



EUROPEAN CENTRAL BANK

EUROSYSTEM

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|--|--|--------------------------------------|
| General Information (Origin of Request) <input type="checkbox"/> User Requirements (URD) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS) | | |
| Request raised by: 4CB | Institute: 4CB | Date raised: 04/09/2018 |
| Request title: Handling for outbound messages with amounts /quantity fields exceeding 14 digits | | Request ref. no: T2S-0684-SYS |
| Request type: Common | Classification: Maintenance | Urgency: Normal |
| 1. Legal/business importance parameter: Medium | 2. Market implementation efforts parameter: Low | |
| 3. Operational/Technical risk parameter: Low | 4. Financial impact parameter: Low | |
| Requestor Category: 4CB | Status: Implemented | |

Reason for change and expected benefits/business motivation:

T2S operates in coexistence between ISO 15022 and ISO 20022. One of these coexistence rules defines that an amount length must not exceed 14 digits plus decimal point.

Although T2S works according to this principle it was detected in test environments that T2S does not fulfil this principle in case of outbound messages. In case an amount exceeding 14 digits has to be reported in an outbound message, T2S reports the full amount making the message schema non-compliant.

This behaviour never occurred in Production environment and it is also considered very unlikely that it will ever happen. Nevertheless a rule should be implemented to prevent that T2S could create schema non-compliant messages.

Description of requested change:

T2S shall populate all amount fields within T2S outbound messages (camt.004, camt.052, etc....) with '99999999999999' in case 14 digits are exceeded and the relevant T2S message schema does not allow more than 14 digits.¹ This prevents T2S from creating schema non-compliant messages and indicates to the recipient an overflow in the amount fields. This behaviour was already implemented for a restricted set of messages 2015 and is in line with the GUI behaviour.

This behaviour was already implemented for the camt.004 before go-live (PBI-155694) and camt.052 in R2.1 (PBI-202457). With this change request the behaviour and the respective documentation updates on MyStandards will be implemented for all impacted messages (see list below).

Submitted annexes / related documents:

Proposed wording for the Change request:

Impact on message documentation on MyStandards / schema:

Add the following text to the T2S-Use of the message elements listed below:

Provision of "99999999999999" in case oversizing in the integer part occurs.

Truncation of decimals in case of oversizing in the decimal part occurs.

¹ Trailing "0" as fractional digits are not considered by the XSD, i.e. they are not computed for the number of total or fraction digits. E.g. 12345678901234.00 is a valid value that will be reported in a message and will not be populated with '99999999999999'. In case the integer part of a numeric value exceeds 14 digits (e.g.

123456789012345.00), the field will be filled with '99999999999999'. If the integer part of a numeric value is equal or less than 14 digits but the total number of digits of the integer and the decimal part exceeds 14 digits (e.g. 123456789012.3456), the exceeding decimals have to be truncated (in the example to 123456789012.34)..

camt.006.001.07

- /ReportOrError/BusinessReport/TransactionReport/TransactionOrError/Transaction/Payment/InterbankSettlementAmount/AmountWithCurrency
- /ReportOrError/BusinessReport/TransactionReport/TransactionOrError/Transaction/AccountEntry/Entry/Amount

camt.050.001.04

- /LiquidityCreditTransfer/TransferredAmount/AmountWithCurrency

camt.051.001.04

- /LiquidityDebitTransfer/TransferredAmount/AmountWithCurrency

camt.052.001.06

- ~~/Report/Balance/Amount~~

camt.053.001.06

- /Statement/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/FaceAmount
- /Statement/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/Unit

camt.054.001.06

-
- /Notification/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/FaceAmount
- /Notification/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/Unit

colr.002.001.01

- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/Position/Quantity/Quantity/FaceAmount
- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/Position/Quantity/Quantity/Unit

camt.073

- ..UndrlygIntraBal/SttlmAmnt/AmtWthCcy

camt.079

- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtls/SttlmAmt/AmtWthCcy
- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtls/SttlmAmt/AmtWthCcy
- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtls/PrevsllySttlmAmt/AmtWthCcy
- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtls/RmngSttlmAmt/AmtWthCcy

camt.084

- ../SubBal/Mvmnt/SttlmAmt/AmtWthCcy
- ../SubBal/Mvmnt/PrevsllySttlmAmt/AmtWthCcy
- ../SubBal/Mvmnt/RmngSttlmAmt/AmtWthCcy

camt.085

- ../Mvmnts/Mvmnt/SttlmAmt/AmtWthCcy

semt.002

- ...BalForAcct/AggtBal/Qty/Qty/Qty/FaceAmt
- ...BalForAcct/AvlBlBal/Qty/Qty/FaceAmt
- ...BalForAcct/NotAvlBlBal/Qty/FaceAmt
- ...BalForAcct/BalBrkdwn/Qty/Qty/Qty/Unit
- ...BalForAcct/BalBrkdwn/Qty/Qty/Qty/FaceAmt
- ...BalForAcct/BalBrkdwn/AddtlBalBrkdwnDtls/Qty/Qty/Qty/FaceAmt
- ...BalForAcct/BalBrkdwn/AddtlBalBrkdwnDtls/QtyBrkdwn/LotQty/Qty/Qty/Qty/FaceAmt

semt.016

- ../FinInstrm/SubBal/IntraPosMvmnt/SttlmQty/FaceAmt
- ../FinInstrm/SubBal/IntraPosMvmnt/PrevsllySttlmQty/FaceAmt

- ../FinInstrm/SubBal/IntraPosMvmnt/RmngToBeSttldQty/FaceAmt
- sem1.018
- ../Txs/TxsDtIs/PstngQty/Qty/FaceAmt
 - ../Txs/TxsDtIs/PstngAmt/Amt/FaceAmt
- sem1.027
- ../Txs/Tx/TxsDtIs/SttlmQty/FaceAmt
 - ../Txs/Tx/TxsDtIs/SttldQty/FaceAmt
 - ../Txs/Tx/TxsDtIs/PrevsllySttldQty/FaceAmt
 - ../Txs/Tx/TxsDtIs//RmngToBeSttldQty/FaceAmt
 - ../Txs/Tx/TxsDtIs/SttlmAmt/Amt
 - ../Txs/Tx/TxsDtIs/SttldAmt/Amt
 - ../Txs/Tx/TxsDtIs/PrevsllySttldAmt/Amt
 - ../Txs/Tx/TxsDtIs//RmngSttlmAmt/Amt
- sem1.029
- ../Mvmnts/Mvmnt/MvmntDtIs/SttlmQty/FaceAmt
 - ../Mvmnts/Mvmnt/MvmntDtIs/SttldQty/FaceAmt
 - ../Mvmnts/Mvmnt/MvmntDtIs/PrevsllySttldQty/FaceAmt
 - ../Mvmnts/Mvmnt/MvmntDtIs/RmngToBeSttldQty/FaceAmt
- sem1.034
- ../Mvmnts/Mvmnt/SttlmQty/FaceAmt
- sem1.040
- ... Bals/BalForAcct/AggtBal/Qty/Qty/Qty/FaceAmt
 - ... Bals/BalForAcct/AvlBlBal /Qty/Qty/FaceAmt
 - ... Bals/BalForAcct/NotAvlBlBal/Qty/FaceAmt
 - ... Bals/BalForAcct/BalBrkdown/Qty/Qty/Qty/FaceAmt
 - ... Bals/BalForAcct/BalBrkdown/AddtlBalBrkdownDtIs/Qty/Qty/FaceAmt
 - ... Bals/BalForAcct/BalBrkdown/AddtlBalBrkdownDtIs/QtyBrkdown/LotQty/Qty/Qty/Qty/FaceAmt
- sese.032
- ../QtyAndAcctDtIs/SttlmQty/Qty/FaceAmt
 - ../SttlmAmt/Amt

High level description of Impact:

Outcome/Decisions:

- * CRG on the 4 September 2018: The CRG has agreed to launch the preliminary assessment of this Change Request.
 - * CRG on the 23 January 2019: The CRG has agreed to recommend CR-684 for authorisation by the T2S Steering Level.
 - * AMI-SeCo on the 6 February 2019: The AMI-SeCo has agreed to the recommendation of the CRG to authorise this Change Request.
 - * CSG on the 6 February 2019: The CSG took the resolution to authorise this Change Request.
 - * NECSG on the 8 February 2019: The NECSG took the resolution to authorise this Change Request.
 - * OMG on 10 September 2019: The OMG identified an operational impact.
 - * MIB on 18-19 February 2019: The MIB agreed to authorise this Change Request.
 - * PMG on 21 June 2019: The PMG proposed to the T2S Steering Level the Change Request for R4.2.
 - * CRG on 19 September 2019: The CRG recommends to the PMG the inclusion of the CR in T2S R4.2.
 - * OMG on 27 September 2019: The OMG confirms that its operational assessment is still valid.
 - * PMG on 27 September 2019: The PMG recommended the inclusion of this CR in R4.2 for approval by the T2S Steering Level.
 - * NECSG on 7 October 2019: the NECSG approves the allocation of the CR to the scope of R4.2.
 - * CSG on 7 October 2019: the CSG approves the allocation of the CR to the scope of R4.2.
 - * OMG on 27 September 2019: The OMG confirmed their previous assessment.
 - * MIB on 8 November 2019: The MIB approved the inclusion of the CR in R4.2.
 - * CRG on 22 January 2020: The CRG agreed to the updates of CR-684.
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Preliminary assessment:

- **Findings:**

Impacted message fields:

camt.004.001.07

- /ReportOrError/AccountReport/AccountOrError/Account/MultilateralBalance/Amount (behaviour already implemented)

camt.006.001.07

- /ReportOrError/BusinessReport/TransactionReport/TransactionOrError/Transaction/Payment/InterbankSettlementAmount/AmountWithCurrency
- /ReportOrError/BusinessReport/TransactionReport/TransactionOrError/Transaction/AccountEntry/Entry/Amount

camt.050.001.04

- /LiquidityCreditTransfer/TransferredAmount/AmountWithCurrency

camt.051.001.04

- /LiquidityDebitTransfer/TransferredAmount/AmountWithCurrency

camt.052.001.06

- /Report/Balance/Amount

camt.053.001.06

- /Statement/Balance/Amount
- /Statement/Entry/Amount
- /Statement/Entry/EntryDetails/TransactionDetails/Amount
- /Statement/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/FaceAmount
- /Statement/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/Unit

camt.054.001.06

- /Notification/Entry/Amount
- /Notification/Entry/EntryDetails/TransactionDetails/Amount
- /Notification/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/FaceAmount
- /Notification/Entry/EntryDetails/TransactionDetails/RelatedQuantities/Quantity/Unit

camt.070.001.03

- /ReportOrError/Report/StandingOrderOrError/StandingOrder/Amount/AmountWithoutCurrency
- /ReportOrError/Report/StandingOrderOrError/StandingOrder/TotalsPerStandingOrder/PendingPredefinedOrder/TotalAmount
- /ReportOrError/Report/StandingOrderOrError/StandingOrder/TotalsPerStandingOrder/PendingPredefinedOrder/TotalAmount
- /ReportOrError/Report/StandingOrderOrError/StandingOrder/TotalsPerStandingOrder/PendingPredefinedOrder/TotalAmount
- /ReportOrError/Report/StandingOrderOrError/StandingOrder/TotalsPerStandingOrder/PendingPredefinedOrder/TotalAmount

camt.077.001.01

- /BillingReportOrError/BillingReport/InvoiceTotals/TotalInvoiceAmount
- /BillingReportOrError/BillingReport/ServiceCategoryTotals/TotalInvoiceAmount
- /BillingReportOrError/BillingReport/ServiceCategoryTotals/TotalInvoiceAmount
- /BillingReportOrError/BillingReport/ServiceCategoryTotals/ServiceItemTotals/Quantity

colr.002.001.01

- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/TotalCollateralValuation (behaviour already implemented)
- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/Position/Quantity/Quantity/FaceAmount
- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/ValuationPrice/PriceValue/Amount (behaviour already implemented)
- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/CollateralValue (behaviour already implemented)
- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/Position/Quantity/Quantity/Unit
- /ReportOrError/BusinessReport/CollateralValueReport/CollateralValue/Securities/ValuationPrice/FinancialInstrumentQuantity/Unit (behaviour already implemented)

camt.073

- ../UndrlygIntraBal/SttlmAmnt/AmtWthCcy

camt.079

- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtIs/SttlmAmnt/AmtWthCcy
- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtIs/StldAmnt/AmtWthCcy
- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtIs/PrevsllyStldAmnt/AmtWthCcy
- ../RptOrErr/Mvmnts/Mvmnt/MvmntDtIs/RmngSttlmAmnt/AmtWthCcy

camt.084

- ../SubBal/Mvmnt/StldAmnt/AmtWthCcy
- ../SubBal/Mvmnt/PrevsllyStldAmnt/AmtWthCcy
- ../SubBal/Mvmnt/RmngSttlmAmnt/AmtWthCcy

camt.085

- ../Mvmnts/Mvmnt/SttlmAmnt/AmtWthCcy

semt.016

- ../FinInstrm/SubBal/IntraPosMvmnt/StldQty/FaceAmt
- ../FinInstrm/SubBal/IntraPosMvmnt/PrevsllyStldQty/FaceAmt
- ../FinInstrm/SubBal/IntraPosMvmnt/RmngToBeStldQty/FaceAmt

semt.018

- ../TxS/TxSDtIs/PstngQty/Qty/FaceAmt

- o ../Txs/TxsDtIs/PstngAmt/Amt/FaceAmt

sem1.027

- o ../Txs/Tx/TxsDtIs/SttlmQty/FaceAmt
- o ../Txs/Tx/TxsDtIs/SttlmQty/FaceAmt
- o ../Txs/Tx/TxsDtIs/PrevsllySttlmQty/FaceAmt
- o ../Txs/Tx/TxsDtIs/RmngToBeSttlmQty/FaceAmt
- o ../Txs/Tx/TxsDtIs/SttlmAmt/Amt
- o ../Txs/Tx/TxsDtIs/SttlmAmt/Amt
- o ../Txs/Tx/TxsDtIs/PrevsllySttlmAmt/Amt
- o ../Txs/Tx/TxsDtIs/RmngSttlmAmt/Amt

sem1.029

- o ../Mvmnts/Mvmnt/MvmntDtIs/SttlmQty/FaceAmt
- o ../Mvmnts/Mvmnt/MvmntDtIs/SttlmQty/FaceAmt
- o ../Mvmnts/Mvmnt/MvmntDtIs/PrevsllySttlmQty/FaceAmt
- o ../Mvmnts/Mvmnt/MvmntDtIs/RmngToBeSttlmQty/FaceAmt

sem1.034

- o ../Mvmnts/Mvmnt/SttlmQty/FaceAmt

sese.032

- o ../QtyAndAcctDtIs/SttlmQty/Qty/FaceAmt
- o ../SttlmAmt/Amt

sem1.002

- o ...BalForAcct/AggtBal/Qty/Qty/Qty/FaceAmt
- o ...BalForAcct/AvlBlBal/Qty/FaceAmt
- o ...BalForAcct/NotAvlBlBal/Qty/FaceAmt
- o ...BalForAcct/BalBrkdwn/Qty/Qty/Qty/FaceAmt
- o ...BalForAcct/BalBrkdwn/AddtlBalBrkdwnDtIs Qty/Qty/Qty/FaceAmt
- o ...BalForAcct/BalBrkdwn/AddtlBalBrkdwnDtIs/QtyBrkdwn/LotQty/Qty/Qty/Qty/FaceAmt

sem1.040

- o ... Bals/BalForAcct/AggtBal/Qty/Qty/Qty/FaceAmt
- o ... Bals/BalForAcct/AvlBlBal /Qty/Qty/FaceAmt
- o ... Bals/BalForAcct/NotAvlBlBal/Qty/FaceAmt
- o ... Bals/BalForAcct/BalBrkdwn/Qty/Qty/Qty/FaceAmt
- o ... Bals/BalForAcct/BalBrkdwn/AddtlBalBrkdwnDtIs/Qty/Qty/Qty/FaceAmt
- o ... Bals/BalForAcct/BalBrkdwn/AddtlBalBrkdwnDtIs/QtyBrkdwn/LotQty/Qty/Qty/Qty/FaceAmt

• **Open issues/ questions to be clarified by the originator:**

No open issues identified so far.

EUROSYSTEM ANALYSIS – GENERAL INFORMATION

| Impact On T2S | Static data management | | Interface | |
|---------------|---|--|---------------------------------|---------------------|
| | | Party data management | X | Communication |
| | | Securities data management | X | Outbound processing |
| | | T2S Dedicated Cash account data management | | Inbound processing |
| | | Securities account data management | | |
| | | Rules and parameters data management | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | Settlement | | Liquidity management | |
| X | Standardisation and preparation to settlement | | Outbound Information Management | |
| | Night-time Settlement | | NCB Business Procedures | |
| | Daytime Recycling and optimisation | | Liquidity Operations | |

| | | | |
|--|--|--|--------------------------|
| | Daytime Validation, provisioning & booking | LCMM | |
| | Auto-collateralisation | X | Instructions validation |
| | | | Status management |
| | Operational services | | Instruction matching |
| | Data Migration | | Instructions maintenance |
| | Scheduling | Statistics, queries reports and archive | |
| | Billing | | Report management |
| | Operational monitoring | | Query management |
| | | | Statistical information |
| | | | Legal archiving |
| | All modules (Infrastructure request) | | |
| | No modules (infrastructure request) | | |
| | Business operational activities | | |
| | Technical operational activities | | |

| Impact on major documentation | | | |
|---|---|---|--|
| Document | Chapter | Change | |
| Impacted GFS chapter | | | |
| Impacted UDFS chapter | | | |
| Additional deliveries for Message Specification | Message documentation for: camt.006, camt.050, camt.051, camt.052, camt.053, camt.054, camt.070, camt.077, colr.002, camt.073, camt.079, camt.084, camt.085, semt.016, semt.018, semt.027, semt.029, semt.034, sese.032 semt.002 and semt.040 | Update of the schema and MyStandards customisation to add note regarding the handling of amounts exceeding the 15 digits (including decimal point). | |
| Links with other requests | | | |
| Links | Reference | Title | |
| OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT | | | |
| Summary of functional, development, infrastructure and migration impacts | | | |
| <p>The Change Requests will require update of the T2S-use of the messages listed above in the message documentations.</p> <p>Main cost drivers:</p> <ul style="list-style-type: none"> • Update of impacted message flows to adjust the formatting of the impacted fields in case of oversizing • Testing of the impacted messages and the impacted message fields in a non-regression testing campaign. <p>The flat files are not impacted by this CR due to the fact that they do not pass schema validation, hence there is no need to update to '99999999999999' the relevant amount.</p> <p>No impact on other TARGET Services has been identified.</p> | | | |
| Summary of project risk | | | |
| None. | | | |
| Security analysis | | | |
| No adverse impact identified. | | | |



23 August 2019

Cost assessment on Change Requests

| T2S-684-SYS – Handling for outbound messages with amounts exceeding 15 digits | | | |
|---|---------------------|-----------|------|
| One-off | Assessment costs* | | |
| | - Preliminary | 2,000.00 | Euro |
| | - Detailed | 10,000.00 | Euro |
| One-off | Development costs | 96,339.81 | Euro |
| Annual | Operational costs | | |
| | - Maintenance costs | 8,286.95 | Euro |
| | - Running costs | 0.00 | Euro |

*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).