Summary

Meeting of the Change Review Group (CRG)

24 April 2017, from 10:30 to 17:30

held at the European Central Bank, Frankfurt

1. Introductory session

The Chairperson, Karen Birkel, welcomed the participants. The CRG was informed about several activities outside CRG:

A. CSDs had an initial workshop on the topic of Cost Recovery on 06 April 2017. No final conclusion on the financing of Change Requests could be reached in that workshop and the discussion will be continued in the CSG. From a Eurosystem perspective it was mentioned that a higher certainty regarding the preferred cost recovery approach would be needed in order to continue with the assessment and implementation of Change Requests in the long run.

B. There was a kick-off meeting about the improvement of the performance of the T2S GUI on 10 April 2017. It was explained that initially the T2S GUI was designed under the assumption of low usage by the users. Experience has shown that this assumption did not hold and that users actually use the T2S GUI frequently. The following areas of potential enhancement were identified and will need to be investigated further, if the PMG confirms this approach:

    a. Implementation of a locally installed software on user side to increase the performance of the GUI.

    b. Identification of end-to-end workflows of frequent business cases in order to reduce the number of steps required to complete a given task in the GUI (most likely Change Requests would be required).

In addition an extension of the automated system logout time (currently 10 minutes) was proposed as a quick-win". A CRG member informed that in (problem) cases where operational investigations in the internal systems are required, 10 minutes would often not be sufficient to

identify a potential problem. Once users are ready to take the required corrective measures in T2S, they are by then logged out and would have to find the related entry in the T2S GUI again. It was mentioned that in most situation where usage of the T2S GUI is required, a timespan of 20 to 30 minutes would be sufficient for operational staff to complete all required investigations and take the corrective measures in T2S.

The CRG was informed that the PMG will discuss the possibility of an extension of the logout time further, with the aim of finding a quick resolution.

C. The 4CB have resumed their work on the detailed assessment of Change Request T2S-0646-SYS. The outcome of the detailed assessment is expected by 10 May 2017. A potential approval of the change request at steering level would be expected about 4 weeks later.

The CRG will have a dedicated teleconference tentatively scheduled for the 18 May 2017 to discuss the outcome of the detailed assessment.

D. The SGMS approved the ISO/SWIFT CRs related to T2S Change Requests 611 and 638 drafted by the 4CB. The CRs will be sent to ISO and SWIFT within the coming weeks, to be considered for the ISO2018 Maintenance Release.

The Chairperson informed that the main aim of the meeting was to discuss:

- The detailed assessments on the CRs T2S-0358-URD, T2S-0515-URD and T2S-0621-SYS
- The preliminary assessments on the CRs T2S-0642-SYS, T2S-0643-SYS, T2S-0644-SYS, T2S-0652-SYS and T2S-655-SYS
- The updated version of the CR T2S-0650-SYS and CR T2S-0653-URD
- The CR T2S-0647-SYS and the solutions to various T2S communication failure scenarios
- New CRs T2S-0658-SYS, T2S-0659-SYS, T2S-0660-SYS, T2S-0661-SYS and other CRs from the market
- Four topics from the Operations Managers Group (OMG)

2. Feedback on action points from previous CRG meetings

The participants were informed that only the 'open' action points would be discussed during the meeting. The feedback of CRG members for action points which were 'pending closure' would be collected through the written procedure[1].

T2SACTION-2955: Compression of T2S outbound messages - Euroclear will share with the CRG a detailed description of the cases observed by them where T2S compression did not work as expected/required.

Update: Euroclear informed that they will share the information in the coming CRG meeting. The action point remains open.

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[1] During the written procedure from 25- 3 May 2017, the CRG members did not raise any objection for the action points with the status 'pending closure'; hence the action points can be considered closed.

T2SACTION- 2952: Change Request T2S-0657-SYS (Multiplex Editorial Change Request on GFS, UDFS and UHB) - The CRG will provide the feedback on the Change Request during a written procedure by 18 April 2017.

Update: The outcome of the written procedure was shared with the CRG and discussed during the meeting on 24 April 2017. The action point was closed.

T2SACTION- 2948: Change Request T2S-0647-SYS (T2S Actors should be allowed to extract bulk of outbound messages in XML format) - The CRG will provide the feedback if

- the resending options provided by T2S i.e. via T2S GUI (U2A), via admi.006 - Resend Request (A2A) and massive manual resend by T2S Service Desk are sufficient or if they require additional solutions in T2S to extract messages from T2S which previously failed to be delivered.

- it is acceptable not to change the business signature provided in the BAH in case of massive manual resend (T2S changes the signature in the Data Exchange Protocol (DEP) Header).

- CRG members require receiving a new BAH signature then they need to provide more detailed information about (i) why the usage of the 'old' signature is not sufficient and (ii) whether they could develop a tool to send Resend Request messages (admi.006) so that they can get the outbound messages with a new BAH signature.

Update: The outcome of the written procedure was shared with the CRG and discussed during the meeting on 24 April 2017. The action point was closed.

T2SACTION- 2945: Change Request T2S-0638-SYS (T2S should allow and process already matched instructions which include the counterparty's securities sub-position to be used for settlement purposes) - The ECB will share with the SMPG the proposal from the CRG for inclusion of the additional settlement parameters of the counterparty in already matched instructions, e.g. Hold Indicator, ISO Transaction Code, etc. and the business case for inclusion of the settlement parameters block

Update: The SMPG will be informed about the CRG proposal during the SMPG meeting on 27 April 2017. The action point remains open.

T2SACTION- 2943: Change Request T2S-0623-SYS (Standing rebalancing of securities positions) - The ECB will inform SGMS about the CRG preference to request a new ISO Transaction Code for 'Rebalancing' of securities positions at the end of the day. SGMS will be requested to make a proposal on the code to be used and to initiate drafting of the related ISO CR (to be done by 4CB).

Update: The SGMS will be informed about the CRG preference to request a new ISO transaction code for 'Rebalancing' of securities positions during the next SGMS meeting/telco. The action point was kept 'on hold' until the related ISO CR is raised (to be expected only in May 2018).

T2SACTION- 2942: Change Request T2S-0559-URD (Prevention of matching (moment of irrevocability) SF2 in case of insolvency of a CSD Participant or a DCA holder) - The ECB will inform the CR initiator (CSG) about the CRG view that the Change Request could be considered for withdrawal considering

- the Change Request has a low business value, involves high implementation efforts and may have an effect on the performance in T2S. Therefore it may not be scoped for upcoming T2S Releases.

- the OMG has drafted the OMG insolvency procedure without including this Change Request and they consider that the Change Request would be helpful however not mandatory.

Update: The CRG feedback will be shared with the CSG during the CSG meeting on 25 April 2017. The action point remains open.

T2SACTION- 2941: Change Request T2S-0515-URD (Allow instructions from CSD participants for n days after maturity date of security) - The CRG will request the OMG to consider the need to set up a procedure in the MOP as to how to add a CCP BIC into the new 'CCP Transformation Exceptions' table

Update: The OMG will be requested to consider the need to set up a procedure in the MOP as to how to add a CCP BIC into the new 'CCP Transformation Exceptions' table during the OMG meeting on 26 – 27 April 2017. The action point remains open.

T2SACTION- 2940: Change Request T2S-0515-URD (Allow instructions from CSD participants for n days after maturity date of security) - The CRG will provide feedback on the detailed assessment on the Change Request and objections on the approval of the Change Request, if any via a written procedure until 7 April 2017

Update: The outcome of the written procedure was shared with the CRG and discussed during the meeting on 24 April 2017. The action point was closed.

T2SACTION- 2926: Scope of T2S Release 3.0 - The 4CB will indicate the time frame for detailed assessment of the second slot of Change Requests and provide considerations about the possible number of Change Requests that could be assigned to each of the slots.

Update: The feedback from 4CB was shared with the CRG and discussed during the meeting on 24 April 2017. The action point was closed.

T2SACTION- 2922: Change Request T2S-0611-SYS (Cash Account Postings GUI Screen to include the T2S Actor References) - The ECB will update the Change Request to align it with the potential SWIFT CR.

Update: The CR-611 will be updated after the relevant SWIFT CR is finalised. The action point was kept 'on hold' until further update is available.

T2SACTION- 2914: Change Request T2S-0544-URD (Retroactive Cash Restriction (Cash Blocking and Reservation)) - The CRG agreed that the 4CB will draft an ISO CR for addition of the new block in sese.030 to modify restriction references, after the implementation solution for the Change Request is finalised.

Update: The ISO CR will be drafted after the discussion on the CR-544 is finalised during the CRG meeting on 7 June 2017. The action point remains open.

T2SACTION- 2912: Change Request T2S-0544-URD (Retroactive Cash Restriction (Cash Blocking and Reservation)) - Euroclear will check if the new alternative for the definition of the required privileges favoured by the CR initiator and most of the CRG members, i.e. the use of the same privilege to amend cash restriction reference that would be both under the data scope of the cash side and under the data scope of the securities side, could be viable from legal perspective

Update: Euroclear will provide the feedback during the CRG meeting on 7 June 2017. The action point remains open.

T2SACTION- 2805: Change Request T2S-0647-SYS (T2S Actors should be allowed to extract bulk of outbound messages in XML format) - The CR initiator will check if the current 'Resend' functionality via A2A / U2A mode can be reused and amended to solve the request.

Update: During the written procedure the CR initiator indicated that the 'Resend' functionality via A2A/U2A could be useful, however they cannot use this functionality due to security reasons (i.e. old signature in the Business Application Header). The action point was closed.

T2SACTION- 2795: Change Request T2S-0544-URD (Retroactive Cash Restriction (Cash Blocking and Reservation) - The CR initiator will update the Change Request, if agreeable with the 4CB proposal.

Update: The Change Request will be discussed during the CRG meeting on 7 June 2017. The action point remains open.

3. Approval of the summary of previous meetings

The CRG did not raise any objections to the final approval of the Summary of the CRG meeting of 28 February 2017

4. **Analysis of the Change Requests**

A) Detailed assessment on Change Requests

Change Request T2S-0358-URD (Unblocking of ISINs as part of Corporate Action Handling)

The aim of the Change Request is to allow CSDs to instruct a special request to unblock an ISIN which takes effect only after the settlement of the corporate action (CA) instructions on that ISIN.

The Change Request has a development cost of Euro 195,583.06 and operational cost of Euro 20,556.60.

The 4CB confirmed that for the ISIN restricted by Restriction Type "CAPR" (Corporate Action Processing Restriction) T2S will check if one of the corporate action FOP (free of payment) instructions has been settled before other settlement instructions are allowed for settlement in this restricted ISIN.

The CRG agreed to recommend the approval of the Change Request and its inclusion in T2S Release 2.0.

CRG decision: The CRG recommended the Change Request for approval and its inclusion in the T2S Release 2.0.

Change Request T2S-0515-URD (Allow instructions from CSD participants for n days after maturity date of security)

The aim of the Change Request is to allow instructions in T2S from CSD participants for n days after the maturity date of an ISIN. During this period the instructions sent by CSD participants should be validated and allowed to match but not settle (with the exception of CCP PFOD instructions which should be allowed to settle). The Change Request has a development cost of Euro 536,165.16 and operational cost of Euro 58,635.33.

The 4CB confirmed that after the implementation of the Change Request it will not be possible to delete any ISIN for 20 days after it has reached its maturity, even when the ISIN was not subject to the transformation detection period.

The CRG took note of the T2S Corporate Actions Sub-group (CASG) feedback that the Change Request brings a harmonised approach for corporate action processing and acknowledged that the Change Request would enable them to be compliant with the mandatory corporate actions standards as specified by the Corporate Actions Joint Working Group (CAJWG) and CASG. Additionally the implementation of the Change Request would result in decommissioning of the functionality introduced by the Change Request T2S-0471-SYS (Deferred processing of maturity/expiry date update in T2S), which is a process that runs during the end of day (EOD) period to avoid issues in the securities static data processing. The decommissioning of the functionality would have a positive impact on T2S, in terms of stabilising the platform during the EOD period.

The 4CB informed that they would make the editorial updates to the Change Request based on the feedback received from the CRG during the written procedure. The updated Change Request would be shared with the CRG on 25 April 2017 for the final review.

The CRG reconfirmed its earlier recommendation for approval of the Change Request and its inclusion in the initial baseline scope of the T2S Release 2.0 in principle subject to the editorial updates by the 4CB.

CRG decision: The CRG reconfirmed its 30 March recommendation for approving the Change Request and including it in the initial baseline scope of the T2S Release 2.0 in principle subject to the 4CB update of the editorial updates identified during the CRG written procedure from 31 March to 7 April 2017.

Action points:

- The 4CB will update the Change Request to incorporate the editorial updates suggested by the CRG during the written procedure and share the updated version on 25 April 2017.

- The CRG will be asked to recommend the approval of the Change Request and its inclusion in T2S Release 2.0 via a written procedure till 27 April 2017, subject to no objection on the updated version of the Change Request.

Change Request T2S-0621-SYS (Multiple pending reason codes (combination of lack of securities and lack of cash)

The aim of the Change Request is to reduce the number of sese.024 (Securities Settlement Transaction Status Advice) messages in case of lack of money and lack of securities occurring at the same time.

The Change Request has a development cost of Euro 320,481.35 and operational cost of Euro 34,610.73.

It was clarified that the examples to be added to the T2S General Functional Specifications (GFS) was meant to display the results of the provision check and processing on the collection of the transactions and not the individual transactions.

The CRG agreed to recommend the approval of the Change Request and its inclusion in T2S Release 2.0.

CRG decision: The CRG recommended the Change Request for approval and its inclusion in the T2S Release 2.0.

B) Preliminary assessment on Change Requests

Change Request T2S-0642-SYS (Adjustments to the PDF and XML format of T2S invoices)

The aim of the Change Request is to optimise the format of T2S invoicing documents by changing the PDF and XML templates of T2S invoices.

The CRG took note that the Change Request has a medium impact and affects the static data management (SDMG), interface (INTF) and Billing modules.

The 4CB informed that the Change Request could have could have an impact on the billing in TARGET2.

The 4CB also recommended that the Change Request should be considered for implementation together with the Change Request T2S-0643-SYS (Display service item code and price on the GUI screen) since the data provided in the updated Service Item screen due to CR-643 will be reconciled with the Service Item Codes introduced by the CR-642.

CRG decision: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment and that there are synergies with the Change Request T2S-0643-SYS (Display service item code and price on the GUI screen), therefore, a joint implementation was favourable.

Action points: The ECB will inform WGT2 about the change request and will recommend that they investigate if the CR has impact on the T2 billing.

Change Request T2S-0643-SYS (Display service item code and price on the GUI screen)

The aim of the Change Request is to display service item codes on the T2S GUI instead of technical identifier. Additionally the relevant price tag for the service item should also be available on the screen.

The CRG took note that the Change Request has a medium impact and affects the static data management (SDMG) and query management modules.

The 4CB also recommended that the Change Request should be considered for implementation together with the Change Request T2S-0642-SYS (Adjustments to the PDF and XML format of T2S invoices) since the data provided in the updated Service Item screen due to CR-643 will be reconciled with the Service Item Codes introduced by the CR-642.

CRG decision: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment and that there are synergies with the Change Request T2S-0642-SYS (Adjustments to the PDF and XML format of T2S invoices), therefore, a joint implementation was favourable.

Change Request T2S-0644-SYS (Automatic set-up of the payment due date in invoices)

The aim of the Change Request is to add the default value of "15" as the number of T2S settlement days in the parameter "payment due date" and link it to the parameter "invoice date" as well as the T2S business days calendar.

The CRG took note that the Change Request has a low impact and affects the billing module.

CRG decision: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment.

Change Request T2S-0652-SYS (Increase the limit of distinct values for the parameters relating to message subscriptions)

The aim of the Change Request is to increase the limit of distinct values to be used in message subscription rules, in order to support the required level of granularity for the subscription rules for all actors directly connected to a given system entity.

The CRG took note that the Change Request has a medium impact and affects the SDMG, Report and Query Management modules.

The CR initiator explained that the Change Request requests to

- increase the limit of distinct parameter values for message subscription from 50 to 100.

- provide information about the current consumption of the message subscription parameters as well as the number of individual message subscription configurations in U2A mode and not in the form of a report

The CR initiator agreed to update the Change Request to specify that the information about the current consumption of the message subscription should be available in U2A mode only.

CRG decision: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment.

Action points: The CR initiator will update the Change Request to specify that the information about the current consumption of the message subscription should be available in U2A mode only.

Change Request T2S-0655-SYS (T2S should allow updates of maturity date for matured ISINs)

The aim of the Change Request is that T2S should allow updates of the maturity date for matured ISINs by modifying the business rule DSU1003 ("When performing a Securities update request, it must refer to an existing and active Securities with a maturity date that is greater than the current business date").

The CRG took note that the Change Request has a medium impact and affects the static data management (SDMG) and settlement (SETT) modules.

The CRG was informed about the two implementation options for the Change Request to tackle the situation of pending instructions in a re-activated ISIN:

1. performing the eligibility check and settlement attempt on the pending instructions on the re-activated ISIN immediately after the update of the maturity date on the ISIN.

2. performing the eligibility check and settlement attempt on the pending instructions on the re-activated ISIN at the start of day (SOD) after the maturity date on the ISIN is updated.

The 4CB highlighted that their preference is to queue the re-activation requests of a matured ISIN if this security is eligible for auto-collateralisation until the end-of-day phase (i.e. second option), in order to avoid any impact on the auto-collateralisation process. The 4CB explained that for intraday and immediate re-activation of an eligible ISIN (i.e. first option) they would expect potential issues/inconsistencies in the processing of the T2S internal auto-collateralisation templates created during the start-of-day phase. The CRG was of the view that ideally any intraday queuing of a re-

activation request should be avoided if possible, to allow a previously matured security for settlement immediately. The CRG asked the 4CB to double-check if an immediate application of a re-activation request for ISINs eligible for auto-collateralisation would be possible. CRG members highlighted that they only require immediate re-activation for settlement purposes, whereas they would not have an issue in case the re-activated ISIN would be made available for auto-collateralisation only at the next business day following the re-activation.

The CRG was further informed that the first solution would have a higher impact whereas the second solution would have a lower impact on the settlement module, however both the options would have impact on SOD. A CRG member challenged the high impact of implementation option 1 and expected that the existing mechanism to send a pending instruction to the eligibility check upon removal of an intraday restriction could be reused in case of ISIN re-activation. The 4CB informed that an application of this trigger/selection mechanism upon an ISIN re-activation would require additional implementation effort. The 4CB agreed to provide more details on the complexity of implementation option 1 by 2 May 2017.

The CRG agreed to indicate their preference for the implementation solution during a written procedure.

The 4CB informed that the Change Request is beneficial from operational resilience perspective. It would help reduce number of requests to the T2S Operator for update of maturity date for matured ISIN. They also informed that as an intermediate solution, a hotfix was recently deployed in production to allow the T2S Operator to update the maturity date of a matured ISIN. Thus, a Last Level Intervention (LLI) procedure is not required any longer.

The CRG agreed to recommend the launch of detailed assessment on the Change Request and its inclusion in T2S Release 2.0 in principle subject to the final decision on the option to be pursued.

CRG decision: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment. The CRG also recommended to launch the detailed assessment on the Change Request and requested the 4CB to check the feasibility to deliver it as part of the Release 2.0 in principle subject to the final decision on the option to be pursued.

Action points:

- The 4CB will provide clarification by 2 May 2017 about the complexity of implementation option 1 and about the T2S behaviour in case the changes to the maturity date of ISINs are applied immediately.

- Considering the 4CB clarification on the T2S behaviour in case the changes to the maturity date of ISINs are applied immediately, the CRG will indicate by 3 May 2017 their preferred implementation solution i.e.
  - An immediate settlement attempt on all pending settlement instructions related to the updated ISIN after the change of the maturity date is applied;
  - Defer the submission of all pending settlement instructions related to the updated ISIN for settlement until the next day (i.e. night-time settlement)

and reasoning for their choice or any other feedback to the Change Request if deemed relevant.

- The 4CB will start the detailed assessment upon identification of the retained option

C) Other Change Requests from the market for future T2S Releases

Change Request T2S-0647-SYS (T2S Actors should be allowed to extract bulk of outbound messages in XML format)

The aim of the Change Request is to allow T2S Actors to extract outbound messages in XML format from the T2S graphical user interface (GUI).

The CRG took note that during the CRG written procedure from 3 to 18 April 2017, there was a divided view about whether existing T2S resending capabilities are sufficient or not.

The CR initiator explained that the Change Request addresses two exceptional situations that result in T2S status messages not been delivered to the client i.e. a connectivity issue at the Network Service Provider (NSP) level and a connectivity issue at the client's system. In this context, the available options are the functionality described in the CR647 and the massive manual resend by the T2S Service Desk. The CRG was of the view that the CR647 (i.e. GUI channel) would not be the right solution for those two exceptional situations since connectivity issues at NSP level would translate into both A2A and U2A being down. In this context, the CR initiator agreed to look at the scenarios included in the Change Request and potentially update the Change Request.

Regarding a massive manual resend via a request to the T2S Service Desk, the CR initiator raised concerns about the risk of accepting T2S messages with a previous-used business signature (i.e. signature in the Business Application Header) in contingency situations as it could also open the door potentially to accept invalid or fraudulent messages as well. The CRG agreed to seek the input from the security experts via the Project Managers Group in this respect. A request for change of the business signature used in the massive manual resend does not fall under the scope of the CR647, a separate change would be required.

A CRG member recalled past T2S incidents when some messages got lost and the T2S Service Desk was not able to resend messages manually before 24 hours; this caused issues in the end of day processing for participants. The 4CB explained that the known issues which caused the problem were already tackled in T2S and it should not happen again.

Some CRG members expressed the need of having an alternative channel to get status messages. Some CRG members were of the view that other channels could be explored like secured e-mails or secured file transfer protocol (sftp). It was noted that there could be confidentiality and integrity issues that need to be analysed. Similar concerns were already identified during the DATF discussions on T2S-0646-SYS (Pre-formatted operational reports at specific times) when analysing secured mails. The CRG was also of the view that before approaching the OMG, further discussions should take place at CRG level, with regards to the scenarios which need to be covered via CR 647 and other connectivity channels. It was agreed to re-discuss the topic during the CRG meeting on 7 June 2017.

CRG decision: The CRG agreed to keep the Change Request on hold.

Action points:

- The CR initiator agreed to look at the scenarios included in the Change Request given connectivity issues at NSP level would translate into both A2A and U2A being down (and potentially update the Change Request).

  The CRG will seek the PMG/ISSG input about in the context of the massive manual resend of messages by the T2S Operator, an assessment of the risk of accepting T2S messages with a previous-used business signature (i.e. signature in the Business Application Header) in contingency situations as it could also open the door potentially to accept invalid or fraudulent messages as well.

Change Request T2S-0650-SYS (T2S to prevent duplicate sequence numbers and duplicate T2S References after a Recovery After Disaster)

The aim of the Change Request is to ensure that T2S assigns a different sequence number to the outbound messages and a different T2S Reference number to the instructions sent by T2S after starting the operation post recovery after disaster (RAD) to avoid duplication of sequence number and T2S reference number used for messages and instructions sent by T2S before RAD.

The CRG was informed about the updates made to the Change Request to include the requirement to assign a new T2S reference to the instructions sent by T2S after the RAD. It was clarified that the T2S reference is referring to the Market Infrastructure Transaction Identification (MITI).

The 4CB informed that the Change Request is beneficial from operational resilience perspective.

Considering the OMG feedback that the urgency and priority of the Change Request is similar to the Change Request T2S-0446-SYS (Blocking of U2A interface for submitting new instructions to T2S during reconciliation process post RAD) i.e. T2S Release 2.0, the CRG agreed to recommend the Change Request for the detailed assessment and its inclusion in the T2S Release 2.0.

CRG decision: The CRG recommended the Change Request for the detailed assessment and requested the 4CB to check the feasibility to deliver it as part of the R2.0.

Change Request T2S-0653-URD (Partial release functionality)

The aim of the Change Request is to create a functionality of 'partial release' which would allow CSD participants to release a transaction for part of the quantity.

The CRG was informed that the Directly Connected Parties Group (DCPG) provided positive feedback for the use of the partial release functionality; however they expressed diverse views on the functionality as proposed in the Change Request and suggested additional requirements. Most of the members agreed that ideally the status update of the instruction (sese.024) due to a partial release should reflect that the release was partial and also inform about the 'partially release quantity'.

A CRG member suggested that the partial release functionality could also be extended to the cash side (i.e. RVP instructions), however most of the CRG members acknowledged that this was a nice-to-have feature. If the Change Request were pursued, it could be explored whether it would be easier

from an implementation perspective to either have a partial release functionality only on the delivery side or to have it available in the same way for both sides, delivery and receipt.

The 4CB reminded about the potential high impact of this CR, to be confirmed with its preliminary assessment as soon as the CR is mature .

CRG decision: The CRG agreed to keep the Change Request on hold.

Action points: The CR initiator will update the Change Request to include the requirements specified by the DCPG members.

Change Request T2S-0656-URD (T2S should allow a temporary limit for the secondary Credit Memorandum Balance)

The aim of the Change Request is to allow payment banks to specify intraday external guarantee, client collateralisation and unsecured credit limits for a specific day which should be automatically replaced by the original limit at the EOD.

The 4CB explained that it is possible to achieve the same results requested in the Change Request in U2A or A2A via modifying the existing limit value to X and creating a new limit with value Y with a Valid From date as of the next day.

The CR initiator informed that the market participants are already making use of this possibility; however they foresee an operational risk in case the user misses to update the new limit and the valid from date in the T2S GUI. Therefore they would prefer to have the functionality where by the T2S automatically resets the limit to the original limit at the end of the day. The CRG noted that the operational risks come from using the T2S GUI to make such updates and not specifically because of how the functionality is built. The CRG members expressed that the Change Request would not bring an additional value as T2S already allows to get the same result and therefore they do not see a need for the Change Request. The CR initiator agreed to inform their market participants about the low support from the CRG for the Change Request.

CRG decision: The CRG agreed to keep the Change Request on hold.

Action points: The CR initiator agreed to inform their market participants about the CRG feedback on the Change Request i.e. the current functionality available in T2S is sufficient to cover the requirements mentioned in the Change Request and therefore the Change Request is not supported by CRG members.

Change Request T2S-0658-SYS (T2S should allow and process already matched instructions with deviating settlement parameters on DELI and RECE legs)

The aim of the Change Request is to allow processing of the deviating settlement parameters (i.e. settlement transaction type, hold status, modification/cancellation allowed flag) in the delivery and receiving leg of an already matched instruction.

The CRG was informed that in the context of CR-638 an ISO CR was raised which was accepted by the SGMS to replace the existing 'Securities Sub Balance Type' by two new blocks i.e. Delivering

Securities Sub Balance Type and Receiving Securities Sub Balance Type to transport the sub-balance type of the counterparty in an already matched instruction. The CR-658 was raised following the feedback from some of the CRG members that it would be useful to duplicate the whole Settlement Parameters block to transport the information related to the delivering and the receiving leg. It would facilitate the provision of other processing information per settlement leg, e.g. Hold Indicator, ISO Transaction Code, etc. The CRG agreed to inform the SMPG during its meeting on 27 April 2017 that with CR-658 a clear business need is now expressed to have more than one attribute of the Settlement Parameters block duplicated in case of already matched instructions.

The CRG agreed to provide the feedback on additional business cases that could be included in the Change Request. The CR initiator would thereafter update the Change Request to include these business cases.

CRG decision: The CRG agreed to put the Change Request on hold.

Action points:

- The CRG will provide feedback via a written procedure till 3 May 2017 if they have identified other business cases for which they would like to provide deviating settlement parameters for DELI and RECE side in an already matched instruction.

- The CR initiator will update the Change Request based on the CRG feedback on additional business cases.

Change Request T2S-0659-SYS (T2S should allow settlement of instructions with an 'AFTER' link to a settled instruction that was subject to conditional securities delivery)

The aim of the CR is to allow submission of settlement instruction containing an 'AFTER' link to an instruction subject to COSD hold once the COSD instruction is settled.

CRG members were informed again that a discussion is still open on steering level about who should bear the cost of this change request, based on the fact that CRG could not agree on the status (defect or according to specification) of the underlying incident.

The CRG agreed to launch the preliminary assessment and seek the steering level input on the cost element after the preliminary assessment.

CRG decision: The CRG recommended to launch the preliminary assessment on the Change Request.

Action points:

- The 4CB will make a proposal for a minor wording update to the Change Request.

- The ECB will inform UTSG that the Change Request has been recommended for the preliminary assessment, therefore UTSG could consider to close the corresponding PBI.

- The CRG will follow-up with the steering level on the issue of who will be responsible for paying for this CR (is it scope evolution or maintenance) once the preliminary assessment is available.

Change Request T2S-0660-SYS (Long Term Statistical Information improvements and performance optimisation (Phase 1))

The aim of the Change Request is to implement improvements to Long Term Statistical Information report/query performance, content and list to enhance user experience.

The Change Request was drafted based on the 4CB proposal approved by the CRG during the CRG meeting on 28 February 2017. The 4CB has indicated that they will bear the cost of the CR and proposed the implementation of the CR as part of the Release 2.0. The CRG agreed to launch the detailed assessment with the aim of including the CR in the Release 2.0.

CRG decision: The CRG recommended the Change Request for detailed assessment and asked the 4CB to check the feasibility to deliver the Change Request as part of the T2S Release 2.0 in principle subject to a final check via the CRG in a written procedure.

Action points: The CRG agreed to provide the feedback on the Change Request and recommend it for the detailed assessment with the aim to include it in T2S Release 2.0 via a written procedure till 3 May 2017.

Change Request T2S-0661-SYS (Long Term Statistical Information improvements and performance optimisation (Phase 2))

The aim of the Change Request is to implement improvements to the Long Term Statistical Information by creating new reports and by fine-tuning report/query content and error list to enhance user experience.

The 4CB said that they will bear the cost of the CR and they would propose its implementation as part of the T2S Release 3.0.

CRG decision: The CRG agreed to put the Change Request on hold.

Action points: The CRG agreed to provide the feedback on the Change Request via a written procedure till 19 May 2017.

C) Editorial Change Request

Change Request T2S-0657-SYS (Multiplex Editorial Change Request on GFS, UDFS and UHB)

The aim of the Change Request is to introduce editorial changes to the GFS, UDFS and UHB.

The 4CB indicated that they will provide the updated Change Request on 25 April 2017 following the CRG written procedure from 3 to 18 April 2017. The CRG did not raise any objection to the incorporation of the editorial comments raised during the written procedure and agrees to recommend the approval of the Change Request in principle subject to the 4CB update of the Change Requests.

CRG decision: The CRG recommended the approval of the Change Request in principle subject to the 4CB update of the editorial updates identified during the CRG written procedure.

Action points:

- The 4CB will share the updated version of the Change Request that incorporates the CRG feedback.

- The CRG agreed to recommend the approval of the updated Change Request via a written procedure till 3 May 2017.

6. Input requested by the Operations Managers Group

Production Incident INC204308 (Back-to-back transactions in partial settlement)

In cases of back-to-back transactions where A delivers securities to B and B delivers securities to A (same ISIN but different quantities) and sufficient resources are not available, it was observed that during the real-time partial settlement window the available securities triggered a number of continuous partial settlements of the available quantity between the two accounts multiple times, until the transaction with the lower quantity was fully settled.

The user expectation was that the optimisation cycle would net the back-to-back transactions during the real-time partial settlement window and settle the largest quantities possible in a single shot, instead of executing partial settlements of the available quantity several times.

The 4CB presented chapters from the General Functional Specifications (GFS) and re-confirmed their view that the current processing is compliant with the scope defining documents.

It was explained that with every real-time partial settlement, two processes are triggered in T2S:

- Recycling, which identifies transactions which could make use of the newly available resources provided by the settled part of the partially settled transaction.

- Optimisation, which searches for other transactions which could be settled together with the remaining part of the partially settled transactions in an efficient/optimised way.

In the situation experienced, after the first partial settlement the recycling process was triggered, at the same time cancelling the optimisation process. A second optimisation attempt was again triggered with the partial settlement, but this optimisation was again cancelled due to the execution of the next recycling attempt, and so on. This way it may happen that T2S executes multiple partial settlements without ever finalising/succeeding the optimisation process.

Related to the above issue, the CRG member explained that given that debit/credit notifications (camt.054) cannot be mapped to the different settlement confirmation messages (sese.025), the reconciliation of the multiple camt.054 generated in this scenario becomes much more cumbersome. It was acknowledged that the current scope of Change Request T2S-0590-SYS (Include information from the underlying settlement instruction in the T2S 'Bank to customer statement (camt.053)' is not expected to improve the situation in the case described, due to the fact that the settled quantity is the same for all partial executions.

CRG decision: The CRG agreed that the current T2S behaviour of non-optimisation of back-to-back transactions in the partial settlement window is in line with the T2S specifications in principle, subject to the final confirmation from the incident initiator. The originator of the incident will double-check whether the T2S specifications describes the T2S behaviour experienced for the next CRG meeting.

The originator of the incident will also look at the Change Request T2S-0590-SYS assess whether there could be any solution to address the reconciliation issue on the cash side.

The Direct Connected Participant Group (DCPG) and Operational Manager Group (OMG) shall be informed about this specific T2S behaviour in order to raise awareness on user side.

The CRG agreed to add the issue to the list of 'Potential change requests topics for a next release of T2S' which is maintained in the CRG website. In addition it was agreed that this behaviour needs to be documented and communicated clearly, e.g. via an "insight" paper.

Action points:
- The originator of the incident will double-check whether the T2S specifications describe the T2S behaviour experienced for the next CRG meeting.
- The originator of the incident will look at the Change Request T2S-0590-SYS (Include information from the underlying settlement instruction in the T2S 'Bank to customer statement (camt.053)' and in the T2S 'Bank to customer debit credit notification (camt.054) messages for Settlement, Custody/Asset servicing and Reconciliation) to assess whether there could be any solution to address the reconciliation issue on the cash side.
- The ECB will inform the Direct Connected Parties Group (DCPG) and the Operational Manager Group (OMG) about this specific T2S behaviour i.e. of non-optimisation of back-to-back transactions in the partial settlement window in order to raise awareness on user side.
- The ECB will add the issue to the list of 'Potential change requests topics for a next release of T2S' which is maintained in the CRG website.

Production Incident INC204677 (Settlement Instructions settle despite Case 2 blocking restriction on ISIN)

A CSD has set up two case 2 restrictions, one positive restriction to block instructions and one negative restriction to allow settlement for instructions fulfilling additional criteria. The situation occurred that in a matched pair of instructions one leg was subject to the positive restrictions (preventing settlement), and the second leg was subject to the negative restriction (allowing settlement).

The transaction was not blocked, due to the fact that one of the legs fulfilled the negative restriction, and settled. The user expected the opposite, i.e. T2S should have blocked the transaction, as one leg was subject to a positive restriction which should prevent the instruction from settling.

The 4CB informed that as part of the T2S eligibility check process the following logic is applied:

- The positive rules (i.e. block) are checked against both SIs and the transaction is blocked if at least one SI complies with the rule.

- The negative rules (i.e. not block) are checked against both SIs and the transaction is excluded from the blocking if at least one SI complies with the rule.

The 4CB explained that due to the fact that the negative case 2 restriction is applied on one instruction, it is therefore applied at the transaction level as well. Accordingly, T2S presents the transaction for settlement.

The initiator of the incident provided references to the UDFS in which according to their view it is clearly stated that T2S should end the settlement attempt if any of the two legs of a settlement transaction does not pass the eligibility check, i.e. is subject to a positive case 2 restriction. According to their view, this is supported by UDFS chapter 1.6.1.8.3 Eligibility check process which states: '*In case of failure on any of these conditions* [instruction on hold, cut-off reached or intraday restriction detected] *for at least one of the Settlement Instructions, Settlement Restrictions or Liquidity Transfers under process, their settlement attempt ends.*' It was mentioned that this description is clearly requesting the eligibility check to be performed on a settlement instruction level and not on a transaction level, i.e. that both instructions need to be validated individually and that a single positive case 2 restriction would end the eligibility check, independent on the validation result of the other leg of the transaction (e.g. application of a negative case 2 restriction). In addition the incident initiator claimed that no reference could be found in the UDFS which states that the eligibility check or application of negative restrictions should be performed on transaction level. Rather, the UDFS is mentioning 'settlement instruction' level instead of 'transaction' level whenever describing the intraday restriction application process during the eligibility check. They mentioned that the current implementation creates issues on their side and requested 4CB to accept the current implementation as a defect. This view was supported by other CRG members as well.

The 4CB responded that the description referred to in the UDFS by the incident initiator stipulates that if any instruction complies with the restriction, the rule then applies, positive (blocking) or negative (exclusion from blocking). According to their view, there are business cases for which a negative case 2 restriction on one leg should enable settlement of the transaction, as it is explained in UDFS 'Example 24'. In this example a negative case 2 restriction blocks all settlement except for instructions having as ISO Transaction Code either 'CORP' or 'CLAI', which shows that the observed T2S processing behaviour is in line with the specification.

The incident initiator on the other hand was of the view that 'Example 24' is supporting their position, as the example never mentions 'transaction' but refers to 'settlement instructions' only: '*..., settlement is blocked for all Settlement Instructions related to the security XXABCDEFGHIJ, with the exception of those with an ISO transaction code related to corporate actions management (i.e. "CORP" or "CLAI")*'. Also it was argued that this example does not correctly reflect the observed situation, as only one leg was subject to the negative restriction related to corporate actions handling ('CORP'). The other leg of the transaction contained ISO Transaction Code 'TRAD' and would therefore not be subject to the exception. UDFS chapter 1.6.1.8.3 Eligibility check process was mentioned again which states that any leg being subject to a positive restriction ends the settlement attempt. Accordingly the transaction should not settle.

CRG decision: The CRG could not come to an agreement whether the current implementation is in line with the scope defining documents or not and accordingly whether Incident INC204677 is a Production Problem. The CRG agreed that if a common understanding cannot be reached in the CRG, the steering level guidance will need to be sought.

Action points: The ECB will inform the DCPG and the OMG about the current implementation whereby one leg is subject to the negative restriction (e.g. due to a corporate action related instruction) and the other leg (or both legs) is subject to a positive restriction (e.g. due to a blocked ISIN), in order to raise awareness on the user side that in such cases T2S does not block settlement of the transaction.

Production Incident INC204713 (Unexpected partial settlement for pooled instructions)

During the Night Time Settlement (NTS) processing, a settlement restriction (delivery to an earmarked position) which was linked to a settlement instruction with the link type 'WITH', settled partially (lower quantity than the quantity stated in the settlement instruction).

The settlement restriction settled partially despite the full settlement of the linked settlement instruction as the intended resources were used by another settlement instruction.
The user expected that the linked settlement restriction would be settled fully due to its 'WITH' link to the settlement instruction.

The 4CB emphasised that the settlement restriction (SR) which settled partially followed the regular settlement rules as a SR with restriction processing type earmarking is allowed to settle partially even when the SR is linked to another settlement instruction. Further, the 4CB explained that during NTS, T2S considers as a whole the full stock of transactions/restrictions; therefore other transactions can be submitted to settlement together along with the linked instructions, forming a pool. The T2S optimisation process, with the objective to maximise the number and value of settled transactions, resulted in full settlement of the original Settlement instruction (ST1) and the other Settlement instruction (ST2) along with partial settlement of the SR.

One of the CRG members argued that 'WITH' links should assure an all-or-none settlement and that the settlement result was therefore not according to the specification. The 4CB clarified that for pooled transactions, the concept of all-or-none means that all transactions in the pool are submitted together for optimisation and settlement. However, during settlement the general rules for partial settlement apply which could lead to the situation that the linked SR is settled partially.

4CB referred to the T2S user requirements document ver. 5.05 (URD) for requirement T2S.09.080 which states "*T2S shall settle linked instructions in a way that ensures that none of them settles if one of them does not settle. This settlement procedure is referred to as the all-or-none rule*". 4CB further argued that a similar requirement for the settlement restrictions is not defined in the URD.

In this context the incident initiator mentioned that cases were observed in production where the processing behaviour described by the 4CB resulted in a partial settlement of the SR with quantity zero, followed by standard settlement reporting of a zero quantity partial settlement (semt.015).

The CR initiator finally mentioned that they will not raise a CR because there are workarounds (see section 4).

<u>CRG decision</u>: The CRG concluded that the description in the scope defining documents is not detailed enough to unambiguously support or contradict the current T2S processing logic. The CRG agreed that one way of interpretation of the UDFS would be that a linked SR would not necessarily mean an all-or-none settlement, if the SR is settled together in a pool of other transactions. This interpretation is also in line with the T2S settlement optimisation objective to maximise the number and value of settled transaction.

The CRG agreed to add the issue to the list of 'Potential change requests topics for a next release of T2S', which is maintained in the CRG website. In addition it was agreed that this behaviour needs to be documented and communicated clearly, e.g. via an "insight" paper.

<u>Action points</u>:

(i) The ECB will inform the DCPG and the OMG in order to raise awareness on user side

- o About the current implementation that the Night Time Settlement objective is to maximise the number of settled transaction and in compliance of that objective, it is possible that a linked settlement restriction is settled partially in case the incoming resources (meant for the settlement restriction) enable settlement of other settlement instructions

- o The following workarounds have been identified to achieve (full) settlement of the settlement restriction:

  - ▪ Assignment of highest possible priority for the settlement restriction (expected settlement result is achieved in most situations, but cannot be guaranteed)

  - ▪ Usage of settlement instructions instead of settlement restrictions to move positions from one position type to another one.

  - ▪ Use of restriction types Blocking, instead of Earmarking

- o Change Request T2S-0638-SYS (T2S should allow and process already matched instructions which include the counterparty's securities sub-position to be used for settlement purposes) could support to reduce or solve the issue, if T2S Actors would change their instruction pattern for movements from one earmarked position to another earmarked position.

(ii) The ECB will add the issue to the list of 'Potential change requests topics for a next release of T2S' which is maintained in the CRG website.

7. Any other business

Operational governance review

The CRG was informed about RMSG discussion to change the operational governance structure in order to put all activities related to a T2S release under the responsibility of the RMSG, including scoping of the release and requesting the detailed assessment of CRs. According to the RMSG proposal, the task of the CRG would in the future consist of a regular prioritisation of CRs according to their importance from a business perspective. The RMSG would then scope upcoming releases, taking into consideration among other factors also this CRG prioritisation list.

One CRG member commented that a release should not just be scoped by looking at the business value/ranking of CRs but that the scoping exercise would be much more complex, due to interdependencies between the CRs and the consideration of external factors (e.g. upgrade to newer ISO version, regulation, etc.). Therefore the CRG was of the view that they should not only prioritise the CRs but that they should also be allowed to indicate a preference for a release in which a given CR should be considered.

The CRG also mentioned that also under the new process the validation and discussion of the outcome of a 4CB detailed assessment should be in their responsibility. CRG expects to be responsible/be consulted for giving initial green light for the implementation of a CR prior to approval on steering level.

Also some CRG members commented that the new governance structure could slow down the scoping and release management process in general and that proper planning and timely discussions would be required in order to address this issue.

CRG members mentioned that they also want to be consulted by the RMSG on the detailed proposed changes in the operational governance structure before the proposal is sent to the CSG for approval.

Finally DCP representatives in the CRG requested to be able to take part in the RMSG, especially given the fact that with the proposed changes in the governance structure the RMSG would take over some of the responsibilities related to release management from the CRG. It was clarified that currently DCPs are not allowed to take part in the RMSG, but CRG requested that this point should be re-discussed in the next RMSG Operational Governance Workshop.

Action points:

- The ECB will inform the RMSG about the CRG view that:
    o if the RMSG role changes, it might be considered the review of the RMSG composition (e.g. additional CBs and CSDs might want to join the RMSG discussions and the DCP representation should be assessed).
    o the timing of a (yearly) CRG prioritisation exercise should be known before enough to ensure that the outcome of the exercise is available to the RMSG so they can start the release scoping exercise.
    o the RMSG should be aware that detailed assessments are not only initiated as a result of a prioritisation exercise and further cases need to be considered for the operational processes.

- as part of the provided prioritised CRs, the CRG would like to provide a preference to the RMSG about which release they may be implemented in and give other relevant elements for the RMSG's release scoping exercise.
- after the detailed assessment on a Change Request is available, the CRG should be consulted for the functional aspects before it is shared with the steering level.

Operational handling of UNIT and FAMT

Currently, changes of Fractional Digits (FDs) for securities denominated in units as a result of the update of the Settlement Unit Multiple (SUM) can be processed by T2S in a fully automated way, as a consequence of the Change Request T2S-0538-SYS (Change of fractional digit of SUM of securities).

However, the Change Request 538 does not address the following cases:

- Changes of denomination currency for securities denominated in face amount (FAMT).

- Changes of Settlement Type (ST): i.e. a change from FAMT to UNIT or vice versa.

For these cases, a manual intervention by the T2S Operator is still required.

Among the above-mentioned cases, only the changes of the denomination currency without a change of FD are frequent.

The 4CB presented their proposal for a solution for this issue and their suggestion for a way forward to address the above-mentioned cases that are currently not addressed in a fully automated way. They informed that the proposed solution would be similar to the solution for the Change Request 538.

CRG decision: The CRG appreciated the 4CB proposed functional solution to address static data updates of the denomination currency for securities denominated in face amount and the changes to settlement type that trigger a FD increase or no FD change in a fully automated way.
The CRG acknowledged that the proposed automated solution would not cover the two rare cases involving decrease of fractional digits arising from either a currency change of face amount denominated security or from a Settlement Type change from unit to face amount and vice versa.

The CRG also welcomed that the 4CB offered to draft a Change Request, which would be presented in the 7th June 2017 CRG meeting. The cost of the Change Request would be borne by the 4CB.

Action points:
- The 4CB will draft the Change Request to address static data updates of the denomination currency for securities denominated in face amount and the changes to settlement type that trigger a FD increase or no FD change in a fully automated way (except for the agreed rare cases) for the CRG meeting on 7 June 2017.
- The ECB will inform the OMG about the CRG discussion on the topic and that until the implementation of the proposed Change Request, a Last level support (LLS) procedure would be

required in cases of currency change for a face amount security and for Settlement Type change from unit to face amount and vice versa.

Planning of detailed assessment for T2S Release 3.0

The 4CB presented their planning for the detailed assessment for CRs potentially to be included in R3.0. The detailed assessments shall be performed in two batches:

1. First batch: 26 June 2017 until 30 October 2017, consisting of
   a. CR612 related to ISO upgrade
   b. 6 CRs required for CSDR
   c. Potentially other CRs, depending on 4CB capacity, preferably CRs 528, 628 and 631
2. Second batch: 2 October 2017 until 8 December 2017, consisting of up to 10 CRs, depending on 4CB capacity. The 4CB suggested to assess CRs 519, 520 and 551 as part of the second batch.

The CRG was not very keen to include CRs 528, 628 and 631 in the first batch of assessments, mainly because of their comparably low business value. A preference was given to rather assess CR520 in the first batch instead, due to the fact that this CR received the highest business value in the previous prioritisation exercise and is considered highly relevant for the market.

In addition the CRG agreed to start the next prioritisation exercise in August/September 2017, in order to prepare a list of CRs to be presented to RMSG for future releases, assuming that the changes to the operational governance structure will be approved.

Action points:

- The ECB will ask the CSDR TF about the status of the Change Request T2S-0608-SYS (T2S should be enhanced to maintain and report types of financial instruments as described in the CSDR Level 2 Technical Standards)
- The 4CB will check if the Change Request T2S-0520-SYS (Add new fields to T2S messages sese.020, sese.024 and sese.025 needed for CA processing) could be considered for the first slot of the detailed assessment instead of the 3 Change Requests suggested by them (i.e. T2S-0528-SYS, T2S-0628-SYS, T2S-0631-SYS).
- The ECB will make a proposal for the planning of next prioritisation exercise which will be conducted over the summer. The CRG members will be invited to assign the business values for the new Change Requests and optionally reassess the business values assigned to the previous Change Requests.

Planning of T2S upgrade to the latest ISO version

The CRG was informed about the RMSG proposal to update to ISO 2017 version in June 2019, to update to ISO 2019 version in June 2020 and to start with the regular yearly upgrade to the latest ISO version in November 2020 (upgrade to ISO 2020 version). Thus, according to the RMSG assumptions, it means that there will be no ISO upgrade in T2S in November 2019.

Participant's organisation	Name of participant	
European Central Bank	Ms Karen Birkel	Chairperson
European Central Bank	Mr Alejandro Del Campo Roiz de la Parra	Rapporteur
European Central Bank	Ms Madhura Satardekar	
European Central Bank	Mr David Weidner	
European Central Bank	Mr Arpit Bhargava	
European Central Bank	Ms Assitan Diallo	
4CB	Mr Arno Friederich	
4CB	Ms Shkurtova Mariana	
4CB	Ms Wilma Jagomast	
4CB	Mr Dirk Beiermann	
4CB	Ms Anke Wagner-Gluth	
4CB	Mr Miguel Martinez	
4CB	Mr Victorien Goldscheider	
4CB	Mr Massimiliano Renzetti	
4CB	Mr Michael Jennings	
Danmarks Nationalbank	Mr Peter Toubro-Christensen	
Deutsche Bundesbank	Ms Melanie Gulden-Jesse	
Bank of Greece	Mr Yorgos Korfiatis	
Banque de France	Mr Christian Leboutet	
Banca d'Italia	Mr Luca Rissolo	
Banque centrale du Luxembourg	Mr Alexandre Briand	
Banco de España	Ms Anca Parau	
De Nederlandsche Bank	Mr Erik Beunen (via teleconference)	
Iberclear	Ms Pilar Sanchez	
Euroclear	Mr Dan Toledano	
VP Securities	Mr Kristoffer Kjelsoe Soenderlev	
VP Securities	Ms Susanne Hass	
Clearstream	Mr Markus Glück	
BBVA	Mr Daniel Saeta Martínez	
BNP Paribas Securites Services	Mr Giorgio Ferraro	
Deutsche Bank	Ms Britta Woernle	
LCH Clearnet	Mr Pierre Peczi	