



BX Swiss AG & BX Digital AG

Transaction Reporting Specifications

«Swiss Format» 3.04

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I. Introduction

1. Purpose and Background

This document describes the technical interface and the data required to upload transaction reports according to Article 39 FMIA (Financial Market Infrastructure Act) to the Reporting Office of BX Swiss AG and BX Digital AG (collectively referred to as "BX").

The specification is based on Swiss regulatory requirements and is the result of inputs of various market participants subject to the reporting obligation and commonly accepted reporting standards in Switzerland (so-called "Swiss Format").

2. Version table

Document version	Release date	Information
V2.0	23.03.2020	Version 2.0 published by BX Swiss.
V2.1	29.04.2020	"BXID" instead of "BX Member ID" required in field "ContraFirmSubTypeCode".
V2.2	06.05.2020	"MEMB" added as a valid input in field "ContraFirmSubTypeCode".
V2.3	03.06.2020	"BXID" instead of "BX Member ID" required in the usage of Beneficial Owner field.
V2.4	06.01.2021	Optional UnderlyingSIN4 field added. Format for LastQty changed. Venue Code conditionally required for BX trades. More BO Options added. "Old" Fields erased from document.
V2.5	24.03.2023	Formal review and minor edits Table of contents added.
V2.6	04.07.2023	Clarifications and Corrections
V2.7	14.08.2023	Announcement of changes due to FinMIO-FINMA revision with go-live May 1st, 2024 and minor edits.
V2.7.1	23.08.2023	Addendum: The Underlying Report Swiss Format will also be decommissioned by May 1st, 2024 .
V2.7.2	10.10.2023	Field "LeverageIndicator" must be greater than 0 (if required) with go-live May 1st, 2024 .
V3.0	01.05.2024	Go-live of all changes related to FinMIO-FINMA revision (Spec. versions 2.7.x). MEMB and BXID removed as BOTC.
V3.01	15.07.2024	ContraFirmPartyID field adjusted from String-50 to 35.
V3.02	04.07.2025	Report reversal & 128 error message clarified.
V3.03	02.09.2025	Report reversal handling, TrdMatchID usage clarified & minor edits
V3.04	18.05.2026	Extended scope to include BX Digital AG; clarifications.



II. Technical Information

3. 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



4. Manual Data Upload

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

5. 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.

6. Test Environment

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

It can be accessed via

<https://test.bxswiss.exchange/extranet/login>

III. Upload files

7. File Naming Conventions

The file names **should not be less than two characters** long including file type indicator. Only **.csv** or **.txt** files are allowed.

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



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 that day will result in the 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 17.

9. Input File Requirements

The input file is expected to be a .csv or .txt file, with the following characteristics:

- EOL character: Windows ("\\r\\n")
- Charset: UTF8 or ANSI (as a subset of UTF8)
- Field delimiter: ';' character (semicolon)
- Body lines contain data.
- Footer line contains only the string "EoF" (case sensitive)
- Lines after the footer line are ignored.
- Header line contains the following column headers:

#	Header field name	#	Header field name	#	Header field name
1	TxReportID	13	LastPx	25	BeneficialOwner
2	TxReportTransType	14	PriceType	26	Currency
3	TxGroupID	15	ExecutionTime	27	CHFAmount
4	InstrumentType	16	SettlDate	28	ExpirationDate
5	TrdMatchID	17	EnteringFirmSide	29	OptionType
6	VenueCode	18	EnteringFirmSecondaryClOrdID	30	StrikePrice
7	ISIN	19	EnteringFirmOrderCapacity	31	StrikePriceType
8	CFICode	20	EnteringFirmPartyID	32	LeverageIndicator
9	UnderlyingISIN	21	EnteringFirmPerson	33	OrderTransmission
10	UnderlyingISIN2	22	ContraFirmSubType	34	AggregatedOrder
11	UnderlyingISIN3	23	ContraFirmSubTypeCode	35	UnderlyingISIN4 (optional)
12	LastQty	24	ContraFirmPartyID		

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 "Swiss Format"

Fieldname	Description	Length	Validation	Mandatory
TxReportID	User/Participant chose unique transaction ID ¹	50 characters	Cannot be empty, cannot be none and must not start with TX. Must be globally unique	Yes
TxReportTransType	Type of transaction, 0 = New report 4 = Report reversal	1	One of the types	Yes
TxGroupID	A group of transactions which have a relation to each other. Used for reporting reversals (see chapter 13)	255	Cannot be empty	Yes
InstrumentType	Instrument identification options: 1 = Security with ISIN; or 4 = Instrument with CFI description	1	Must be set to 1 or 4	Yes. Must be set to 1 for securities admitted to BX and else set to 4
TrdMatchID	Code from the trading venue that identifies the trade for which the transaction report is made	52		Required if VenueCode is XBRN or BXDA (BX Trade IDs begin with 'BX'), otherwise optional.
VenueCode	Trading venue identifier on which the trade was executed	4		Required if trade matched on venue XBRN or BXDA
ISIN ²	The instrument to report on	12	Must match regular expression <code>^[A-Z]{2}([A-Z0-9]){9}[0-9]\$</code>	Yes, if InstrumentType is set to 1, or if set to 4

¹ unique on the day of upload (i.e., could theoretically be re-used the following day)

² BX Swiss & BX Digital securities must be reported with their ISIN, whereas for securities not listed/traded on BX Swiss or BX Digital a CFI code must be reported in addition to the ISIN

Fieldname	Description	Length	Validation	Mandatory
				and ISIN is also available
CFICode ³	The CFI code of the instrument	6	Can not exceed nor be shorter than 6 characters	Yes, if InstrumentType is set to 4, or if InstrumentType is set to 1 and reported ISIN is no BX security ⁴
UnderlyingISIN	Underlying ISIN of the instrument.	12	If not empty must match regular expression <code>^[A-Z]{2}([A-Z0-9]){9}[0-9]\$</code>	Yes, if CFICode requires input (Appendix 1)
UnderlyingISIN2	Second underlying ISIN of the instrument.	12	If not empty must match regular expression <code>^[A-Z]{2}([A-Z0-9]){9}[0-9]\$</code>	No ³
UnderlyingISIN3	Third underlying ISIN of the instrument.	12	If not empty must match regular expression <code>^[A-Z]{2}([A-Z0-9]){9}[0-9]\$</code>	No ³
LastQty	Quantity of trade	23 digits before, 6 after decimal point	Must be a positive decimal	Yes
LastPx	Price of the reported transaction	23 digits before, 6 after decimal point	Can be negative	Yes
PriceType	Type of price: 1 = Percentage 2 = Per unit 6 = Spread 9 = Yield	1	One of the types	Yes
ExecutionTime	The timestamp of execution of the trade (Swiss time zone, either CEST or CET depending on the time of year)	24	Required to be in format yyyyMMdd-HH:mm:ss.fff or yyyyMMdd-HH:mm:ss.ffffff	Yes
SettlDate	The timestamp of the settlement.	8	Required to be format yyyyMMdd and must not precede Execution-Time	No

³ non-BX securities can be reported with just the CFI code; however, if an ISIN is available, it should be reported as well

⁴ where the ISIN check is disabled, and a reporting member reports a security not currently admitted to BX (i.e., overreporting)



Fieldname	Description	Length	Validation	Mandatory
EnteringFirmSide	The type of trade from the firm side: 1 = Buy 2 = Sell	1	One of the types	Yes
EnteringFirmSecondaryCIOrdID	Alternative trade ID	52	Cannot be longer than 52 chars	No
EnteringFirmOrderCapacity	Type of principal P = Principal R = Riskless Principal	1	One of the types	Yes
EnteringFirmPartyID	The BX party ID of the entering firm	8	Max 8 characters.	No
EnteringFirmPerson	The user that reports; logs in	35	Cannot exceed 35 characters	No
ContraFirmSubType	Type of ContraFirmPartyID: CUST = Customer MEMB = Exchange Participant EFFH = Other Securities Dealer EXCH = Exchange XOFF = Unrecognized venue by FINMA CCP = Central Counterparty	4	One of the 6 types	Yes
ContraFirmSubTypeCode	Identifier type of input in field "ContraFirmPartyID" LEI, MEMB, BIC, NID or OTH (Other)	4	One of the 5 types	Yes
ContraFirmPartyID	The ID of the counterparty or if the ID is not known "other".	35	An identifier matching the specified ContraFirmSubTypeCode	Yes, if ContraFirmSubType is MEMB, EFFH, EXCH; XOFF, or CCP. Optional, if ContraFirmSubType is CUST

Fieldname	Description	Length	Validation	Mandatory
BeneficialOwner	The identification of the beneficial owner	700	<p>Multiple Beneficial Owners must be separated by a “^”. Every Beneficial Owner must match below specified regular expression:</p> <p>For natural persons: PRSN-[A-Z]{2}-\d{8}-[^^-]{1,23}</p> <p>For juridical persons: Code{3,4}-[A-Z]{2}-[^^]{1,32}\$</p> <p><u>First part (natural person):</u> always “PRSN”</p> <p><u>First part (juridical person):</u> LEI, BIC, CRN, UID, PLI, FOC, ASS, CCO or COH</p> <p><u>Second part (always):</u> ISO 3166-1 country code</p> <p><u>Third part (natural person):</u> date in format yyyyMMdd</p> <p><u>Third part (juridical person):</u> alpha numeric identifier of type specified in first part.</p> <p><u>Fourth part (natural person):</u> alpha numeric identifier</p>	Yes
Currency	The currency that the trade has been done in	3	ISO 4217 currency code	Yes
CHFAmount	The amount of the trade in CHF	23 digits before, 6 after decimal point		No

Fieldname	Description	Length	Validation	Mandatory
ExpirationDate		8	Required to be format yyyyMMdd	Yes, if CFICode requires input (Appendix 1)
OptionType	Indicates whether the derivative product is a put, call or other (e.g., swap): C = Call P = Put O = Other	1		Yes, if CFICode requires input (Appendix 1)
StrikePrice	The instrument's strike price.	23 digits before, 6 after decimal point		Yes, if CFICode requires input (Appendix 1)
StrikePriceType	The instrument's strike price. 1 = Percentage 2 = Per Unit	1		Yes, if Strike-Price is set.
LeverageIndicator	Initial margin rate / leverage in case of CFD and contract size for other derivatives	22 characters before, 6 after decimal point	Must be greater than 0	Yes, if CFICode requires input (Appendix 1)
OrderTransmission	Y (Yes) or N (No)	1		No
AggregatedOrder	Y (Yes) or N (No)	1		No
UnderlyingISIN4	Populate if the reporting member determines that more than 3 Underlying need to be reported	4000	Up to 307 ISINs may be reported in this field. Format: Each submitted ISIN must be separated by a caret '^' ISIN must match regular expression: ^[A-Z]{2}([A-Z0-9]){9}[0-9]\$	No Note: The column itself is not mandatory. Meaning, reporting files without this column or an empty column will be accepted.



11. Currency Conversion

BX does the currency conversion for reports submitted in a non-CHF currency according to data of <https://www.backend-rates.bazg.admin.ch/api/xmldaily>.

12. Reporting Member IDs

The list of BX reporting members can be downloaded from the respective website:

- BX Swiss:
https://www.bxswiss.com/downloadfile/regulatorydocuments/Reporting_Member_P.xlsx
- BX Digital:
<https://bxdigital.ch/en/document/list-of-reporting-members/>

If a reporting member is not on the list, use “Other” for reporting purposes.

13. 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.

Firstly, delete the incorrect transaction report by uploading the original incorrect record and switching the TxReportTransType from '0' (for New) to '4' (for Reversal) as well as assigning a new TxReportID.

Secondly, the corrected transaction report must then be resubmitted with a new TxGroupID, a new TxReportID and TxReportTransType '0' (essentially this is a new transaction report altogether).

It is however advised to include some reference to the reversed transaction. For example:

- 1) Initial transaction with TxGroupID = abc123
- 2) Delete/reverse transaction with TxGroupID = abc123
- 3) Amended/new transaction with TxGroupID = abc123_corrected

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.

Important: Reversals are handled differently from new reports. While new reports follow an “all-or-nothing” principle (i.e., if any error occurs, no reports are processed), reversals included in the same file are processed independently. This means **valid reversals will still be processed even if other reports in the file contain errors**. In such cases, the response may display “**0 reports imported**”, which refers to new reports only and does not indicate that reversals were ignored (i.e. were in fact successfully processed).

IV. Validation Response

14. 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.

For new reports (i.e., TxReportTransType ‘0’) the data processing is based on an “all-or-nothing” principle (please see above the exception to that rule with regards to reversals). If there is one error in the file, the whole file gets rejected and no report enters the database.

Note: For details on the processing of report reversals, please refer to paragraph 12.

Additionally: A report for an ISIN not known or tradeable on the BX trading platforms is not considered an error. Those reports are simply skipped, and the user will be informed within either the success or the error response message.

The TxReportID of a skipped report could be used again as it didn’t enter the database.

The response message is sent back with the respective TxReportID 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.

15. Response Format

The response data is structured as JSON format. Please find some examples below in paragraphs 16 and 17. A transaction reporting sample response file can be found in the reporting tool’s download section.



16. 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.

17. 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:

18. Error Codes

The BX reporting tool uses the following error codes:

Error Type	Value	Description
File Processing Technical Error	100	Report File status is not an expected status.
Invalid Currency	102	Currency field is empty or contains an invalid currency code (not ISO 4217)
Invalid ExecutionTime	104	ExecutionTime does not precede the current time. E.g., execution time after reporting time
Invalid Input Data Type	106	A data type validation has failed in the report entry.
Invalid Input Enumeration Value	107	An enumeration validation has failed in the report entry.
Invalid Instrument Format	108	The ISIN (12 char) or CFI (6 char) code does not comply with the prescribed format.
Invalid Country	111	Invalid country code according to ISO 3166-1
Invalid SettlDate	112	The entry is not correctly formatted or precedes the ExecutionTime
Not Authorized for Member	117	Login authorization has failed. Example: {"Errors":[{"LineNr":0,"ColumnNr":0,"ErrorCode":117,"ErrorMsg":"Incorrect user or password."}], "SkippedRecords":[], "Imported":0, "Skipped":0, "AltMessage":"Incorrect user or password.", "IsImportSuccessful":false}



Error Type	Value	Description
Duplicate TxReportID found	124	The TxReportID already used. Entry does not conform with the specification
Invalid Contra Firm	125	ContraFirmPartyID is not valid.
Invalid TxFile Name	126	The transaction report file name format is invalid. This error occurs if a file name with less than 2 chars is used.
TxFile EoF Marker Missing	127	Transaction file does not have an End of File (EoF) marker.
Internal Processing Error	128	Technical error. Please contact the BX support desk. Potential cause for error: Report not found, deletion already processed, deletion attempt of report that is older than 7 days, deletion request by user with insufficient account privilege.
Field Not Specified	129	A mandatory field is not filled.
Invalid Entering Firm	131	The EnteringFirmPartyID is not a valid participant ID of a Trading or Reporting Participant.
Invalid LastQty	134	Incoming report has a quantity of zero or less.
Duplicate File	136	This file has already been uploaded and imported on dd.mm.yyyy hh:mm. Content check not name.
Invalid File Header	137	The file cannot be processed as the header is incorrectly formatted, e.g. invalid character, upper/lower case typo, incorrect sequence, incorrect number of columns etc.
Invalid File Size	138	The file is too large.
Missing Input for CFI	140	The reported CFI Code requires one or more of the fields to be populated.
The maximum amount of retries for this report file has been reached within a specified time limit. Please read the error message before trying again.	none	Message the reporting tool will return when a client tries to upload the same file five times in a row within 20 minutes.

Please note: Unknown ISINs are skipped and will neither be processed nor imported unless the reporting member had asked BX to disable the so-called ISIN-check. In that case the verification and validation procedures outlined in this document apply.



V. Operations

19. 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.

20. Operating Hours & Support

The BX Reporting Office provides its 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
meldestelle@bxdigital.ch

Phone: +41 31 329 40 46



APPENDIX 1 – Sample of CFI codes & their mandatory attributes

CFI Code	Underlying ISIN	OptionType	StrikePrice	ExpirationDate	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