



## OP's customer instructions for international Swift account reporting data retrieved from the Web Services channel

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|              |   |  |   |
|--------------|---|--|---|
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|     |  |    |
|-----|--|----|
| 1   | General.....   | 2  |
| 2   | Requirements for implementation.....                         | 2  |
| 2.1 | Agreements.....  | 2  |
| 2.2 | Types of incoming data.....                                  | 2  |
| 2.3 | Retrieval of incoming data.....                              | 3  |
| 2.4 | Paging.....  | 4  |
| 3   | Contents of the data.....                                    | 4  |
| 4   | Testing the data.....  | 4  |
| 5   | Pricing.....   | 4  |
| 6   | Termination of agreement.....                                | 4  |
| 7   | Swift account reporting from OP to other banks.....          | 4  |
| 8   | Data descriptions.....                                       | 4  |
| 8.1 | Incoming MT940 account statement XML (camt.053.001.02).....  | 4  |
| 8.2 | Incoming MT940 account statement SW.....                     | 13 |
| 8.3 | Incoming MT941 balance report XML (camt.052.001.02).....     | 14 |
| 8.4 | Incoming MT941 balance report SW.....                        | 17 |
| 8.5 | Incoming MT942 transaction report XML (camt.052.001.02)..... | 18 |
| 8.6 | Incoming MT942 transaction report SW.....                    | 30 |
| 9   | Appendices.....  | 31 |
| 9.1 | Interface description of the WS channel.....                 | 31 |

9.6.2022

## 1 General

This service description describes OP's incoming Swift account reporting in the Web Services channel, hereinafter the WS channel. The operation of the WS channel is described in a separate service description of the WS channel.

Swift is an international data transmission network between banks. Swift uses international message standards. You can find more information at the [www.swift.com](http://www.swift.com) website (in English).

Customers may use the OP's Swift account reporting service to retrieve account reporting information for their accounts in domestic or foreign banks from the WS channel.

Customers may retrieve the following data from the WS channel:

- tiliote (Customer Statement Message MT940) XML- and/or SW -formats
- saldoilmoitus (Balance Report MT941) XML- and/or SW-formats
- tapahtumaote (Interim Transaction Report MT942) XML- and/or SW-formats

This service description contains the OP's Swift account reporting descriptions of the messages used in the B2C (Bank-to-Customer) service delivered via the international Swift system, defined in accordance with the ISO organisation's ([www.iso.org](http://www.iso.org)) ISO20022 standard (<http://www.iso20022.org/>), and converted into XML format. B2C messages are a part of the international ISO 20022 standard and belong to the Cash Management (camt) XML message group. It is also possible to retrieve account statements in SW format as in the Swift message, and balance and transaction reports in SW format.

Retrieval of Swift account reporting data from the WS channel is not dependent of through which channel or using which data format their accounts have been accessed. The service is available 24/7, excluding Finnish national holidays. Foreign banks may also have their own limitations on sending the messages.

OP's latest description on Swift account reporting data is included in this document. OP reserves the right to change this description on the basis of national and international recommendations.

## 2 Requirements for implementation

### 2.1 Agreements

The customer must make a written agreement with Osuuspankki on the use of the WS channel and the retrieval of Swift account reporting data. If the customer retrieves data in XML format, the camt version used by the customer is agreed at the same time. The service is activated immediately when the agreement becomes valid in both the OP and the bank from which Swift reports are sent to the OP.

Swift account reporting is based on the account number. Account numbers abroad may be rather different than those used in Finland. For example, the account number may include a currency or the customer's name. For this reason, it is important that the account number is exactly correct on the agreement, too. The customer must notify the customer's own OP bank of any changes to account numbers without delay.

### 2.2 Types of incoming data

In Swift account reporting, the data arrives in the WS channel for retrieval based on the agreement between the customer and the bank, either in XML format conforming to the ISO 20022 standard or in Swift message account statement format. The data format is determined based on the FileType element value returned by the channel as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<ApplicationRequest xmlns="http://bxd.fi/xml/data">
<CustomerId>1000000000</CustomerId>
<Timestamp>2011-08-15T09:48:31.177+03:00</Timestamp>
<Status>NEW</Status>
```

9.6.2022

```

<Environment>PRODUCTION</Environment>
<SoftwareId>Ohjelmisto 1.0</SoftwareId>
<FileType>SW</FileType>
<Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
  <SignedInfo>
    <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315#WithComments"/>
    <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
    <Reference URI="">
      <Transforms>
        <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
      </Transforms>
      <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
      <DigestValue>sPNzEb+Mf5dchY5MTGq7GL1grEg=</DigestValue>
    </Reference>
  </SignedInfo>
  <SignatureValue>alqreFNkxuy...nM4SXE8g==</SignatureValue>
  <KeyInfo>
    <X509Data>
      <X509Certificate>MIIC9TCCA...lv3xpHPU=</X509Certificate>
    </X509Data>
  </KeyInfo>
</Signature>
</ApplicationRequest>

```

| Return messages                                    |   |  |
|--|---|--|
| Message type                                       | Message types conforming to the ISO 20022 standard schema or format | File type (highlighted in the example above) |
| MT940 tiliote<br>(Customer Statement Message)      | BankToCustomerStatementV02<br>camt.053.001.02.xsd                   | camt.053.001.02 MT940                        |
|  | Swift message format  | SW   |
| MT941<br>saldoilmoitus (Balance report)            | BankToCustomerStatementV02<br>camt.052.001.02.xsd                   | camt.052.001.02 MT941                        |
|  | Swift message format  | MT941  |
| MT942<br>tapahtumaote (Interim Transaction Report) | BankToCustomerStatementV02<br>camt.052.001.02.xsd                   | camt.052.001.02 MT942                        |
|  | Swift message format  | MT942  |

### 2.3 Retrieval of incoming data

The customer uses their own cash management or ledger software that supports the processing of data delivered via the WS channel for the retrieval of data, for example, the Kultalinkki software.



9.6.2022

Data that can be retrieved can be listed with the getFileList service as indicated in the WS channel description. Customers can check the integrity of retrieved data in the WS channel by checking whether the signature is genuine. OP uses UTF-8 character encoding for camt XML data.

The data is delivered for retrieval by the customer several times a day on banking days, once they have been received from the sending bank via the Swift system to OP and converted into the format agreed with the customer.

The data is available for retrieval in the WS channel for three months from the time of creation of the data. During this time, there are no limits on data retrieval.

## 2.4 Paging

The maximum length of a Swift message is 2000 characters. In Swift account statement reporting, account report data may arrive in separate messages when the account report contains multiple pages. In OP, messages related to the same customer's account and service type are appended into one set of account reporting data, if they were received from the sending bank within the same data set.

## 3 Contents of the data

The data contents, sending periods and times of the account report messages may vary depending on the sending bank, and all banks are not necessarily able to send these message types. This is agreed between the customer and the banks using power of attorney. The sending bank is responsible for the message contents. OP only acts as the bundler and relayer of the pages and does not make any changes to the contents.

## 4 Testing the data

Customers may test data retrieval in OP's WS channel customer test system. Customers are able to test all the same data as in the normal production environment. You can get access codes to the customer test system from your own Group member bank branch.

## 5 Pricing

The customer is charged a monthly fee for the service in accordance with the service price list.

## 6 Termination of agreement

If they so desire, customers may terminate their agreement in writing at their own Group member bank branch and the bank sending Swift account reporting.

## 7 Swift account reporting from OP to other banks

OP also offers an outgoing Swift account reporting service. You can find out more information from your nearest Group member bank branch.

## 8 Data descriptions

The mandatory fields of the Swift messages are displayed in bold in the last column of the tables below.

### 8.1 Incoming MT940 account statement XML (camt.053.001.02)

| Index | Element name | Element  | Qty    | Description                                   | Swift MT940 field |
|-------|--------------|----------|--------|---|-------------------|
| 1.0   | GroupHeader  | <GrpHdr> | [1..1] | Each message contains one GrpHdr element that |                   |

9.6.2022

|       |                           |                |         | contains the common information for the message  |                                |
|-------|---------------------------|----------------|---------|--|--------------------------------|
| 1.1   | +MessageIdentification    | <Msgld>        | [1...1] | Reference from field 20  | :20:                           |
| 1.2   | +CreationDateTime         | <CreDtTm>      | [1...1] | Time of data creation at the OP Financial Group in UTC format YYYY-MM-DDTHH:MM:SS  |                                |
| 2.0   | Statement                 | <Stmt>         | [1...n] |  |                                |
| 2.1   | +Identification           | <Id>           | [1...1] | Swift message reference number   | :20:                           |
| 2.2   | +ElectronicSequenceNumber | <ElctrncSeqNb> | [0...1] | The sequential number of the Swift message from the beginning of the year  | :28C:                          |
| 2.4   | +CreationDateTime         | <CreDtTm>      | [1...1] | Time of data creation at OP in UTC format YYYY-MM-DDTHH:MM:SS  |                                |
| 2.10  | +Account                  | <Acct>         | [1...1] |  |                                |
| 1.2.0 | ++Identification          | <Id>           | [1...1] |  |                                |
| 1.2.2 | +++Other                  | <Othr>         | [1...1] |  |                                |
| 1.2.3 | ++++Id                    | <Id>           | [1...1] | The account number of the reported account   | :25:                           |
| 2.23  | +Balance                  | <Bal>          | [1...1] |  |                                |
| 2.24  | ++Type                    | <Tp>           | [1...1] |  |                                |
| 2.25  | +++CodeOrProprietary      | <CdOrPrtry>    | [1...1] |  |                                |
| 2.26  | ++++Code                  | <Cd>           | [1...1] | PRCD=Opening balance<br>CLAV=Closing balance, includes the limit<br>CLBD=Closing balance<br>FWAV=Balance of advance bookings | :60F:<br>:64:<br>:62F:<br>:65: |
| 2.35  | ++CreditDebitIndicator    | <CdtDbtInd>    | [1...1] | CRDT=Positive balance<br>DBIT=Negative balance   | :60F:<br>:62F:<br>:64:<br>:65: |
| 2.36  | ++Date                    | <Dt>           | [1...1] |  |                                |
| 4.1.0 | +++Date                   | <Dt>           | [1...1] | Balance date   | :60F:                          |

9.6.2022

|      |                            |               |         |   |                       |
|------|----------------------------|---------------|---------|---|-----------------------|
|      |                            |               |         |   | :62F:<br>:64:<br>:65: |
| 2.76 | <b>+Entry</b>              | <Ntry>        | [0...n] |   |                       |
| 2.78 | ++Amount                   | <Amt>         | [1...1] | Amount booked for the account   | :61:                  |
|      | Valuuttakoodi attribuutti  | Ccy           | [1...1] | Account's currency code   | :60F:                 |
| 2.79 | ++CreditDebitIndicator     | <CdtDbtInd>   | [1...1] | CRDT=credit transaction<br>DBIT=debit transaction   | :61:                  |
| 2.80 | ++ReversalIndicator        | <RvslInd>     | [0...1] | Display (true), when the debit/credit indicator is RC or RD.  | :61:                  |
| 2.81 | ++Status                   | <Sts>         | [1...1] | BOOK=booked for the account   | :61:                  |
| 2.82 | ++BookingDate              | <BookgDt>     | [0...1] |   |                       |
| 4.10 | +++Date                    | <Dt>          | [0...1] | Booking date in format 9999-MM-DD   | :61:                  |
| 2.83 | ++ValueDate                | <ValDt>       | [0...1] |   |                       |
| 4.10 | +++Date                    | <Dt>          | [0...1] | Value date in format YYYY-MM-DD   | :61:                  |
| 2.84 | ++AccountServicerReference | <AcctSvcrRef> | [0...1] | Transaction reference given by bank   | :61:                  |
| 2.91 | ++BankTransactionCode      | <BkTxCd>      | [1...1] |   |                       |
| 2.97 | +++Proprietary             | <Prtry>       | [0...1] |   |                       |
| 2.98 | ++++Code                   | <Cd>          | [1...1] | (1+3 characters) One-character transaction type from the following alternatives:<br><br>S (Swift transfer)<br><br>N (Non-Swift transfer)<br><br>F (First advice)<br><br>and additionally a three-character identification code appended without a space from the following alternatives:<br><br>BNK (Securities Related Item – Bank Fees)<br><br>BOE (Bill of Exchange) | :61:                  |

9.6.2022

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  | <p>BRF (Brokerage Fee)</p> <p>CAR (Securities Related Item – Corporate Actions Related (should only be used when no specific corporate action event code is available)</p> <p>CAS (Securities Related Item – Cash in Lieu)</p> <p>CHG (Charges and Other Expenses)</p> <p>CHK (cheques)</p> <p>CLR (Cash Letters/ Cheques Remittance)</p> <p>CMI (Cash Management Item – No Detail)</p> <p>CMN (Cash Management Item – Notional Pooling )</p> <p>CMP (Compensation Claims)</p> <p>CMS (Cash Management Item – Sweeping)</p> <p>CMT (Cash Management Item – Topping)</p> <p>CMZ (Cash Management Item – Zero Balancing)</p> <p>COL (Collections (used when entering a principal amount))</p> <p>COM (Commission)</p> <p>CPN (Coupons Securities Related Item – Coupon Payments.)</p> <p>DCR (Documentary Credit (used when entering a principal amount))</p> <p>DDT (Direct Debit Item)</p> <p>DIS (Securities Related Item – Gains Disbursement)</p> |  |
|--|--|--|--|--|--|



9.6.2022

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  | DIV (Dividends (Securities Related Item – Dividends.))<br><br>EQA (Equivalent Amount)<br><br>EXT (Securities Related Item – External Transfer for Own Account)<br><br>FEX (Foreign Exchange)<br><br>INT (Interest (Interest related amount.))<br><br>LBX (Lock Box)<br><br>LDP (Loan Deposit)<br><br>MAR (Securities Related Item – Margin (Payments/Receipts))<br><br>MAT (Securities Related Item – Maturity)<br><br>MGT (Management fees (Securities Related Item – Management Fees.))<br><br>MSC (Miscellaneous)<br><br>NWI (Securities Related Item – New Issues Distribution)<br><br>ODC (Overdraft Charge)<br><br>OPT (Securities Related Item – Options)<br><br>PCH (Purchase (Securities Related Item – Purchase (including STIF and Time deposits)))<br><br>POP (Securities Related Item – Pair-off Proceeds)<br><br>PRN (Securities Related Item – Principal Pay-down/Pay-up)<br><br>REC (Reclaim (Securities Related Item – Tax Reclaim))<br><br>RED (Securities Related Item – Redemption/Withdrawal) |  |
|--|--|--|--|--|--|

9.6.2022

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  | <p>RIG (Securities Related Item – Rights)</p> <p>RTI (Returned Item)</p> <p>SAL (Sale (Securities Related Item – Sale (including STIF and Time deposits)))</p> <p>SEC (Securities (Securities (used when entering a principal amount)))</p> <p>SLE (Securities Related Item – Securities Lending Related)</p> <p>STO (Standing Order)</p> <p>STP (Securities Related Item – Stamp Duty)</p> <p>SUB (Securities Related Item – Subscription)</p> <p>SWP (Securities Related Item – SWAP Payment)</p> <p>TAX (Securities Related Item – Withholding Tax Payment)</p> <p>TCK (Travellers Cheques)</p> <p>TCM (Securities Related Item – Tripartite Collateral Management)</p> <p>TRA (Securities Related Item – Internal Transfer for Own Account)</p> <p>TRF (Transfer)</p> <p>TRN (Securities Related Item – Transaction Fee)</p> <p>UWC (Securities Related Item – Underwriting Commission)</p> <p>VDA (Value Date Adjustment (used with an entry made to withdraw an incorrectly dated entry – it will be followed by the</p> |  |
|--|--|--|--|--|--|

9.6.2022

|              |                               |                         |                |   |      |
|--------------|-------------------------------|-------------------------|----------------|---|------|
|              |                               |                         |                | correct entry with the relevant code))  |      |
|              |                               |                         |                | WAR (Securities Related Item - Warrant) |      |
| 2.99         | ++++Issuer                    | <Issr>                  | [0...1]        | Swift                                   |      |
| <b>2.135</b> | <b>++Entry Details</b>        | <b>&lt;NtryDtls&gt;</b> | <b>[0...n]</b> |   |      |
| 2.142        | +++TransactionDetails         | <TxDtls>                | [0...n]        |   |      |
| 2.143        | ++++References                | <Refs>                  | [0...1]        |   |      |
| 2.148        | +++++EndToEndIdentification   | <EndToEndId>            | [0...1]        | Transaction reference                   | :61: |
| 2.314        | +++AdditionalEntryInformation | <AddtNtryInf>           | [0...1]        | Message to account owner                | :86: |

MT940 camt.053.001.02 sample data:

```

<?xml version="1.0" ?>
- <Document xmlns="urn:iso:std:iso:2002:tech:xsd:camt.053.001.02">
- <!-- Versio 1.3
-->
- <BkToCstmrStmt>
- <GrpHdr>
  <MsgId>STATEMENT 005</MsgId>
  <CreDtTm>2016-03-03T08:09:00</CreDtTm>
  <AddtInf>SUORAVELOI TTAJA</AddtInf>
</GrpHdr>
- <Stmt>
  <Id>STATEMENT 005</Id>
  <ElctrncSeqNb>00005</ElctrncSeqNb>
  <LglSeqNb>00005</LglSeqNb>
  <CreDtTm>2016-03-03T07:31:00</CreDtTm>
- <Acct>
  <Id>
- <Othr>
  <Id>500094-20129413</Id>
</Othr>
</Id>
  <Ccy>EUR</Ccy>
- <Svcr>
  <FinInstnId>
  <BIC>OKOYFI H0XXX</BIC>
</FinInstnId>
</Svcr>
</Acct>
- <Bal>
- <Tp>
- <CdOrPrtry>
  <Cd>PRCD</Cd>
</CdOrPrtry>

```

9.6.2022

```
</Tp>
<Amt Ccy="EUR">13271200.86</Amt>
<CdtDbtInd>CRDT</CdtDbtInd>
- <Dt>
  <Dt>2016-02-29</Dt>
</Dt>
</Bal>
- <Bal>
- <Tp>
- <CdOrPrtry>
  <Cd>CLBD</Cd>
</CdOrPrtry>
</Tp>
<Amt Ccy="EUR">13270961.81</Amt>
<CdtDbtInd>CRDT</CdtDbtInd>
- <Dt>
  <Dt>2016-03-02</Dt>
</Dt>
</Bal>
- <Ntry>
<Amt Ccy="EUR">200.00</Amt>
  <CdtDbtInd>DBIT</CdtDbtInd>
  <RvslInd>>false</RvslInd>
<Sts>BOOK</Sts>
- <BookgDt>
  <Dt>9999-03-02</Dt>
</BookgDt>
- <ValDt>
  <Dt>2016-03-02</Dt>
</ValDt>
  <AcctSvcrRef>00094270001</AcctSvcrRef>
- <BkTxCd>
- <Prtry>
  <Cd>NTRF</Cd>
  <Issr>SWIFT</Issr>
</Prtry>
</BkTxCd>
- <NtryDtls>
- <TxDtls>
- <Refs>
  <EndToEndId>NONREF</EndToEndId>
</Refs>
  <AddtlTxInf>YRI TYS LASKUTTAJA</AddtlTxInf>
</TxDtls>
</NtryDtls>
</Ntry>
- <Ntry>
  <Amt Ccy="EUR">100.16</Amt>
  <CdtDbtInd>DBIT</CdtDbtInd>
  <RvslInd>>false</RvslInd>
  <Sts>BOOK</Sts>
- <BookgDt>
```

9.6.2022

```
<Dt>9999-03-02</Dt>
</BookgDt>
- <ValDt>
  <Dt>2016-03-02</Dt>
  </ValDt>
  <AcctSvcrRef>00094270002</AcctSvcrRef>
- <BkTxCd>
- <Prtry>
  <Cd>NTRF</Cd>
  <Issr>SWIFT</Issr>
  </Prtry>
  </BkTxCd>
- <NtryDtls>
- <TxDtls>
- <Refs>
  <EndToEndId>NONREF</EndToEndId>
  </Refs>
  <AddtITxInf>YRI TYS SANOMA</AddtITxInf>
  </TxDtls>
  </NtryDtls>
  </Ntry>
- <Ntry>
  <Amt Ccy="EUR">61.11</Amt>
  <CdtDbtInd>CRDT</CdtDbtInd>
  <RvslInd>>false</RvslInd>
  <Sts>BOOK</Sts>
- <BookgDt>
<Dt>9999-03-02</Dt>
  </BookgDt>
- <ValDt>
  <Dt>2016-03-02</Dt>
  </ValDt>
  <AcctSvcrRef>00001999999</AcctSvcrRef>
- <BkTxCd>
- <Prtry>
  <Cd>NTRF</Cd>
  <Issr>SWIFT</Issr>
  </Prtry>
  </BkTxCd>
- <NtryDtls>
- <TxDtls>
- <Refs>
  <EndToEndId>NONREF</EndToEndId>
  </Refs>
  </TxDtls>
  </NtryDtls>
  </Ntry>
  </Stmt>
  </BkToCstmrStmt>
</Document>
```



9.6.2022

## 8.3 Incoming MT941 balance report XML (camt.052.001.02)

| Index | Element name                | Element            | Qty     | Description  | Swift MT941 field |
|-------|-----------------------------|--------------------|---------|--|-------------------|
|       | BankToCustomerAccountReport | <BkToCstmrAcctRpt> |         |  |                   |
| 1.0   | GroupHeader                 | <GrpHdr>           | [1...1] | Each message contains one GrpHdr element that contains the common information for the message                                  |                   |
| 1.1   | +MessageIdentification      | <MsgId>            | [1...1] | Unique identifier provided by the bank   | <b>:20:</b>       |
| 1.2   | +CreationDateTime           | <CreDtTm>          | [1...1] | Time of data creation at OP in UTC format YYYY-MM-DDTHH:MM:SS  | <b>:13D:</b>      |
| 1.5   | +AdditionalInformation      | <AddtlInf>         | [0...1] | Identifying reference of the response message (seldom used)  | <b>:21:</b>       |
| 2.0   | Report                      | <Rpt>              | [1...n] |  |                   |
| 2.1   | +Identification             | <Id>               | [1...1] | Swift message reference number   | <b>:20:</b>       |
| 2.2   | +ElectronicSequenceNumber   | <ElctrncSeqNb>     | [0...1] | The sequential number of the Swift message from the beginning of the year.   | <b>:28C:</b>      |
| 2.3   | +LegalSequenceNumber        | <LglSeqNb>         | [0...1] | The sequential number of the Swift message from the beginning of the year. The page numbering of the message is not displayed. | <b>:28C:</b>      |
| 2.4   | +CreationDateTime           | <CreDtTm>          | [1...1] | The data generation time at the bank sending the balance statement to  | <b>:13D:</b>      |

|                  |                                       |              |         |  |  |
|------------------|---------------------------------------|--------------|---------|--|--|
|                  |                                       |              |         | the SWIFT system in the UTC format YYYY-MM-DDTHH:MM:SS   |  |
| 2.10             | +Account                              | <Acct>       | [1...1] |  |  |
| 2.10.<br>(1.2.0) | ++Identification                      | <Id>         | [1...1] |  |  |
| 2.10.<br>(1.2.2) | +++Other                              | <Othr>       | [1...1] |  |  |
| 2.10<br>(1.2.3)  | ++++Identification                    | <Id>         | [1...1] | The account number of the reported account   | :25:                                       |
| 2.10<br>(1.2.11) | ++Currency                            | <Ccy>        | [0...1] | The account's currency code  | :62F:                                      |
| 2.10<br>(1.2.56) | ++Servicer                            | <Svcr>       | [0...1] |  |  |
| 2.10<br>(1.2.57) | +++FinancialInstitutionIdentification | <FinInstnId> | [1...1] |  |  |
| 2.10<br>(1.2.58) | ++++BIC                               | <BIC>        | [0...1] | BIC of the sending bank, 11 characters, e.g. OKOYEE20XX  | <b>Header 2:</b>                           |
| 2.23             | +Balance                              | <Bal>        | [1...n] | Balance data in their own Balance elements   |  |
| 2.24             | ++Type                                | <Tp>         | [1...1] |  |  |
| 2.25             | +++CodeOrProprietary                  | <CdOrPrtry>  | [1...1] |  |  |
| 2.26             | ++++Code                              | <Cd>         | [1...1] | PRCD=Opening balance (avaus-saldo)<br><br>ITBD=Closing balance (loppusaldo)<br><br>CLAV=Closing available balance (käytettävissä oleva loppusaldo)<br><br>FWAV=Forward Available Balance (ennakkokirjausten saldo) | :60F:<br><br>:62F:<br><br>:64:<br><br>:65: |
| 2.34             | ++Amount                              | <Amt>        | [1...1] | Balance amount. Three-character  | :64: 65:                                   |



9.6.2022

|                 |                              |                  |         |  |  |
|-----------------|------------------------------|------------------|---------|--|--|
|                 |                              |                  |         | currency code in an attribute.                     | <b>:62F:</b><br>:60F:  |
| 2.35            | ++CreditDebitIndicator       | <CdtDbtInd>      | [1...1] | CRDT=Positive balance<br><br>DBIT=Negative balance | :64:<br>C/D<br><br>:65:<br>C/D<br><br><b>:62F:</b><br><b>C/D</b><br><br>:60F:<br>C/D |
| 2.36            | ++Date                       | <Dt>             | [1...1] |  |  |
| 2.36<br>(4.1.0) | +++Date                      | <Dt>             | [1...1] | Balance date                                       | :64::65:<br><br><b>:62F:</b><br><br>:60F:  |
| 2.43            | +TransactionsSummary         | <TxsSummry>      | [0...1] |  |  |
| 2.49            | ++TotalCreditEntries         | <TtlCdtNtries>   | [0...1] |  |  |
| 2.50            | +++NumberOfEntries           | <NbOfNtries>     | [0...1] | Number of credit transactions                      | :90C:  |
| 2.51            | +++Sum                       | <Sum>            | [0...1] | Total amount of credit transactions                | :90C:  |
| 2.52            | ++TotalDebitEntries          | <TtlDbtNtries>   | [0...1] |  |  |
| 2.53            | +++NumberOfEntries           | <NbOfNtries>     | [0...1] | Number of debit transactions                       | :90D:  |
| 2.54            | +++Sum                       | <Sum>            | [0...1] | Total amount of debit transactions                 | :90D:  |
| 2.315           | +AdditionalReportInformation | <AddtlRptInf>    | [0...1] | Additional information on the report               | :86:   |
|                 | BankToCustomerAccountReport  | <BkCstmrAcctRpt> | [0...1] |  |  |

MT941 camt.052.001.01 sample data:

&lt;?xml version="1.0" ?&gt;

- &lt;Document xmlns="urn:iso:std:iso:2002:tech:xsd:camt.052.001.02"&gt;

- &lt;!--

9.6.2022

Versio 1.3

```

-->
- <BkToCstmrAcctRpt>
- <GrpHdr>
  <MsgId>ASTESTI 941 </MsgId>
<CreDtTm>2013-09-26T13:02:00</CreDtTm>
<AddtlInf>1234567890123456</AddtlInf>
</GrpHdr>
- <Rpt>
<Id>ASTESTI 941 </Id>
<ElctrncSeqNb>99</ElctrncSeqNb>
<LglSeqNb>99</LglSeqNb>
<CreDtTm>2013-09-26T13:36:00</CreDtTm>
- <Acct>
- <Id>
- <Othr>
<Id>123456</Id>
</Othr>
</Id>
<Ccy>EUR</Ccy>
- <Svcr>
- <FinInstnId>
<BIC>OKOYFI HOXXX</BIC>
</FinInstnId>
</Svcr>
</Acct>
- <Bal>
- <Tp>
- <CdOrPrtry>
<Cd>PRCD</Cd>
</CdOrPrtry>
</Tp>
<Amt Ccy="EUR">1102.00</Amt>
<CdtDbtInd>CRDT</CdtDbtInd>
- <Dt>
<Dt>2013-09-25</Dt>
</Dt>
</Bal>
- <Bal>
- <Tp>

```

#### 8.4 Incoming MT941 balance report SW

SWIFT MT941 data description:

| Status | Tag | Field Name                   | Content / Options | No. |
|--------|-----|------------------------------|-------------------|-----|
| M      | 20  | Transaction Reference Number | 16x               | 1   |
| 0      | 21  | Related Reference            | 16x               | 2   |

9.6.2022

|        |     |   |              |    |
|--------|-----|---|--------------|----|
| M      | 25  | Account Identification                      | 35x          | 3  |
| M      | 28  | Statement Number / Sequence Number          | 5n[/2n]      | 4  |
| O      | 13D | Date/Time Indication                        | 6!n4!n1!x4!n | 5  |
| O      | 60F | Opening Balance                             | 1!a6!n3!a15d | 6  |
| O      | 90D | Number and Sum of Entries                   | 5n3!a15d     | 7  |
| O      | 90C | Number and Sum of Entries                   | 5n3!a15d     | 8  |
| M      | 62F | Book Balance                                | 1!a6!n3!a15d | 9  |
| O      | 64  | Closing Available Balance (Available Funds) | 1!a6!n3!a15d | 10 |
| -----> |     |   |              |    |
| O      | 65  | Forward Available Balance                   | 1!a6!n3!a15d | 11 |
| -----  |     |   |              |    |
| O      | 86  | Information to Account Owner                | 6*65x        | 12 |

**MT941 SW sample data:**

```
{1:F21OKOYFIH0AXXX3543141219}{4:{177:1309261228}{451:0}}{1:F01OKOYFIH0A
X XX3543141219}{2:09411228130926OKOYFIH0AXXX35430800991309261228N}{4:
:20:ASTESTI941
:21:1234567890123456
:25:123456
:28:99/1
:13D:1309261336+0100
:60F:C130925EUR1102,
:90D:3EUR1333,
:90C:1EUR2100,
:62F:C130926EUR1869,
:64:C130926EUR1869,
:65:C130927EUR120,
:65:D130927EUR100,
:86:LISATIE TOA
LISATIE TOA
LISATIE TOA
LISATIE TOA
-}
```

**8.5 Incoming MT942 transaction report XML (camt.052.001.02)**

| Index | Element name                 | Element            | Qty     | Description  | Swift MT942 field |
|-------|------------------------------|--------------------|---------|--|-------------------|
|       | BankToCustomerAccount-Report | <BkToCstmrAcctRpt> |         |  |                   |
| 1.0   | GroupHeader                  | <GrpHdr>           | [1...1] | Each message contains one GrpHdr element that contains |                   |

9.6.2022

|                  |                           |               |         | the common information for the message   |                                 |
|------------------|---------------------------|---------------|---------|--|---------------------------------|
| 1.1              | +MessageIdentification    | <MsgId>       | [1...1] | Unique identifier provided by the bank, Swift message reference  | <b>:20:</b>                     |
| 1.2              | +CreationDateTime         | <CreDtTm>     | [1...1] | Time of data creation at OP in UTC format YYYY-MM-DDTHH:MM:SS  |                                 |
| 1.5              | +AdditionalInformation    | <AddtlInf>    | [0...1] | Identifying reference of the response message (seldom used)<br><br>The transaction's smallest monetary amount to be reported and the currency code | <b>:21:</b><br><br><b>:34F:</b> |
| 2.0              | Report                    | <Rpt>         | [1...n] |  |                                 |
| 2.1              | +Identification           | <Id>          | [1...1] | Unique identifier provided by the bank, Swift message reference  | <b>:20:</b>                     |
| 2.2              | +ElectronicSequenceNumber | <ElctrcSeqNb> | [0...1] | The sequential number of the Swift message from the beginning of the year.   | <b>:28C:</b>                    |
| 2.3              | +LegalSequenceNumber      | <LglSeqNb>    | [0...1] | The sequential number of the Swift message from the beginning of the year. The page numbering of the message is not displayed.                     | <b>:28C:</b>                    |
| 2.4              | +CreationDateTime         | <CreDtTm>     | [1...1] | The data generation time at the bank sending the transaction statement to the SWIFT system in the UTC format YYYY-MM-DDTHH:MM:SS                   | <b>:13D:</b>                    |
| 2.10             | +Account                  | <Acct>        | [1...1] |  |                                 |
| 2.10.<br>(1.2.0) | ++Identification          | <Id>          | [1...1] |  |                                 |

9.6.2022

|                  |                                       |                     |                |  |                               |
|------------------|---------------------------------------|---------------------|----------------|--|-------------------------------|
| 2.10.<br>(1.2.2) | +++Other                              | <Othr>              | [1...1]        |  |                               |
| 2.10<br>(1.2.3)  | ++++Identification                    | <Id>                | [1...1]        | The account number of the reported account                         | :25:                          |
| 2.10<br>(1.2.11) | ++Currency                            | <Ccy>               | [0...1]        | Account's currency code  | :34F:                         |
| 2.10<br>(1.2.56) | ++Servicer                            | <Svcr>              | [0...1]        |  |                               |
| 2.10<br>(1.2.57) | +++FinancialInstitutionIdentification | <FinInstnId>        | [1...1]        |  |                               |
| 2.10<br>(1.2.58) | ++++BIC                               | <BIC>               | [0...1]        | BIC of the sending bank, 11 characters, e.g. OKOYEE2XXXX           | <b>Header 2:</b>              |
| 2.43             | +TransactionsSummary                  | <TxSummry>          | [0...1]        |  |                               |
| 2.49             | ++TotalCreditEntries                  | <TtlCdtNtries>      | [0...1]        |  |                               |
| 2.50             | +++NumberOfEntries                    | <NbOfNtries>        | [0...1]        | Number of credit transactions                                      | :90C:                         |
| 2.51             | +++Sum                                | <Sum>               | [0...1]        | Total amount of credit transactions                                | :90C:                         |
| 2.52             | ++TotalDebitEntries                   | <TtlDbtNtries>      | [0...1]        |  |                               |
| 2.53             | +++NumberOfEntries                    | <NbOfNtries>        | [0...1]        | Number of debit transactions                                       | :90D:                         |
| 2.54             | +++Sum                                | <Sum>               | [0...1]        | Total amount of debit transactions                                 | :90D:                         |
| <b>2.76</b>      | <b>+Entry</b>                         | <b>&lt;Ntry&gt;</b> | <b>[0...n]</b> | Separate transactions are reported using this element              |                               |
| 2.78             | ++Amount                              | <Amt>               | [1...1]        | Transaction amount. Three-character currency code in an attribute. | :61:<br>(Ccy)<br><b>:34F:</b> |
| 2.79             | ++CreditDebitIndicator                | <CdtDbtInd>         | [1...1]        | CRDT=positive balance<br>DBIT=negative balance                     | :61:                          |
| 2.80             | ++ReversalIndicator                   | <RvslInd>           | [0...1]        | If 2.79 value is RD or RC, the value of this element is            | :61:                          |

9.6.2022

|      |                            |               |         |  |      |
|------|----------------------------|---------------|---------|--|------|
|      |                            |               |         | "true"; otherwise "false".   |      |
| 2.81 | ++Status                   | <Sts>         | [1...1] | BOOK=booked or PDNG=pending  | :61: |
| 2.82 | ++BookingDate              | <BookgDt>     | [0...1] | Booking date in format YYYY-MM-DD  | :61: |
| 2.83 | ++ValueDate                | <ValDt>       | [0...1] | Value date in format YYYY-MM-DD  | :61: |
| 2.84 | ++AccountServicerReference | <AcctSvcrRef> | [0...1] | Transaction reference given by bank  | :61: |
| 2.91 | ++BankTransactionCode      | <BkTxCd>      | [1...1] |  |      |
| 2.97 | +++Proprietary             | <Prtry>       | [0...1] |  |      |
| 2.98 | ++++Code                   | <Cd>          | [1...1] | <p>(1+3 characters)<br/>One-character transaction type from the following alternatives:</p> <p>S (Swift transfer)</p> <p>N (Non-Swift transfer)</p> <p>F (First advice)</p> <p>and additionally a three-character identification code appended without a space from the following alternatives:</p> <p>BNK (Securities Related Item – Bank Fees)</p> <p>BOE (Bill of Exchange)</p> <p>BRF (Brokerage Fee)</p> <p>CAR (Securities Related Item – Corporate Actions Related (should only be used when no specific corporate action event code is available))</p> | :61: |

9.6.2022

|  |  |  |  |   |  |
|--|--|--|--|---|--|
|  |  |  |  | <p>CAS (Securities Related Item – Cash in Lieu)</p> <p>CHG (Charges and Other Expenses)</p> <p>CHK (cheques)</p> <p>CLR (Cash Letters / Cheques Remittance)</p> <p>CMI (Cash Management Item – No Detail)</p> <p>CMN (Cash Management Item – Notional Pooling )</p> <p>CMP (Compensation Claims)</p> <p>CMS (Cash Management Item – Sweeping)</p> <p>CMT (Cash Management Item – Topping)</p> <p>CMZ (Cash Management Item – Zero Balancing)</p> <p>COL (Collections (used when entering a principal amount))</p> <p>COM (Comission)</p> <p>CPN (Coupons Securities Related Item – Coupon Payments.)</p> <p>DCR (Documentary Credit (used when entering a principal amount))</p> <p>DDT (Direct Debit Item)</p> <p>DIS (Securities Related Item – Gains Disbursement)</p> |  |
|--|--|--|--|---|--|

9.6.2022

|  |  |  |  |   |  |
|--|--|--|--|---|--|
|  |  |  |  | DIV (Dividends (Securities Related Item – Dividends.))<br>EQA (Equivalent Amount)<br>EXT (Securities Related Item – External Transfer for Own Account)<br>FEX (Foreign Exchange)<br>INT (Interest (Interest related amount.))<br>LBX (Lock Box)<br>LDP (Loan Deposit)<br>MAR (Securities Related Item – Margin (Payments/Receipts))<br>MAT (Securities Related Item – Maturity)<br>MGT (Management fees (Securities Related Item – Management Fees.))<br>MSC (Miscellaneous)<br>NWI (Securities Related Item – New Issues Distribution)<br>ODC (Overdraft Charge)<br>OPT (Securities Related Item – Options)<br>PCH (Purchase (Securities Related Item – Purchase (including STIF and Time deposits)))<br>POP (Securities Related Item – Pair-off Proceeds) |  |
|--|--|--|--|---|--|



9.6.2022

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  | <p>PRN (Securities Related Item – Principal Pay-down/Pay-up)</p> <p>REC (Reclaim (Securities Related Item – Tax Reclaim))</p> <p>RED (Securities Related Item – Redemption/Withdrawal)</p> <p>RIG (Securities Related Item – Rights)</p> <p>RTI (Returned Item)</p> <p>SAL (Sale (Securities Related Item – Sale (including</p> <p>STIF and Time deposits)))</p> <p>SEC (Securities (Securities (used when entering a principal amount)))</p> <p>SLE (Securities Related Item – Securities Lending Related)</p> <p>STO (Standing Order)</p> <p>STP (Securities Related Item – Stamp Duty)</p> <p>SUB (Securities Related Item – Subscription)</p> <p>SWP (Securities Related Item – SWAP Payment)</p> <p>TAX (Securities Related Item – Withholding Tax Payment)</p> <p>TCK (Travellers Cheques)</p> |  |
|--|--|--|--|--|--|

9.6.2022

|       |                                      |                         |                |   |                     |
|-------|--------------------------------------|-------------------------|----------------|---|---------------------|
|       |                                      |                         |                | <p>TCM (Securities Related Item – Tripartite Collateral Management)</p> <p>TRA (Securities Related Item – Internal Transfer for Own Account)</p> <p>TRF(Transfer)</p> <p>TRN(Securities Related Item – Transaction Fee)</p> <p>UWC (Securities Related Item – Underwriting Commission)</p> <p>VDA (Value Date Adjustment (used with an entry made to withdraw an incorrectly dated entry – it will be followed by the correct entry with the relevant code))</p> <p>WAR (Securities Related Item - Warrant)</p> |                     |
| 2.135 | <b>++Entry Details</b>               | <b>&lt;NtryDtls&gt;</b> | <b>[0...n]</b> |   |                     |
| 2.142 | +++TransactionDetails                | <TxDtls>                | [0...n]        |   |                     |
| 2.143 | ++++References                       | <Refs>                  | [0...1]        |   |                     |
| 2.148 | +++++EndToEndIdentification          | <EndToEndId>            | [0...1]        | Transaction reference   | :61:                |
| 2.313 | ++++AdditionalTransactionInformation | <AddtlTxInf>            | [0...1]        | Additional information  | :61:                |
| 2.314 | +++AdditionalEntryInformation        | <AddtNtryInf>           | [0...1]        | Additional information for the transaction  | :61:<br>and<br>:86: |
| 2.315 | +AdditionalReportInformation         | <AddtlRptInf>           | [0...1]        | Additional information on the report  | :86:                |
|       | BankToCustomerAccount-Report         | <BkCstmrAcctRpt>        | [0...1]        |   |                     |

9.6.2022

MT942 camt.052.001.01 sample data:

```

<?xml version="1.0" ?>
- <Document xmlns="urn:iso:std:iso:20022:tech:xsd:camt.052.001.02">
  - <!--
    Versio 1.3
    -->
  - <BkToCstmrAcctRpt>
  - <GrpHdr>
    <MsgId>ASTESTI942</MsgId>
    <CreDtTm>2013-09-26T11:02:00</CreDtTm>
    <AddtlInf>1234567890123456 / USDD0,00 / USDC1,00</AddtlInf>
    </GrpHdr>
    <Rpt>
    <Id>ASTESTI942</Id>
    <ElctrncSeqNb>100</ElctrncSeqNb>
    <LglSeqNb>100</LglSeqNb>
    <CreDtTm>2013-09-26T14:54:00</CreDtTm>
  - <Acct>
  - <Id>
  - <Othr>
    <Id>12</Id>
    </Othr>
    </Id>
    <Ccy>USD</Ccy>
  - <Svcr>
  - <FinInstnId>
    <BIC>OKOYFIHOXXX</BIC>
    </FinInstnId>
    </Svcr>
    </Acct>
  - <TxSummry>
  - <TtlCdtNtries>
    <NbOfNtries>3</NbOfNtries>
    <Sum>550.00</Sum>
    </TtlCdtNtries>
  - <TtlDbtNtries>
    <NbOfNtries>3</NbOfNtries>
    <Sum>1090.00</Sum>
    </TtlDbtNtries>
    </TxSummry>
  - <Ntry>
    <Amt Ccy="USD">200.00</Amt>
    <CdtDbtInd>CRDT</CdtDbtInd>
    <RvslInd>>false</RvslInd>
    <Sts>PDNG</Sts>
  - <BookgDt>
    <Dt>9999-09-12</Dt>
    </BookgDt>
  - <ValDt>
    <Dt>2013-09-27</Dt>
    </ValDt>
    <AcctSvcrRef>1111111111111111</AcctSvcrRef>

```

9.6.2022

```
- <BkTxCd>
- <Prtry>
  <Cd>NDDT</Cd>
  </Prtry>
  </BkTxCd>
- <NtryDtIs>
- <TxDtIs>
- <Refs>
  <EndToEndId>121</EndToEndId>
  </Refs>
  <AddtITxInf>22222222222222222222222222222222222222222222222222222222222222222222</AddtITxInf>
  </TxDtIs>
  </NtryDtIs>
  <AddtINtryInf>LI SATEKSTI TAPAHTUMALLE</AddtINtryInf>
  </Ntry>
- <Ntry>
  <Amt Ccy="USD">150.00</Amt>
  <CdtDbtInd>CRDT</CdtDbtInd>
  <RvslInd>>true</RvslInd>
  <Sts>BOOK</Sts>
- <BookgDt>
  <Dt>9999-09-11</Dt>
  </BookgDt>
- <ValDt>
  <Dt>2013-09-26</Dt>
  </ValDt>
  <AcctSvcrRef>1111111111111111111</AcctSvcrRef>
- <BkTxCd>
- <Prtry>
  <Cd>NDDT</Cd>
  </Prtry>
  </BkTxCd>
- <NtryDtIs>
- <TxDtIs>
- <Refs>
  <EndToEndId>122</EndToEndId>
  </Refs>
  <AddtITxInf>22222222222222222222222222222222222222222222222222222222222222222222</AddtITxInf>
  </TxDtIs>
  </NtryDtIs>
  <AddtINtryInf>TESTI</AddtINtryInf>
  </Ntry>
- <Ntry>
  <Amt Ccy="USD">200.00</Amt>
  <CdtDbtInd>CRDT</CdtDbtInd>
  <RvslInd>>false</RvslInd>
  <Sts>BOOK</Sts>
- <BookgDt>
  <Dt>9999-09-09</Dt>
  </BookgDt>
- <ValDt>
  <Dt>2013-09-26</Dt>
```

9.6.2022

```
    </ValDt>
  <AcctSvcrRef>12</AcctSvcrRef>
- <BkTxCd>
- <Prtry>
  <Cd>NDDT</Cd>
  </Prtry>
  </BkTxCd>
- <NtryDtIs>
- <TxDtIs>
- <Refs>
  <EndToEndId>1</EndToEndId>
  </Refs>
  <AddtITxInf>34</AddtITxInf>
  </TxDtIs>
  </NtryDtIs>
  <AddtINtryInf>MALLI </AddtINtryInf>
  </Ntry>
- <Ntry>
  <Amt Ccy="USD">350.00</Amt>
  <CdtDbtInd>DBIT</CdtDbtInd>
  <RvslInd>>false</RvslInd>
  <Sts>PDNG</Sts>
- <BookgDt>
  <Dt>9999-09-12</Dt>
  </BookgDt>
- <ValDt>
  <Dt>2013-09-27</Dt>
  </ValDt>
  <AcctSvcrRef>111111111111</AcctSvcrRef>
- <BkTxCd>
- <Prtry>
  <Cd>NDDT</Cd>
  </Prtry>
  </BkTxCd>
- <NtryDtIs>
- <TxDtIs>
- <Refs>
  <EndToEndId>100</EndToEndId>
  </Refs>
  <AddtITxInf>2222222222222222</AddtITxInf>
  </TxDtIs>
  </NtryDtIs>
  <AddtINtryInf>MALLI 2</AddtINtryInf>
  </Ntry>
- <Ntry>
  <Amt Ccy="USD">200.00</Amt>
  <CdtDbtInd>DBIT</CdtDbtInd>
  <RvslInd>>true</RvslInd>
  <Sts>BOOK</Sts>
- <BookgDt>
  <Dt>9999-09-16</Dt>
  </BookgDt>
```





