:**

  - TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384
  - TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
  - TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384
  - TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256
  - TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA
  - TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA
  - TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
  - TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
  - TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384
  - TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256
  - TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA
  - TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA
  - TLS_RSA_WITH_AES_256_GCM_SHA384
  - TLS_RSA_WITH_AES_128_GCM_SHA256
  - TLS_RSA_WITH_AES_256_CBC_SHA256
  - TLS_RSA_WITH_AES_128_CBC_SHA256
  - TLS_RSA_WITH_AES_256_CBC_SHA
  - TLS_RSA_WITH_AES_128_CBC_SHA
  - TLS_RSA_WITH_3DES_EDE_CBC_SHA

5. Manual Data Upload

Reports can be manually uploaded to the BX reporting tool via web interface:
https://www.bxswiss.com/extranet/login

6. CURL-Upload

The reporting office technical interface is a web service available at:

- Test Environment: https://test.bxswiss.exchange/extranet/curlupload
- Production Environment: https://www.bxswiss.com/extranet/curlupload

The client web service call – irrespective of the technology used – should be equivalent to the following curl invocation:

curl --form user=reporter@<party-id><suffix> --form password=<password> --form upload=@<file-name> https://test.bxswiss.exchange/extranet/curlupload
where:

<party-id><suffix>	- is the identifier assigned to a reporting member user with an added suffix e.g. _aw
<password>	- is a password assigned to that user account
<file-name>	- is the name/location of the (input) file to be uploaded

Calls to the web service are **synchronous**. File processing happens within the call. The client receives the answer in the response body.

7. Test Environment

BX also maintains a Test Environment. User accounts will be created for reporting members on request via meldestelle@bxswiss.com or via reportingoffice-ch@seturion.com

It can be accessed via
https://test.bxswiss.exchange/extranet/login

IV. Upload files

8. Content Check

Uploading an identical report file twice (on the same day or any two different days) by the same user leads to an error and the file is not accepted a second time. This check is based on the entire file content (as a hash SHA256 comparison).

Uploading a transaction report with a TxReportID that has already been used will result in a rejection of the file as a TxReportID must be globally unique (i.e., a TxReportID can only be used once per day and reporting member).

Please note that if a previously uploaded file is uploaded again on any other day and either the file name and/or its content is changed (no matter how small), the file and any of its transaction reports are imported and will hence result in duplicate records.

Please refer to the error code table in paragraph 15.

9. Input File Requirements

The file names should not be less than two characters long.

The input file is expected to be an **.xml** file, with the characteristics defined in above mentioned regulation and standards (paragraph 3).

File name re-use is possible considering the file content changes.

The maximum file size is **4MB**. There is no explicit limitation on the number of lines, but the file size restriction limits the maximum number of lines indirectly. 20 concurrent calls to the web service per reporter are accepted but we advise to report consecutively (one report after the other).

For smoother and more reliable processing, we suggest using smaller file sizes, ideally around **500KB to 1MB**. This helps ensure uninterrupted processing, as larger files can sometimes lead to longer handling times during peak periods, which may cause the reporting member's security safeguards to close connections that appear inactive.

10. Data fields Transaction Reporting "EU Format"

Each RTS22 report can feature multiple transactions.

The transaction element of the file contains certain mandatory fields so that the EU standard transaction reports follow the reporting requirements set forth by the Swiss regulator.

Since the RTS22 standard is using a .xml file format, we start from xpath *Document\FinInstrm-RptgTxRpt\Tx\New*

RTS 22 field	BX usage	Note
\TxId	Trade report ID GroupId for reversal	Required
\Buyr or **\Sellr**	LEI of the transmitting firm (buyer or seller)	Required

RTS 22 field	BX usage	Note
\Tx\TradgCpcty	Should be MTCH, DEAL or AOTC.	Required
\FinInstrm\Id	ISIN Identification of a financial instrument **admitted to the BX** trading venues.	Required, if instrument admitted to the BX trading venues[1]
\FinInstrm\Othr\FinInstrmGnlAttrbts\Id	ISIN Identification of a financial instrument **not admitted to the BX** trading venues.	Required, if available[1]
\FinInstrm\Othr\FinInstrmGnlAttrbts\ClssfctnTp	CFICode Taxonomy used to classify a financial instrument. It should be a complete and accurate CFI code.	Required, if **\FinInstrm\Id** is empty or if instrument/ISIN is not admitted to the BX trading venues[1]

[1] additional mandatory input introduced for derivatives with partial revision of FinMIO-FINMA and go-live May 1st, 2024.

RTS 22 field	BX usage	Note
From **\FinInstrm\Othr\DerivInstrmAttrbts\UndrlygIn-strm** **And then** **\Othr\Sngl\ISIN or** **\Swp\SwpIn\Sngl\ISIN or** **\Swp\SwpOut\Sngl\ISIN or** **\Othr\Bskt\ISIN or** **\Swp\SwpIn\Bskt\ISIN or** **\Swp\SwpOut\Bskt\ISIN or** **(Fields are sequentially checked if they contain an ISIN)**	Underlying ISIN	Required, as indicated by CFI-Code (Appendix 1)[1]
\FinInstrm\Othr\DerivInstrmAttrbts\XpryDt	Expiry date of the reported financial instrument. Field must be populated with a valid date in the following format: YYYY-MM-DD	Required, as indicated by CFI-Code (Appendix 1)[1]
\FinInstrm\Othr\DerivInstrmAttrbts\PricMltplr	Price multiplier Number of units of the underlying instrument represented by a single derivative contract.	Required, as indicated by CFI-Code (Appendix 1)[1] Validation: Must be >0
\FinInstrm\Othr\DerivInstrmAttrbts\StrkPric	Strike Price	Required, as indicated by CFI-Code (Appendix 1)[1]

RTS 22 field	BX usage	Note
\FinInstrm\Othr\DerivInstrmAttrbts\OptnTp	Option type Indication as to whether the **derivative contract** is a call, a put or will be determined later.	Required, as indicated by CFI-Code (Appendix 1)[1]
\TradVn	The MIC of the venue where the transaction was executed.	Required
\Sellr\acctOwnr\ or **\Buyr\acctOwnr**	The beneficial owner information.	Required
\qty\NmnlVal **\qty\NmnlVal\Value or** **\qty\Unit or**	Quantity	Required
\Tx\Qty\NmnlVal\Ccy or **\Tx\Qty\MntryVal\Ccy or** **\Tx\Pric\Pric\MntryVal\Amt\Ccy**	Currency as per corresponding ISO code	Required
\Tx\Pric\Pric\MntryVal\Amt\Value **or** **\Tx\Qty\MntryVal\Value**	Price	Required 22 digits before, 6 after **decimal point**.
\Tx\TradDt	Trade Date and Time	Required
If \Tx\qty\Unit is filled, then 2 **If \Tx\Pric\Price\Yld is filled, then 9** **Else 1**	PriceType	Optional

11. Report Reversal(s)

Successfully uploaded reports can't be amended. Therefore, any transaction report with wrong or incomplete information must be deleted and the corrected record resubmitted like a new transaction report.

Since RTS22 is a xml file we start from xpath *\Document\FinInstrmRptgTxRpt\Tx\Cxl*

RTS 22 field	BX usage	Note:
\TxId	Trade report to reverse	Required
\SubmitgPty	Used to generate unique transaction identifier	Required
\ExctgPty	Used to generate unique transaction identifier	Required

Please note: Transaction reports can be deleted/reversed manually via the web interface or via file upload only until **7 calendar days** after the original Transaction Report was made.

Furthermore, reversals can only be made by either the **user that made the initial report** or by the reporting participants' **user that holds 'Master Account'** privileges.

V. Validation Response

12. General Information

The response is either a success message or an error message that contains a list of all errors found in that upload attempt.
The processing is based on an **"all-or-nothing"** principle. If there is one error in the file, the whole file gets rejected and no report enters the database.

Please note:
A report for an ISIN not known or tradeable on the BX trading platforms is not considered an error and hence those reports are simply skipped (**unless** the reporting member had specifically asked BX to disable the so-called ISIN-check, in which case the report would be accepted provided all other conditions as per paragraph 9 are met). The user will be informed within either the success or error response message, if any reports were skipped.

The **\TxId** of a skipped report could be used again as it didn't enter the data base.

The response message is sent back with the respective **\TxId** and the skipped message information.

The response generated upon uploading reports should be saved by the user. The response is not stored by the reporting office and cannot be viewed or retrieved from the BX reporting tool at a later stage.

13. Response Format

The response data are structured in JSON format. Please find examples below (paragraphs 13 and 14). A transaction reporting sample response file can be found within the reporting tool's download section.

14. Success Response

In case of a successful processing, the following response is provided:

```
{
        "Errors": [],
        "SkippedRecords": [],
        "Imported": <number-of-data-lines-in-file>,
        "Skipped": 0,
        "AltMessage": "",
        "IsImportSuccessful": true
}
```

If "Skipped" is greater than zero, it means some lines have not been processed, because BX considers them irrelevant (i.e., with no legal obligations to report the information to BX). When records are skipped, the SkippedRecords array is filled with information regarding the reason and record identification.

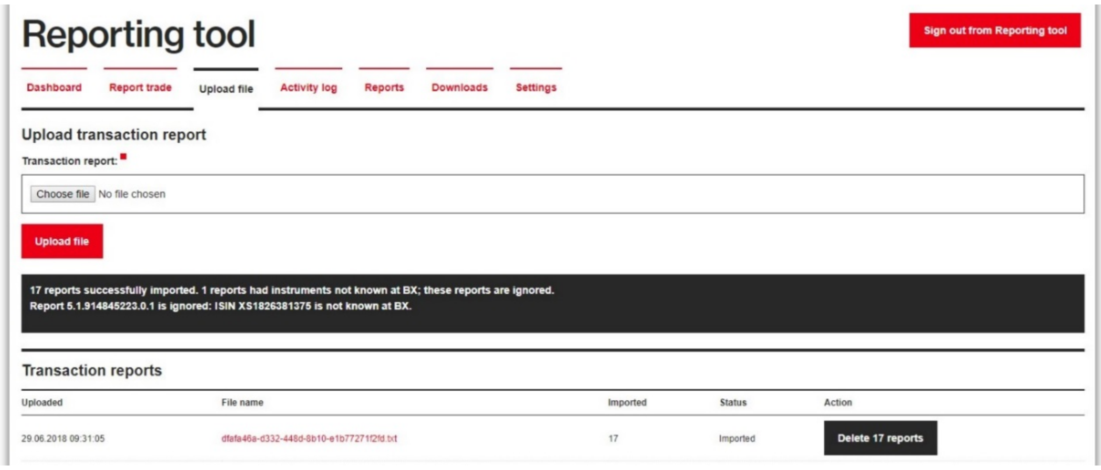
15. Error Response

In case of errors, the response has the following structure:

```
{
  "Errors": [
    {
      "LineNr": <erroneous-line-no>,
      "ColumnNr":<column-where-the-error-was-found>,
      "ErrorCode": <numerical value>,
      "ErrorMsg": "<the description of the error (free text)>"
    },
    ...
  ],
  "SkippedRecords": [
    {
      "SkipReason": "<the reason the records were skipped>",
      "RecordIdentifier":" <record that was skipped>"
    },
    ...
  ],
  "Imported": 0,
  "Skipped": 0,
  "AltMessage": "<general comment on the result of the file processing (free text)>",
  "IsImportSuccessful": false
}
```

Each erroneous line has its corresponding entry in the "Errors" array. “LineNr” needs to be counted from zero (header is line number zero). Column numbers are also zero based.

Sample response for a manual file upload via the GUI:



16. Error Codes

RTS22 format level errors point to RTS22 content issues via message structures shown below.

- The value {n} should be read as the nth element were the error occurred.
- The value {txId} should be read as the txID of that element.

Field	Message
TxId	The element Cxl should be present at \Document\FinInstrm-RptgTxRpt\Tx[{n}]
OrdrTrnsmssn	The element OrdrTrnsmssn should be present at \Document\Fin-InstrmRptgTxRpt\Tx[{n}]\New\
Buyr or Sellr	The element Buyr or Sellr should be present at \Document\FinInstrm-RptgTxRpt\Tx[{n}]\New\
TradgCpcty	The element TradgCpcty should be present at \Document\FinInstrm-RptgTxRpt\Tx[{n}]\New\transaction\Tx\TradgCpcty
FinInstrm	The element Id should be present at \Document\FinInstrm-RptgTxRpt\Tx[{n}]\New\FinInstrm\Id
ClssfctnTp*	The ClssfctnTp should be present at \Document\FinInstrm-RptgTxRpt\Tx[{n}]\New\ FinInstrm\Othr\FinInstrmGnlAttrbts\ClssfctnTp
ISIN*	The element ISIN should be present at \Document\FinInstrm-RptgTxRpt\Tx[{n}]\New\ FinInstrm\Othr\DerivInstrmAttrbts\UndrlygInstrm\Othr\Sngl
ISIN*	The element ISIN should contain at least one ISIN be present at \Docu-ment\FinInstrmRptgTxRpt\Tx[{n}]\New\FinInstrm\Othr\ DerivInstrmAttrbts\UndrlygInstrm\Othr\Swp\SwpIn\Bskt
ISIN*	The element ISIN should contain at least one ISIN be present at \Docu-ment\FinInstrmRptgTxRpt\Tx[{nodeNumber}]\New\FinInstrm\Othr \DerivInstrmAttrbts\UndrlygInstrm\Othr\Swp\SwpOut\Bskt

Field	Message
Currency	The attribute currency on element should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\transaction\Tx\Pric\Pric \MntryVal\Amt\Ccy or Tx\Qty\NmnlVal\Ccy or Tx\Qty\MntryVal\Ccy
Qty	The element Qty NmnlVal\Value or Unit should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\transaction\Tx\Qty\
Pric	The element Pric MntryVal/Pctg/Yld/BsisPts/Pdg should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\transaction\Tx\Pric\
TradVn	The element TradVn should be present at \Document\FinInstrmRptgTxRpt\Tx[{nodeNumber}]\tx\TradVn
OptnTp	The ClssfctnTp should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\ FinInstrm\Othr\FinInstrmGnlAttrbts\OptnTp
StrkPric	The ClssfctnTp should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\ FinInstrm\Othr\FinInstrmGnlAttrbts\StrkPric
XpryDt	The ClssfctnTp should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\ FinInstrm\Othr\FinInstrmGnlAttrbts\XpryDt
PricMltplr	The ClssfctnTp should be present at \Document\FinInstrmRptgTxRpt\Tx[{n}]\New\ FinInstrm\Othr\FinInstrmGnlAttrbts\PricMltplr

*one of these fields needs to be present; adjustments introduced for derivatives with partial revision of FinMIO-FINMA and go-live May 1st, 2024, please see above

VI. Operations

17. Business Continuity Management

- the reporting tool is running on two datacenters
- automated switch from one datacenter to the other if required
- no need to change the URL

In case of service interruptions, BX informs its reporting participants by email. Reporting must be completed as soon as the systems are up and running again.

18. Operating Hours & Support

There is no limitation imposed on the time when the files can be uploaded. BX provides the service on 24/7 basis. Support is available on business days from 8:00 am through to 5:45 pm CET. In case of any operational or technical issues with the reporting tool application in either the test or production environment please contact BX Reporting Office customer support:

Email:	meldestelle@bxswiss.com or reportingoffice-ch@seturion.com
Phone:	+41 31 329 40 46

APPENDIX 1 – Sample of CFI codes & their mandatory attributes

CFI Code	Underlying ISIN	Option-Type	Strike-Price	Expira-tionDate	Leverage Indicator
F∗∗∗∗∗	X			X	X
O∗∗∗∗∗	X	X	X	X	X
H∗∗∗∗∗	X	X	X		X
JE∗∗C∗	X				X
RWS∗∗∗	X	X	X		X
SE∗∗∗∗	X				X

∗ denotes any of the valid letter/character defining the CFI group and attributes
X denotes a mandatory field for the respective CFI Code