19 May 2017
Revised DRAFT

Proposal for

Collateral Management Harmonisation Activities (CMHAs) of AMI-SECO

0.   Introduction

In its March 2017 meeting, the AMI-SeCo agreed to foster the integration and efficient functioning of collateral management and invited to HSG to establish a comprehensive list of collateral management harmonisation activities[1].

This note identifies a preliminary list of key harmonisation activities to foster an efficient functioning of collateral management that could merit further analysis. They are referred to as collateral management harmonisation activities (CMHAs) and are largely based on work by COGESI (on collateral messaging and related processes to improve mobility). They also take into account aspects that may be relevant in the context of the Eurosystem's investigations for a Eurosystem Collateral Management System (ECMS). The preliminary list of CMHAs is the starting point for further analysis, which could lead to a revised/final list of CMHAs. The revised/final list will then be the basis for subsequent work on identifying market standards and/or best practices. The methodology for this further work to arrive at standards/best practices will be explained in a separate note.

The CMHAs are related to impediments to an efficient use of collateral across financial markets and are related to operational barriers/problems in the messaging of collateral management activities and collateral mobility. Other barriers/problems to post-trade arrangements of financial markets in Europe also play a role, such as legal/regulatory barriers, but they are covered by other initiatives (i.e. in the context of the Commission's Capital Markets Union and European Post Trade Forum[2]).

This note is structured as follows: Section 1 proposes the terminology to be used. Section 2 provides explanations for the CMHA identified. Section 3 outlines which next steps could be taken. The Annex provides an overview of the proposed CMHAs in a table.

The preliminary list of CMHAs will be presented in the July 2017 meeting of AMI-SeCo. It is assumed that, following the AMI-SeCo discussion in July, the proposed CMHAs will have to be explored and explained in more detail in order to arrive at a robust list of CMHAs. At the current juncture, i.e. prior to the AMI-SeCo discussion in July, the focus of the HSG should be on the explanations of the activities. Afterwards, the sections on terminology and overview will be reviewed.

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[1]   In particular, the AMI-SeCo agreed on the following: "Based on the COGESI work on collateral management harmonisation and also taking into account the ongoing work on ECMS harmonisation, the AMI-SeCo, with the help of the HSG, will establish a comprehensive list of collateral management harmonisation activities, similar to the approach followed by the AG in the early stages of defining the T2S harmonisation agenda. This list of collateral management harmonisation activities should aim to describe clearly and concretely i) the identified barrier [to the efficient functioning of collateral management] covered under the activity, ii) the objective of the activity, iii) the deadline for compliance with the standard or best market practice (after having been endorsed by the AMI-SeCo) and iv) the relevant actors for defining, monitoring and implementing the endorsed rule (standard/best market practice)."

[2]   [Link to EPTF report to be added]

1. Terminology/ conceptual framework

The terminology and concepts to be used in the context of the CMHAs should be clearly defined, and at a later stage a glossary and methodology will be developed on collateral aspects relevant for different levels and parties in trade/post-trade processes of financial markets. For now, the terminology/concepts focus only on "collateral management" (while acknowledging that the terminology will be further developed and other aspects in a trade/post-trade process also play a role in the use/mobilisation of collateral):

- **Collateral management services**: services to handle a variety of collateral-related functions, including but not limited to, information on collateral holdings, the optimisation or allocation of collateral and collateral transformation services (CPMI 2014)[3]. In addition, also standard custody/settlement services may be provided for collateral management (and for this purpose these services may have some particularities/adaptations for collateral management). Collateral management includes[4]:

    - **Bilateral collateral management**, in which the market participants (or their agents) themselves select/maintain the securities in their accounts which are to be delivered as collateral.

    - **Tri-party collateral management**, under which collateral management is outsourced to a service provider (Tri-Party Agent). Once informed of a transaction between two market participants, the tri-party agent selects a basket of collateral from the account of the collateral giver, the contents of which fall within eligibility criteria pre-defined by the collateral taker and delivers the selected collateral to the collateral taker against payment. The tri-party agent then maintains the value, quality and performance of the collateral.

- **Market participants and providers**: The following main parties are involved in collateral management:

    - **Collateral management service providers (CMSPs)**: are typically custodian banks and (I)CSDs that provide collateral management services to other market participants (CPMI 2014).[5] This may include tri-party agents. In addition, CCPs could also provide collateral management services to market participants[6].

    - **Users of collateral management services (UCMS)**: collateral takers and collateral givers (e.g. banks, NCBs, CCPs).

- **Priorities**: The following preliminary distinction in priority is made for CMHAs:

    - **Priority 1**: are activities that are (1) directly related to the markets/market participants that have migrated to T2S, i.e. involving the Eurosystem, CMSPs and UCMS in T2S markets; (2) necessary for the safe and efficient functioning of financial market infrastructures and collateral management arrangements in T2S markets; and (3) feasible to be implemented in line with [the timing of] the Action Plan on Building a Capital Markets Union (CMU) of the European Commission. For example, these activities may cover counterparty interactions with the Eurosystem for central bank operations in T2S

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[3] Source: "Developments in collateral management services". Committee on Payments and Market Infrastructures (CPMI), September 2014

[4] Source: "FAQs on Repo" International Capital Market Association, February 2013/ amended December 2015

[5] Source: "Developments in collateral management services". Committee on Payments and Market Infrastructures (CPMI), September 2014.

[6] CCPs often provide the following services: valuation, eligibility checks, concentration checks, outstanding instructions such as permanent cash balances, collateral optimisation (use securities first and automatically return cash). In addition, services keep evolving towards more sophisticated services

markets. They also may cover market operations in T2S markets involving UCMS and CMSPs (e.g. in accepting, lending/repo, or exchanging collateral).

- **Priority 2**: are activities that are not directly related to market infrastructures/collateral management arrangements in the markets that have migrated to T2S, i.e. these activities involve CMSPs and UCMS interactions which are beyond the activities in T2S markets and/or feasibility/time considerations of priority 1. For example, these activities cover participation of UCMS and CMSPs in global collateral markets and across jurisdictions (involving UCMS/CMSPs beyond T2S markets), e.g. sourcing of collateral from multiple global venues to TPAs or other international/ICSD initiatives to improve/automate the use of collateral.

The implementation tools will be defined at a later stage to determine whether an activity becomes a "market best practice" or "harmonisation standard"[7]. These market best practices/harmonisation standards should then supersede any other/current market practices or standard. The different implementation tools (standards/best practices) will be further explained in the methodology, in view of their role at a later stage in the implementation and monitoring process.

2. Explanations of the of collateral management harmonisation activities (CMHAs)

This section provides general explanations of the CMHAs[8], i.e. it explains what the activity is about and why these activities could be considered for promoting efficiency through harmonisation on collateral management (barrier/problem). Some of the activities need further clarification/input to determine the relevance and suitability for further work on harmonisation. When clarifying the activity and related problems, it is needed to specify the category which the process (and the problem) falls in. This will then contribute towards the potential solution. There are three key categories:

- *General settlement and custody process*: The activity/problem applies to collateral management activities but also to standard/other settlement and custody activities. The solution should focus on both collateral management and settlement/custody processes (e.g. the existing settlement and custody standards and market practices do not exist, are incomplete, are not applied, etc).
- *Collateral management modification of a general settlement and custody process*: The general settlement and custody processes exist, but they are carried out in a slightly different way in order to meet the needs of collateral management (e.g. there is no common standard/market practice on how the divergence should be processed. There is no standard or market practice or multiple market practices possibly depending on the kind of collateral management). The solution should focus on a common modification of existing settlement/custody processes for collateral management.
- *Specific collateral management process*: There is no equivalent in general settlement and custody processing. The solution should focus on specific processes for collateral management.

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[7] Market best practice: This is an AMI-SeCo recommendation to be endorsed and properly communicated by the community of stakeholders (i.e. on the ECB website. Like in T2S, where best practices for activities may be relevant for T2S markets but are not defined as a harmonisation standards (see e.g. the T2S Best market practice on "Clients of the CSD participants")

Harmonisation standard: This would be an AMI-SeCo endorsed requirement/specification that is expected to be used in accordance with the agreed harmonisation methodology

[8] For general information on collateral mobilisation/use, see also "Collateral Fundamentals" from Collateral Initiatives Coordination Forum by ICMA (http://www.icmagroup.org/assets/documents/Regulatory/CICF/Collateral-Fundamentals-7Nov2012.pdf)

The CMHAs are grouped in 4 main areas. The sequence/order of the key areas could also be changed at a later point in time, after additional analysis of the individual activities confirmed the necessity for the activities:

1. **Collateral messaging**: Harmonisation of messaging standards (ISO20022).
2. **Collateral Dynamic and Static Data**: Harmonisation of data transmission (content/fields) and consistent usage of data/identifiers.
3. **Collateral operating frameworks** (business processes): Harmonisation of the interaction/ use of messages between collateral management service providers (CMSPs) and the users of collateral management services (UCMS).
4. **Non-euro collateral**: Harmonisation of procedures for non-euro collateral.

1. Collateral messaging

General observations on collateral messaging: [based on background information from COGESI]:

1) Message type and format may change in each execution flow (i.e. processing involving venue, institutional, agent, CCP and CSD with different content and formats).
2) Repo product definitions/specifications are included in initial documentation and onboarding but it is not used to drive lifecycle consistency from venue into downstream processing (unlike e.g. derivatives).
3) Most UCMS currently use SWIFT MT messages to send information to agents/CMSPs for processing, which do not have the capacity to deal with some new required attributes (e.g. LEI, UTI).
4) The new ISO20022 (MX) messages should be the target standard (in view of T2S and regulatory requirements) and many FMIs committed to implement it, but most UCMS are not (yet) using this format, relying instead on agent conversion processes into FMIs.
5) The ISO20022 framework needs to be evolved to fully capture the repo product[collateral management needs] and allow for a consistent identification of repo [collateral] throughout the post-trade process

CMHA (1)   Messaging for triparty collateral management

Harmonisation activity:
UCMS and CMSPs (TPAs and (I)CSDs) should use harmonised ISO20022 messaging for triparty collateral management
Problem description
The triparty collateral management involve a series of specific[9] triparty messages to manage high volumes of collateral transactions. The triparty messages are currently in ISO 15022, but they are not used consistently (See Box 1 regarding differences in content and use of triparty messages). It is noted that as of yet there has been no triparty collateral management messages developed in the ISO20022 library but the development of such messages are anyway a necessity to facilitate general securities industry use of the ISO20022 standard.

Box 1: *Overview of triparty messaging*
Currently, most institutions use triparty collateral management messages based on the ISO 15022, e.g. involving triparty messages for trade details (MT527), status and advice (MT 558) and exposure
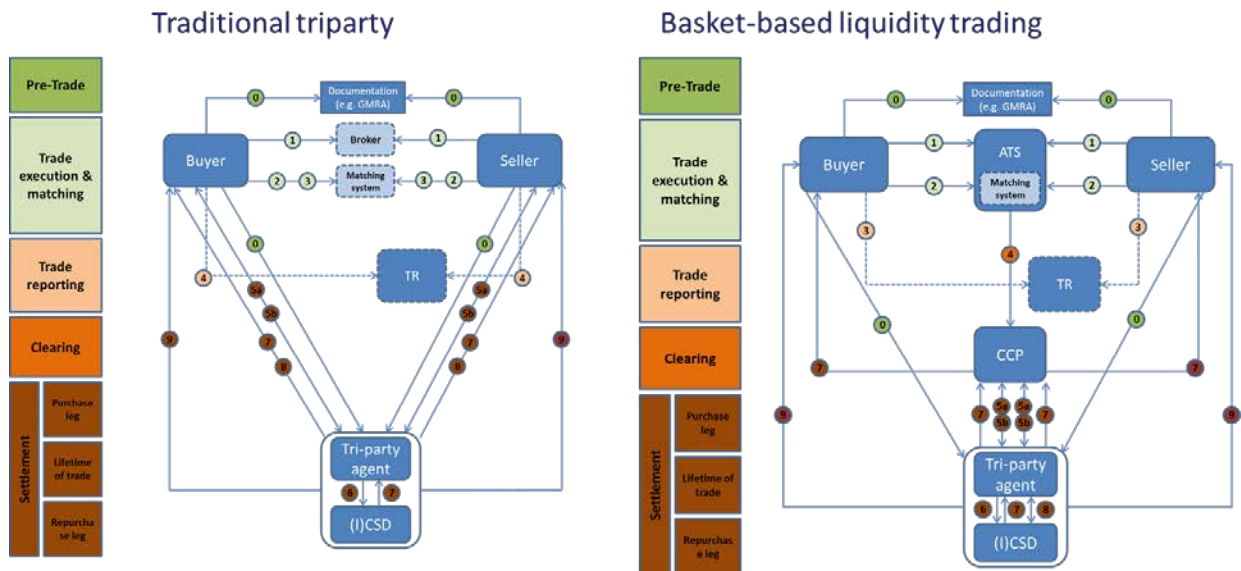
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9   Some steps in the process also involve non-specific triparty messages which are not covered in this sub-section, i.e. on settlement and corporate actions. (i.e. Settlement instructions are generated by the TPA to the (I)CSD to instruct the movement of collateral following the collateral allocation and management process. Settlement status instructions provide feedback from the (I)CSD on the settlement instructions, including validation, matching, and execution status reporting). The messages on securities settlement are not covered as it is already addressed in T2S markets. The messaging on the TPA for corporate actions (CA) is covered in the sub-section xxx on corporate actions (i.e. the TPA's messaging on CA notifications, instructions and execution reporting).

statement (MT569)

A distinction could be made between

- Traditional triparty: This involves the UCMS and a TPA at the start and during the trade.
- Triparty with basket based liquidity trading: This involves the UCMS, ATS, CCP and a TPA.

There are other triparty types/models (such as SIX triparty) but this is not covered

Examples of triparty messages (*traditional triparty*)

Messages (and their use) differ for instructions between the UCMS and the TPA both at the start of the trade (initiation) as during the life of the trade, including new instructions, modifications and cancellations. The messages also include feedback (status updates and reporting) from the TPA to the UCMS on collateral instructions.

Examples of messages from interaction between Eurosystem and TPAs (on cross-border basis)				
		CBF	CBL	EOC
Increase	Request	MT527	MT527	MT527
	Confirmation	MT558	MT558	
Decrease	Request	MT527	MT527	MT527
	Confirmation	MT558	MT558	
Settlement status	Settlement status	N/A	N/A	MT558
Revaluation	Intraday revaluation	N/A	MT569	MT569
Cancellation	Cancellation	N/A	N/A	MT527
	Confirmation	N/A	N/A	MT558
Closure	Closure	N/A	N/A	MT527
	Confirmation	N/A	N/A	MT558
	Statement	N/A	N/A	MT569
Compulsory Decrease	Revaluation	MT558	MT569	MT569
	CA	MT558		
Collateral suspension	Instruction	MT527	N/A	N/A
	Termination	MT527	N/A	N/A
Unilateral removal	Unilateral removal	N/A	MT599	N/A
	Confirmation	N/A	MT599	N/A
Reporting	End of day on flows	MT558	MT536	MT536
	End of day on stocks	MT569	MT569	MT569
Technical receipt	After increase	MT558		
	After decrease	MT558		

Proposed follow-up

Further analysis is needed to review the key differences on the use of TPA's messages (types, content, etc) with the aim of identifying ways in which the different messages with the TPAs could be harmonised based on ISO 20022 messaging standard. QUESTIONS:

(1) Is this a specific activity for collateral management?
(2) Should the status be checked regarding the ISO20022 messaging for triparty?
(3) Next steps to harmonise messaging used for allocations of collateral on a triparty basis?

CMHA (2)   Messaging for bilateral collateral management [FURTHER INPUT NEEDED]

Harmonisation activity:

UCMS should use harmonised ISO20022 messaging for bilateral collateral management
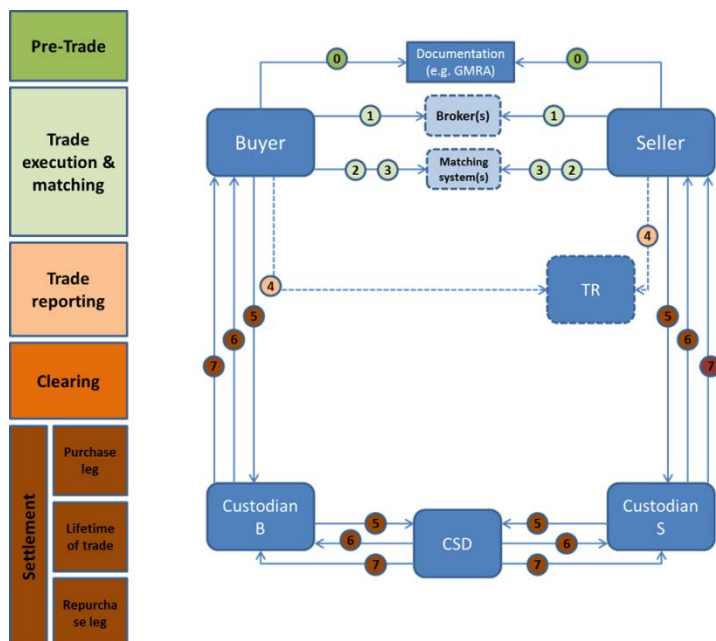
Problem description

Currently, different messaging solutions exist in the execution flow for bilateral collateralisation, i.e. based on ISO 20022 XML or other standards (ISO15022, SWIFT proprietary, FIX, local proprietary standards). QUESTIONS:

- What should be the scope of harmonisation? Should it cover the collateral specifications (e.g. repo product definitions), which are included in initial documentation but not used to drive lifecycle consistency from venue into downstream processing? Should it cover other areas (e.g. in trade execution and matching, reporting, etc).

- What are the common messaging based on ISO 20022 that would foster automation e.g. negotiation, dispute and agreement, substitution, and other communication for bilateral collateralisation processes? What messages would enable standardised data exchange between UCMS, facilitating straight-through-processing and improving the efficiency and transparency of interaction across borders?

Box2: Overview of messaging for bilateral collateral management

[Please provide feedback on the scope of the messages to be covered.]

Proposed follow-up

Conduct further analysis to review the scope of the messages. QUESTIONS

(1) Is this a specific activity for collateral management?
(2) What should the messaging cover for allocations of collateral on a bilateral basis (e.g. affirmation or confirmation, matching systems to be covered)?
(3) Should the messaging for ATS/CCP be covered?

It is noted that the settlement instruction (to CSDs) is already ISO20022 in T2S.

CMHA (3)   Messaging for Corporate Actions (CA)

Harmonisation activity:
UCMS and CMSPs should use harmonised ISO20022 messaging for corporate action events. The messaging should be in line with agreed standards/practices (i.e. CA market standards, T2S CA standards and upcoming CMU/EPTF work)

Problem description
As explained in the EPTF report [ADD LINK], market standards have already been agreed and endorsed by the industry (both for CA Processing and General Meetings) and the process for implementing the market standards for CA Processing is well advanced in major markets. The EPTF proposed that the process of implementing the two sets of market standards should be continued and finalised.

On the basis of these market standards, there is a need to harmonise the messaging of CA to the greatest extent possible in order to ensure harmonised management of collateral (and related risk e.g. situations of under collateralisation). As the information necessary for CAs relies upon data from various different CSDs there is a need to build common messages for interaction between UCMS and CSDs to accommodate the differing levels of data provided by CSD (See Box 3 on CA messages).

In addition, CA messaging is also relevant if a CSD has accepted to be an Investor CSD in another CSD (CSD link), because the Investor CSD has in principle accepted to process CAs for assets held via links. Depending on the link set-up (FOP or DVP), the CSD could also interact with other parties, such as cash settlement agent for processing of corporate actions (if the CSD would not conduct CA processing themselves).

Box 3: Overview of CA messages
There is diversity in the use of CA messages. Most UCMS/CMSPs use MT564 message for CA notification, but greater heterogeneity lies at the other levels, e.g. CA confirmation is not always used with an MT566. In general, the standard set of messages in the table below is not used (consistently) across UCMS/CMSPs.

Message Name	Message Type	Message Format	Purpose of Message
Corporate Action Notification	MT564	ISO15022	provides advance notification of upcoming CAs
Corporate Action Instruction	MT565	ISO15022	provide information to custodian on decisions for elective CA events
Corporate Action Confirmation	MT566	ISO15022	provides confirmation funds have been received/used for reconciliation purposes
Corporate Action Status and Processing Advice	MT567	ISO15022	provides an update on the status of a corporate action event
Corporate Action Narrative*	MT568	ISO15022	provides additional information on CA event/requests details of underlying beneficial owner
Free Format Message	MT599	ISO15022	free format message used to receive ad-hoc information
General Financial Institution Transfer	MT202	ISO15022	used to transmit funds to UCMS
Financial Markets Direct Debit Message	MT204	ISO15022	used to debits funds from UCMS e.g. in case of negative cash flow
Confirmation of Debit	MT900	ISO15022	sent to UCMS to confirm debit of account

Confirmation of Credit	MT910	ISO15022	sent to UCMS to confirm credit of account
Statement Message	MT950	ISO15022	provides details of account balance

Some markets will adopt the ISO 20022 format for the processing of CA events. This is an opportunity to further consider and identify the common data elements necessary for the creation of the CA event in ISO 20022 and to ensure that this information is available from interactions with CMSPs in ISO20022 format.

Proposed follow-up

Further analysis is needed to review the key messages involved in the handling of corporate actions. Existing work should also be leveraged in this respect, i.e. by the T2S harmonisation work stream and CMU/EPTF.

The analysis should include details on (i) the CA event types that should be handled; (ii) the data source used to receive information on upcoming CAs (see also CMHA on data); (iii) the message types used and purpose of each; (iv) local procedures adopted currently in the processing of CAs and (v) identification of information not currently provided but which may be available in the CSD. Once a clear picture of the data needed for processing each event type by UCMS has been determined it would then be assessed how UCMS best receive to this information. Details should also be collected on how proceeds are processed and passed on to (or, collected from, in the case of negative flows) the beneficial owner. In addition, UCMS as collateral taker should be invited to indicate whether they receive and retain CA proceeds (ensured by legal provisions).

The fact finding should be broad scope analysing each of the CA events as defined by ISO. Following a detailed fact-finding exercise this list should be refined to a narrower subset of CA events deemed relevant to collateral management. Further information should be collected to document the CAs.

QUESTIONS
  (1) Is this a general activity for settlement and custody?
  (2) Should the status be checked of the use of ISO20022 messaging for CA (which are relevant to the efficient management of collateral)?

CMHA (4)   Messaging for tax procedures (i.e. Messages for withholding tax procedures)

Harmonisation activity:

UCMS and CMSPs should use harmonised ISO20022 messaging for sending information related to tax processes and status of UCMS (i.e. information on beneficial owner, UCMS tax exemption status). The messaging should be in line with agreed market standards (i.e. T2S Harmonisation activity on Withholding tax procedures and upcoming CMU/EPTF work)

Problem description

As explained the EPTF report [ADD LINK LATER], inefficiencies in withholding tax (WHT) procedures have been identified as a barrier to efficient cross-border investment and securities. The EPTF report proposes a "common harmonised process for WHT collection and reliefs, based on standard rules and forms in application of the relevant Double Taxation Treaties". The European Commission also launched work, which focuses on best practice and a code of conduct for more efficient withholding taxes procedures. [TO ADD DETAILS LATER][10]

On the basis of this proposed harmonised set of best practices and code of conduct (which is expected to be adopted in the next 12 months), there is a need for WHT messaging so that UCMS and CMSPs could agree a standardised way to exchange information on the existence of the relevant taxation forms and statuses (on withholding tax) for certain assets used as collateral. Harmonised messages should lead to efficient handling of withholding tax-related information for collateral management. For non-euro assets, there is also a need to identifying possible harmonised ways to interact with (I)CSDs and possibly the foreign central banks (e.g. US) on information related to taxes on coupon payments and role played by UCMS for those assets i.e. US assets.

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[10]   See Commission's communication on "Capital Markets Union - Accelerating Reform" 14 September 2016. As background, the Commission "Non-paper on the withholding tax for discussion at the Expert Group on barriers to free movement of capital – 28 September 2016"

A full set of information is in particular needed in messages for those UCMS which allow the use of collateral (incl. the processing of mobilisation requests) for 'undocumented' UCMS[11]. These 'undocumented' transactions require subsequent dealings e.g. of tax deductions from proceeds. UCMS choosing to reject (or queue) collateralisation requests for undocumented UCMS (e.g. due to internal organisational/legal constraints) would not need to use the full set of information in messages.

Box 4: Overview of messages for WHT procedures

Several messages are involved in WHT procedures. The table below gives an overview from the perspective of a UCMS as collateral taker (including its interaction with the collateral giver and local (I)CSD of the collateral taker). Collateral takers receive requests from their local (I)CSD to deliver information on beneficial owner, allocation information, etc. In most cases, the requests are simply passed on to the collateral giver, whereas in some cases the collateral taker prepares a specific request message to the collateral giver to obtain the information and then passes the received information to the (I)CSD. Reminders to provide such information – received from the (I)CSD– are sent sometimes via SWIFT or by surface mail to the collateral giver, or involve manual interaction. There are cases where collateral takers just forward the message received from the (I)CSD.

	Message Type	Purpose of Message
Receive and store information relevant for documenting a UCMS's tax status	tbc	Such information includes information on tax forms, tax authority certificate(s), allocation information , information on beneficial owner, whether a UCMS is "fully documented"/tax exemption, and whether the provided information is current/valid
Pass on relevant information on a UCMS's tax status to the local (I)CSD	tbc	There should be standardised exchange (e.g. SWIFT and e-mail) with (I)CSDs
Pass on information or requests for information from the local (I)CSD to the UCMS as well as to pass on responses from UCMS back to the relevant (I)CSD		Passing on (I)CSD information and requests, for example to identify the beneficial owner of certain securities holdings to the UCMS and to provide a response accordingly to the (I)CSD

Proposed follow-up

Further analysis is needed. QUESTIONS:
   (1) Is this a general activity for settlement and custody?
   (2) The status of the use of ISO20022 messaging for information on tax procedures should be checked? (the messages used in the different steps to handle information on WHT).
   (3) In some jurisdictions, UCMS (collateral givers) need to provide tax status documentation to (I)CSDs, via the relevant collateral takers, to receive tax rate discounts or tax exemption. Some NCBs also act as a qualified intermediary for certain tax authorities to withhold tax on some assets/for some UCMS on their behalf.

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[11] In certain cases, the collateral taker asks the collateral giver to provide the requested information on WHT (i.e. tax forms, allocation information, etc.). In these cases, the request for information is also required to be passed on to the beneficial owner; and may involve a confirmation of the beneficial owner of the assets. In the majority of cases, tax issues are related to assets of US/G10 issuers (i.e. Eurobonds). The need to provide tax forms is not dependent on specific asset types, and it may be needed for any type of issuer. UCMS that have provided the requested tax forms, etc., are considered "documented" UCMS. As a result, these UCMS may be exempted from withholding tax

CMHA (5)   Margining messaging

Harmonisation activity:
UCMS and CMSPs should use harmonised ISO20022 messaging for margining.
Problem description
Margin transfers involve a number of messages (see Box 5) and the format is currently either in ISO 15022 (i.e. for cash the MT202 and for securities the MT540-3), in ISO 20022 or in proprietary formats.
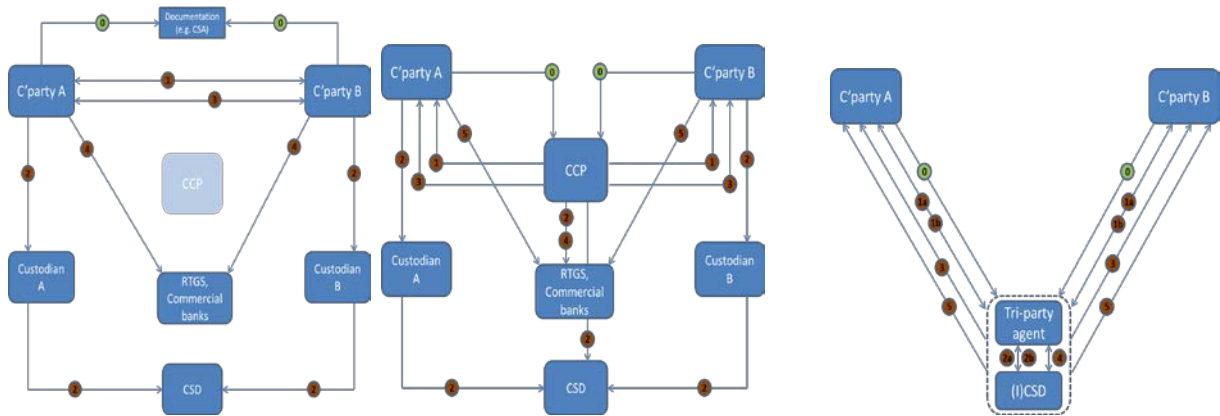
Box 5: Margin messaging
A distinction could be made for margin related to (1) bilateral, (2) CCP or (3) triparty.

(1) Bilateral: (2) CCP: (3) Triparty

Proposed follow-up
Further analysis is needed. QUESTIONS:
    (1) Is this a specific activity for collateral management?
    (2) Status of the use of ISO20022 messaging for margin should be checked?

CMHA (6)   Messaging from (I)CSD and TPA on fee/billing information

Harmonisation activity:
UCMS and CMSPs should use harmonised ISO20022 messaging to disseminate information on billing / fees.
Problem description
Currently, every UCMS receives an invoice with fee/billing information from its local (I)CSDs and its local TPAs with a total fee per (individual and omnibus) account for collateral held in the (I)CSD / TPA. In the future, CSDs/TPAs could be requested to provide information on the total fee via a standardised ISO20022 message or xml variant. This allows UCMS to have standardised data to process/allocate/ transmit to counterparties.
[TO ADD FURTHER INFO]
Proposed follow-up
Further analysis is needed. QUESTIONS:
    (1) Is this a modified activity for collateral management?
    (2) Status of the use of ISO20022 messaging for fee/billing information should be checked?

CMHA (7)   Messaging for reporting

Harmonisation activity:
UCMS and CMSPs should use harmonised messaging for reporting based on the ISO20022 standard
Problem description

[Reporting is related to regulatory requirements (e.g. reporting formats in EMIR, SFTR and MiFIR/MIFIDII[12]) and unique identifiers (ISIN, LEI, UPI, UTI)]

[The SFTR entered into force in early 2016, but the regulatory technical standards (RTS) which will include the details on the reporting rules of the SFTR are currently still being finalised (expected fourth quarter of 2017, followed by a one year implementation period). The ICMA/ERCC and Securities Lending Association (ISLA) have started to consider the implementation challenges and solutions related to the reporting requirements of the EU SFT Regulation (SFTR) from an operational perspective.][13]

Proposed follow-up
Further analysis is needed. QUESTIONS:
    (1) Is this a modified activity for collateral management?
    (2) Should the analysis cover messaging for SFT reporting?

CMHA (8)   Collateral messaging for new participants in collateral markets (buy-side)

Harmonisation activity:
UCMS should use harmonised collateral messaging including new participants in collateral markets (buy-side).

Problem description: [From COGESI closing note - FEEDBACK WELCOME]
Electronic messaging is not always available for smaller and mid-size players (and is related to cost/benefit of setting up SWIFT/electronic messaging e.g. for buy-side). The industry should move together to electronic messaging. The timing and scope of participants will depend on cost-efficient solutions.

Proposed follow-up
Further analysis is needed. QUESTIONS:
    (1) Is this a general activity for settlement and custody?
    (2) Who are main actors (new participants)?
    (3) Is this in scope?
    (4) To what extent could it be merged with CMHA 1 on Collateral Messaging? (harmonised messaging based on ISO20022)

2. Collateral Dynamic and Static Data

CMHA (9)   Collateral data (including pool factor and other data elements)

Harmonisation activity:
Issuer (I)CSDs send up-to-date collateral data (including pool factors and other data elements) directly to UCMS through STP data feeds.

Problem description
At present, practices differ significantly on the data sources for pool factor information used in the valuation of mobilised ABSs and some non-ABSs having pool factors. Also other data elements required for collateral management are collected from different sources. For example, CSDs or external data providers may provide UCMS information on unit size and minimum amounts. Some sources may provide intraday updates, while other sources not (which could result in different/conflicting data).

Instead, it could be considered relying on an appropriate and up-to-date data source which may also provide intraday updates. The issuer (I)CSDs are deemed the most reliable source for up-to-date pool factor and other information. However, the settlement confirmation messages (in particular in a

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[12] MiFID II requires most OTC derivatives to have an ISIN (all derivatives tradable on a venue including SI),

[13] The considerations are related dual sided reporting to Trade Repositories in new ISO 20022 standard reporting format, reporting of some 'action types' (to be finalised), T+1 reporting, inclusion of Unique Trade Identifier, collateral updates/revaluations, margin call reporting, re-use reporting. ICMA turned to the SFT vendor community to request their partnership in finding streamlined and efficient ways of taking the industry forward (see ICMA website)

TARGET2-Securities context) may not quote an asset's pool factor and other information and therefore another reliable basis for data is needed (e.g. to value assets at the time of their mobilisation).

The issuer (I)CSDs could be requested to provide up-to-date pool factor information for all eligible ABSs (and some non-ABSs having pool factors) through a dedicated data feed received towards the end of the business day (d-1) for use on the next business day (d). The data feed would be expected to provide up-to-date pool factor information that takes into account the effect of corporate action events on the next business day (d). For collateral, if a corporate action notification message is received from a(n) (I)CSD, it will be considered as providing the most up-to-date pool factor.

Proposed follow-up

Further analysis is needed. QUESTIONS:
   (1) Is this a modified activity for collateral management?
   (2) Investigate what type of pool factor data for ABS.

CMHA (10)   Consistent storage/management of collateral information (SSI/ static data)

Harmonisation activity

UCMS should have a robust framework for the proper storage and management of collateral information (standard settlement instructions (SSI).

Problem description: [From COGESI closing notes FEEDBACK WELCOME]

At cross-border level, there is a risk of unmatched transactions because of manual intervention/repairs to have correct information on place. This may result in (i) lower efficiency in the use of collateral, (ii) risk for settlement fails and (ii) market risk of having to settle the transaction on the next value date. This issue could be aggravated in the future with the increased availability of multiple settlement and custody locations for a multitude of assets.

There is a need to have a robust framework to align information on static data (e.g. UCMS account details) with the dynamic data (received in collateral instructions) in order to ensure efficient settlement and prevent delays, (i.e. by proper management of standard settlement instructions (SSI)). A proper storage and management of information, with common procedures and taxonomy in place to avoid fails and market risk, should also be promoted. A harmonised approach is needed on this part.

Potential solutions could be use of some central utilities (e.g. Omgeo of DTCC) where (SSI) data/information is centrally managed. Collateral market participants could consider how to ensure that common procedures and taxonomy are used, which could facilitate cross-border inventory management.

Proposed follow-up

Further analysis is needed. QUESTIONS:
   (1) Is this a general activity (also for settlement and custody)?
   (2) Is the analysis valid for non-T2S markets?
        -    Is it to have common (static and dynamic) data *in non-T2S markets?*
        -    To have consist collateral information *across asset classes (and FMIs)?*
        -    To have collateral information to *meet new regulation?*
   (3) How will this ensure settlement efficiency and prevent delays?
        -    Is it to have real-time transparency into collateral exposures?
   (4) What data/information? (static data with the dynamic data received in collateral instructions)
        -    From/to data providers or (I)CSDs:
             -   Information from data provider or CSDs on securities for valuation of assets
             -   Information from CSDs / data provider on securities properties, also related to information on record date, corporate actions, etc.
        -    From/to TPAs:

             -   List of eligible assets
             -   Prices for eligible assets
             -   Potential Own-Use Pairs List
             -   Close links data

- From UCMS?
  - Reference data: e.g. data on eligibility, concentration and haircut data?
  - Dynamic data e.g. data on accruals and interest payments

3. Collateral operating frameworks (workflow/interface/exchanges)

CMHA (11)   Managing of multiple places of safekeeping and settlement in bilateral collateral management (workflow/interface)

Harmonisation activity

UCMS and CMSPs should use harmonised processes (procedures/workflows) for inventory management functions (related to managing multiple places of safekeeping and settlement).

Problem description [From COGESI closing notes - FEEDBACK WELCOME]
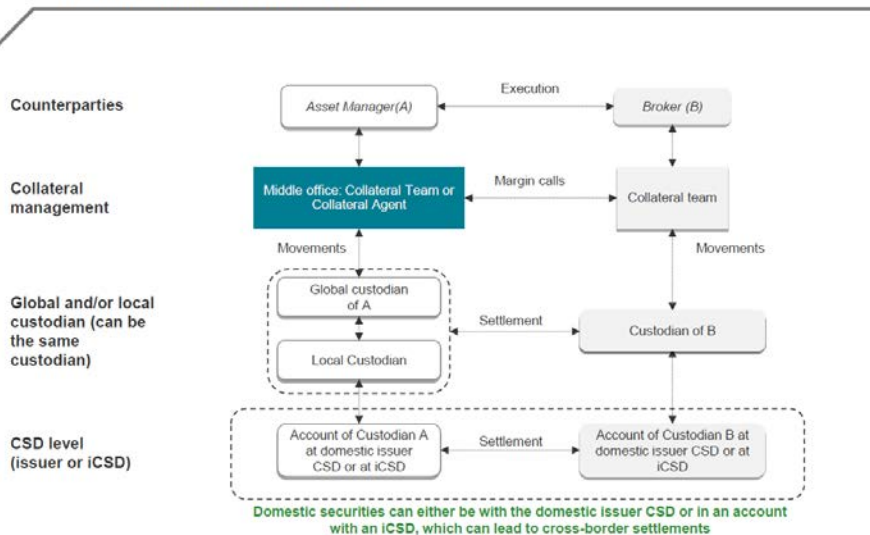
Market participants have to increasingly cope with cross-border complexity in [collateral] process management, i.e. multiple settlement locations (where to deliver and where to receive when assets are in different ICSDs and CSDs). The fact that securities will have multiple places of safekeeping/settlement will put additional pressure on collateral managers' inventory management functions. This may be related to non-T2S markets (because T2S has already a place of settlement indication in the message).

The main evolution could be (i) that UCMS should provide/exchange CMSPs information to track/identify the multiple places of safekeeping and the preferred settlement chain (place of settlement) in advance of initiating the transaction involving non-T2S markets], (ii) that (I)CSDs and intermediaries in non-T2S markets should agree on adaptations needed to receive sufficient information from UCMS on safekeeping/settlement.

Box6: Example of workflows [to source/move collateral] in bilateral collateral management
Collateral workflows must be in place e.g. for bilaterally cleared trades.

Source: BNPP

Proposed follow-up

Further analysis is needed. QUESTIONS:
  (1) Is this a modified activity for collateral management? Or a general settlement and custody activity?
  (2) Is this relevant for non-T2S only?

- Collateral movements: T2S has already a place of settlement indication in the message
    (3) Is it a requirement on the message fields themselves or external information flows apart from sett messages?
- What workflows/interfaces are to be streamlined/ harmonised (bilateral)? e.g. workflows bilateral margin-call processing, confirmations, dispute resolution.
    (4) Is this connected to CMHA13&14]?

CMHA (12)   Source/move collateral to/from triparty agents (TPA)

Harmonisation activity

TPAs should have harmonised processes for cross-border sourcing of assets to/from the custody network of the TPA (involving non-T2S markets).
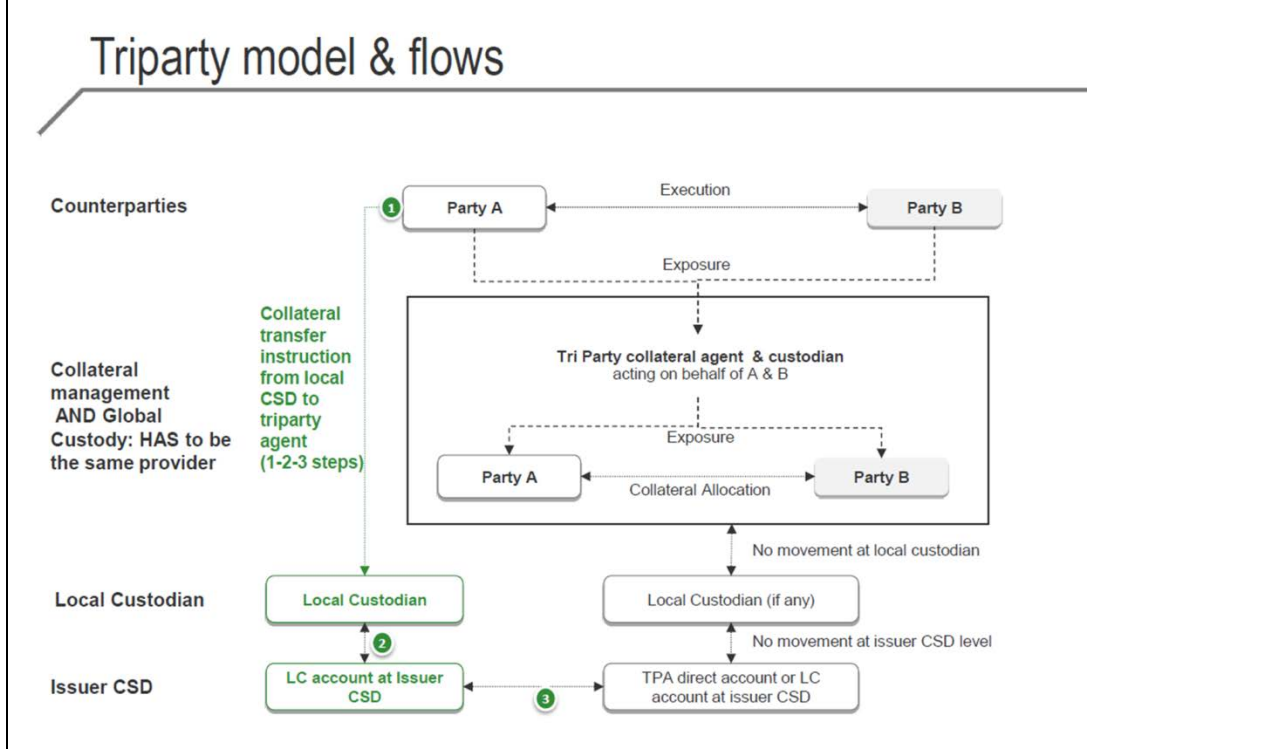
Problem description [From COGESI closing notes - FEEDBACK WELCOME]

Complexity for cross-border transactions mainly appears when it is necessary to source/move collateral from domestic markets to the custody network of a triparty agent. Triparty collateral management services are built on "internal book transfer" and are therefore not dependent on settlement process at (I)CSD level. Most of the main players are equipped to source/move collateral from domestic markets but this may not be the case for smaller actors such as buy side who are heavily relying on their agents to perform these tasks. It is mainly related to sourcing/moving of collateral in non-T2S markets (and the interaction with T2S markets).

Some TPAs have however already developed automated sourcing mechanism to select collateral in some external custody locations and automatically transfer these assets towards dedicated collateral sub-custody accounts, therefore extending the automated selection process of collateral to external pools of collateral (i.e. other (I)CSD, local agents, custodians)

Box7: Example of workflows to source/move collateral to/from TPA
Collateral operations and technology must be in place to accommodate all of the workflows for triparty trades

Source: BNPP

Proposed follow-up

Further analysis is needed. QUESTIONS:
  (1) Is this a specific activity for collateral management? (or general)
  (2) Is this in relation to intraday collateral relocation?
  (3) Is this related to cut-off's CMHA18 (including operational procedures of links with external (Non-T2S) CSDs?

CMHA (13)   Data exchanges via interfaces on asset information

Harmonisation activity

UCMS and CMSPs should use harmonised processes via interfaces to ensure harmonised data exchange.

Problem description

[This is related to the CMHA 9 on static and dynamic data, i.e. it should describe the processes related to the exchange of static and dynamic data identified in CMHA 11]

There are multiple processes/workflows for data exchanges between the UCMS and external systems (e.g. (I)CSDs, data providers) including:
  A. External data feeds:
  - Information from data provider or (I)CSDs on securities for valuation of assets
  - Information from data provider or (I)CSDs on securities properties, also related to information on record date, corporate actions, etc.
  B. TPA
  - List of eligible assets
  - Prices/valuation for eligible assets
  - Potential Own-Use Pairs List
  - Close links data

Currently, some TPAs may perform collateral valuation only once in a day, while CCPs are required by EMIR to value near real time or demonstrate that the CCP can manage the associated risks. The frequency in collateral valuation could be considered, as it is a barrier to the usage of TPAs by some CCPs.

Proposed follow-up

Further analysis is needed. QUESTIONS
  (1) Is this a specific activity for collateral management?
  (2) Analyse which workflows are relevant in the message provided by the (I)CSDs with a view to receiving relevant information via a ISO20022 message or standardised data feed
    - Could be part of other CMHAs on workflows, i.e. bilateral and triparty (CMHA 12 and 13)? On the other hand, this CMHA 14 could be kept to focus on workflows on data which are outside bilateral and triparty workflows CMHA 12 and 13.

CMHA (14)   Data exchanges on fee/billing information (schedule-periods)

Harmonisation activity

CMSPs should offer harmonised data exchanges/processes for fee/billing periods (across all (I)CSDs, [TPAs]).

Problem description

Currently, every UCMS receives an invoice from its local (I)CSDs and its local TPAs with a total fee per (individual and omnibus) account held in the (I)CSD / TPA. There is no common fee schedule and thus no harmonised approach on when/how to receive this information, which also influences when/how the information on charges is subsequently remitted to UCMS (from collateral taker to collateral giver).

It could be foreseen that (I)CSDs/TPAs to implement standard billing periods i.e. each invoice should cover a calendar month e.g. 1st - 31st of each month. Harmonised fee/billing periods (and harmonised messaging for fee/billing - see CMHA6) should foster the further automation of collateral management

functionalities, e.g. to produce harmonised processes for invoices and generate, in an automated way payments (from collateral takers to/from collateral givers).

Proposed follow-up

Further analysis is needed. QUESTIONS:
  (1) Is this a modified activity for collateral management?
  (2) Investigate the exact period to have a harmonised billing across all (I)CSDs for collateral held by the participants, for example 1st to 31st of each month?

CMHA (15)   Common triparty processes for interaction of TPAs with UCMS (for collateral allocation and risk control measures)

Harmonisation activity

TPAs should offer harmonised processes to UCMS for exchanging relevant data on collateral managed in the triparty collateral management systems (TPCMS), in particular related to collateral allocation and for risk control measures

Problem description

Differences in triparty market arrangements to interact with TPAs results in different UCMS procedures:
- For providing collateral via triparty arrangements: When using triparty arrangements of CMSPs with the Eurosystem, for example, there exist 3 cross-border arrangements (see box) and – in addition and on top of these – there are 4 different unique domestic models currently in use by the Eurosystem. So, there are 7 different triparty arrangements in use. These arrangements are similar in terms of the generic high-level workflow steps they employ but are very heterogeneous in terms of detailed use of messages as well as detailed workflows applied.
- For the receipt of intraday updates on changes in securities collateralising triparty global amounts to facilitate the application of intraday risk control measures by the UCMS.

Therefore, it should be considered to develop a single set of processes/procedures for providing information on collateral via TPAs (based on the ISO20022 standard – see CMHA1). Under the assumption that ISO 20022 messaging standards will be used (CMHA1), a single set of processes/arrangements for intraday updates should also be developed to facilitate the application of intraday risk controls.

Box 8: Triparty collateral management services on a cross-border basis with Eurosystem

Triparty collateral management services are supported (at a domestic level) by a number of Eurosystem NCBs, in some cases for many years, with their domestic counterparties in the context of Eurosystem credit operations. In addition, the Eurosystem has introduced a framework that also supports the use of such triparty services on a cross-border basis via the CCBM. This enhancement to Eurosystem collateral management services went live in 2014. Three models are supported by the Eurosystem on a cross-border basis:

Cross-border triparty collateral management arrangements via CCBM

Triparty Collateral Management models for Eurosystem	Notification deadlines *	Example of Central Banks using model...
Clearstream Banking Frankfurt-model 1	18h	Deustche Bundesbank,Banque centrale du Luxembourg
Clearstream Banking Luxembourg-model 2	17h	Banque centrale du Luxembourg,Deustche Bundesbank
Euroclear Bank, Euroclear France-model 3	TBD	National Bank of Belgium, Banque de France…

Proposed follow-up

Further analysis is needed. QUESTIONS:
   (1) Is this a specific activity for collateral management?
   (2) Investigate the high-level and generic steps related to triparty collateral management that would need to be supported by a UCMS?
   (3) Investigate the possibilities to receive intraday information on the securities collateralising triparty global amounts in order to allow for the application of intraday risk control measures?

CMHA (16)   Data exchanges for CAs processing

Harmonisation activity

CMSPs should offer harmonised CA processes for information exchange .

Problem description

There are currently different processes to receive information on CA from (I)CSDs and TPAs (e.g. processes and timing to inform on interest rate, payment date etc.). In addition to the proposed adoption of standardised ISO20022 messages for CAs (CMHA3), there could be a set of high-level harmonised processes (workflows), which should allow for harmonised information exchange. This would facilitate the handling the different CAs across (I)CSDs and TPAs.

One of the differences is related to the process to receive CA cash flows (processes currently may involve collateral taker or giver). In general, the UCMS (as collateral taker) should receive the cash flows, so that in case of undercollateralisation these proceeds could be used by the collateral taker. It should be ensured that proceeds are only paid out to the collateral giver when sufficient collateralisation is available. As next steps, common processes should therefore be considered so that the collateral taker always has the possibility to receive the cash flows (and is in control of the receipts from the collateral).

Another potential difference in processes is related to the revaluation of an asset, which could be linked to the moment when the actual cash payment of a corporate action event is received but it could also be at a different time. Since it would in practice not be feasible to have a revaluation for all CA event types generating payments at the actual payment, it could be considered that the revaluation of an asset takes place at different times depending on the CA event type.

Proposed follow-up

Further analysis is needed
   (1) Is this a modified activity for collateral management?
   (2) Investigate harmonisation to receive CA information
      - Is there a harmonised way/process to exchange CA information (involving (I)CSDs and TPAs). It will need to be determined which exact processes (workflows) are necessary for CAs, and if it involves the (I)CSD/TPAs or other sources including external data providers.

CMHA (17)   Data exchanges for tax processing

Harmonisation activity

CMSPs should offer harmonised processes for tax information exchange

Problem description

[This is linked to the current tax information activity (activity 4) in the list of messaging activities, but adds common processing for tax-related activity]. There are certainly tax messaging problems, but there are many more underlying tax process problems.

CMHA (18)   Collateral and settlement cut-off's times

Harmonisation activity

[CMSPs] should align the [settlement/collateral] cut-off's and times for collateral operations [in non-T2S markets?][14]

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[14] Settlement cut-off times (for CSDs), collateral cut-off times (for CCPs, central banks, intermediaries, etc)

Problem description
T2S will harmonise securities settlement cut-off in the euro area, but non-T2S markets and ICSDs will have different deadlines. Major collateral markets (e.g. in ICSDs) are moving to extended collateral cut offs for their real-time markets (up to 8.00 pm) while T2S value day is up to 6.00 pm. This creates frictions between non-T2S market and T2S market to mobilise freely collateral (see Box).

<table>
<tr><td colspan="8">Box 9: Overview of cut-off's times
The matrix below identifies the deadlines of main infrastructures. The (I)CSD deadlines do not take into account the operational buffer taken by intermediaries. The matrix includes free of payment instruction only (assuming STP instructions)
- (1)JGB / (2) Night time settlement from 19h30 -> 3h - realtime can start before if night time batch</td></tr>
<tr><td>Deadlines (CET)</td><td>Japan</td><td>T2S</td><td>Switzerland</td><td>UK</td><td>Clearstream ICSD</td><td>Euroclear ICSD</td><td>US (3)</td></tr>
<tr><td>Deadline for Settlement on SD</td><td>13h(1)</td><td>18h</td><td>18h</td><td>19h</td><td>20h</td><td>TBC</td><td>24h</td></tr>
<tr><td>Earliest time for Settlement on SD for value SD +1</td><td>-</td><td>19h30 on SD(2)</td><td>-</td><td>-</td><td>21h30 on SD</td><td>TBC</td><td>-</td></tr>
<tr><td>Bridge instructions CBL-EOC</td><td>-</td><td></td><td>-</td><td>-</td><td>17h25</td><td>TBC</td><td>-</td></tr>
<tr><td colspan="8">terminates before 3h then maintenance windows for 2 hours and realtime starts from 5h till 18h / (3) Fed and DTCC</td></tr>
</table>

The problem is that an instruction after 6.00 pm (e.g. 7 pm) in T2S will have the next value date, but an instruction in the ICSD will have the same value date. So, there would be a risk of unmatched transactions. Given that settlement cut-offs and market deadlines differ, it can mean that the over-collateralization or under-collateralization can last for longer than a day which can cause constraints on liquidity and may result in late deliveries for obligations elsewhere.

The main evolution should be reduction of risk of unmatched trades, which are caused by different end-of-day cut off times (for transactions involving links to non-T2S markets). This would allow European participants (that use collateral held outside T2S) to fulfil their collateral obligations (even if different platforms/CSDs use different value dates)

Proposed follow-up
Further analysis is needed. QUESTIONS
  (1) Is this a modified activity for collateral management?
  (2) If the differences in cut-off times are related to non-T2S markets, what could improve the situation?
  (3) Need to specify 'non-T2S markets'?

CMHA (19)   Framework for triparty connections/interoperability
Harmonisation activity
TPAs should establish connections with other TPAs and related FMIs (also referred to as triparty interoperability).
Problem description
Arrangements are not (yet) available for mobilising securities via (interlinked) arrangements involving different triparty collateral management agents (TPAs), CCPs and (I)CSDs. Developing triparty interoperability would allow participants to pool collateral across borders, where a triparty agent automatically selects the eligible collateral and interoperates with the other TPAs where needed. A distinction could be made between triparty settlement interoperability (TSI) and triparty sub-custody interoperability (TCI). [Description to be added[15]] Progress has been achieved to some extend by some

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TPAs/FMIs and market participants on a framework for CCP cleared SFTs/triparty repo products, but work will continue after T2S migration. It was considered that the work could focus on regional challenges, as solutions could be implemented more straightforwardly in a region (e.g. euro area/T2S markets).

Proposed follow-up
Further analysis is needed.

    (1) Is this a specific activity for collateral management?
    (2) What could improve the situation?

4. Non-euro collateral management

CMHA (20)   Non-euro collateral management [FEEDBACK WELCOME]

Harmonisation activity
CMSPs should harmonise procedures related to the handling of non-euro collateral.

Problem description
Procedures differ for the handling of non-euro collateral amongst (I)CSDs, for example the handling of foreign currency payments for CA may differ per CSD (the FX proceeds may be converted to euro).

Proposed follow-up
Further analysis is needed to determine if standardised procedures could be followed for the handling of non-euro collateral, including the handling of foreign currency CA payments. Parts of this CMHA may be covered under CMHA (3) Corporate Actions.

    (1) Is this a modified activity for collateral management?
    (2) What could improve the situation?

3.   Next steps

A dedicated AMI-SeCo HSG task force (or subgroup) on collateral management harmonisation should be set up. This task force/subgroup should take charge of the overall development of a final list of CMHAs for AMI-S

Annex: Overview of Collateral management harmonisation activities (CMHAs)

This section provides a draft overview list of CMHAs, a

For each activity row in the table, the following items are described:

- Activity: What is the activity about (which business processes are covered)?
- Barrier/problem: What is barrier that hampers integration/efficiency for collateral management?
- Objective/solution: What does the activity aim to achieve? (Concrete solution)
- Priority: A preliminary distinction is made between Priority 1 and Priority 2.
- Definition: Who will be responsible for defining the standard/best practice and by when.
- Monitoring: Who will be responsible for monitoring the standard/best practice and by when.
- Implementation: Who will be responsible for implementing the standard/best practice and by when.
- Remarks: Open points/questions for clarification of the activities (Further input of AMI-SeCo HSG is needed).

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	Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
1. Collateral Messaging	1	Messaging for triparty collateral management Harmonise messaging used for allocations of collateral on a triparty basis (ISO20022).	There is currently different usage of messages for triparty collateral management by TPAs, Inconsistent usage of messaging standards across TPAs drives down efficiency in processing.	UCMS and CMSPs (TPAs and (I)CSDs) should use harmonised ISO20022 messaging for triparty collateral management.	Priority 1	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: TPA, (I)CSD By when: [tbd]	(1) Is this a specific activity for collateral management? (2) Should the status be checked regarding the *ISO20022 messaging for triparty*? (3) Next steps to harmonise messaging used for allocations of collateral on a triparty basis?
	2	Messaging for bilateral collateral management Harmonise messaging for mobilisation of collateral on a bilateral basis. [INPUT NEEDED]	Differences in messages for bilateral collateral management could hamper how collateral is allocated quickly and efficiently across borders. Messaging solutions exist for bilateral collateralisation (facilitating straight through	UCMS should use harmonised *ISO20022 messaging* for bilateral collateral management	[TBD]?	Actors: ? By when: [tbd]	Actors: ? By when: [tbd]	Actors: [?] By when: [tbd]	(1) Is this a specific activity for collateral management? (2) What should the messaging cover for allocations of collateral on a bilateral basis (e.g. affirmation or confirmation,

	Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
			processing). Settlement instructions are already ISO20022 in T2S.						matching systems to be covered)? (3) Should the messaging for ATS/CCP be covered?
	3	Messaging for Corporate Actions (CA) Harmonise messaging related to corporate actions	Currently, heterogeneities exist in CA messaging, which are relevant also for an efficient management of collateral. In addition, heterogeneous CA messaging represents a barrier for establishing a higher number of CSD link arrangements, as (smaller) Investor CSDs have to be able to process the corporate actions on securities brought from Issuer CSDs. s.	UCMS and CMSPs should use harmonised ISO20022 messaging for corporate action events. The messaging should be in line with agreed standards/practices (i.e. CA market standards, T2S CA standards and market practices agreed by the Securities Market Practice Group)	Priority 1	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: (I)CSD [TPA] By when: [tbd]	(1) Is this a general activity for settlement and custody? (2) Should the status be checked of the use of ISO20022 messaging for CA (which are relevant to the efficient management of collateral)? (3) Should it be checked whether the ISO 20022 standards are used in accordance with the CA market standards, T2S CA standards and market practices agreed by SMPG?
	4	Messaging for tax procedures Harmonise messaging for sending information involving tax procedures.	The non-availability of information related to WHT tax procedures might require the rejection of a mobilisation of collateral (e.g. information on parties subject to withholding tax on proceeds).	UCMS and CMSPs should use harmonised ISO20022 messaging for sending information related to tax processes and status of UCMS (i.e. information on beneficial owner, UCMS tax exemption status) The messaging should be in line with agreed market standards (T2S Harmonisation activity on Withholding tax procedures and	Priority 1	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: (I)CSD [TPA] By when: [tbd]	(1) Is this a general activity for settlement and custody? (2) The status of the use of ISO20022 messaging for information on tax procedures should be checked? (3) In some jurisdictions, UCMS (collateral givers) need to provide tax status documentation

Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
			upcoming CMU/EPTF work)					to (I)CSDs, via the relevant collateral takers, to receive tax rate discounts or tax exemption. Some NCBs also act as a qualified intermediary for certain tax authorities to withhold tax on some assets/for some UCMS on their behalf.
5	Margin messaging\nHarmonise messaging for margining.	Messaging is divergent for initial and variation margining (i.e. information needed to determine, instruct and agree on the exposure and call for margin), which are relevant for efficient collateral management	UCMS and CMSPs should use harmonised ISO20022 messaging for margining	Priority 1	Actors: AMI-SeCo\n\nBy when: [tbd]	Actors: NUGs\n\nBy when: [tbd]	Actors: TPA, (I)CSD\n\nBy when: [tbd]	(1) Is this a specific activity for collateral management? (2_ Status of the use of ISO20022 messaging for margin should be checked?
6	Messaging from (I)CSD and TPA on fee/billing information\nHarmonise messaging related to information on billing/fees (so that UCMS have data to process/allocate/ transmit to counterparties).	(I)CSDs and TPAs currently send information on collateral holdings (of collateral takers on behalf of collateral givers) in various different formats to UCMS. This information is needed to allow reconciliation by UCMS (and is relevant for efficient collateral management).	UCMS and CMSPs should use harmonised ISO20022 messaging to disseminate information on billing / fees.	Priority 1	Actors: AMI-SeCo\n\nBy when: [tbd]	Actors: NUGs\n\nBy when: [tbd]	Actors: TPA, (I)CSD\n\nBy when: [tbd]	(1) Is this a modified activity for collateral management? (2) Status of the use of ISO20022 messaging for fee/billing information should be checked?
7	Messaging for reporting\nHarmonise messaging related to	Regulatory reporting regimes are being introduced and transactions must be reported in the	UCMS and CMSPs should use harmonised *messaging* for reporting based on the ISO20022	Priority 1	Actors: AMI-SeCo	Actors: Each national market	Actors: [TPA, (I)CSD ?]	(1) Is this a modified activity for collateral management?

	Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
		reporting requirements	ISO 20022 format.	standard		By when: [tbd]	/ NUG By when: [tbd]	By when: [tbd]	(2) Should the analysis cover messaging for SFT reporting?
	8	Collateral messaging for new participants in collateral markets (buy-side). The entire industry (including buy-side) should move together to electronic messaging.	Electronic messaging is not always available for market participants, such as new, smaller or mid-size players (and is related to cost/benefit of setting up SWIFT/electronic messaging e.g. for buy-side). The timing and scope of participants will depend on cost-efficient solutions.	UCMS should use harmonised collateral messaging including new participants in collateral markets (buy-side)	?	Actors: ? By when: [tbd]	Actors: ? By when: [tbd]	Actors: [?] By when: [tbd]	(1) Is this a general activity for settlement and custody? (2) Who are main actors (new participants)? (3) Is this in scope? (4) To what extent could it be merged with CMHA 1 on Collateral Messaging? (harmonised *messaging* based on *ISO20022*)
2. Collateral Dynamic and Static Data	9	Pool factor Harmonise up-to-date pool factor information for ABS.	The timely provision of up-to-date pool factor information is needed to correctly value collateral, especially on the payment date of corporate action proceeds. The timely provision of up-to-date pool factor information is also needed for T2S-autocollateralisation Static Data.	Issuer (I)CSDs should send up-to-date pool factors directly to UCMS through STP data feeds.	Priority 1	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: (I)CSD By when: [tbd]	(1) Is this a modified activity for collateral management? (2) Investigate what type of pool factor data for ABS. (3) Investigate what type of asset/pricing data for T2S auto-collateralisation.
	10	Consistent storage/ management of collateral information (SSI/ static data) Harmonise storage and management of collateral information (SSI/ static data)	At cross-border level, there is a risk of unmatched transactions. Manual intervention and repairs to have correct information on place may result in (i) lower efficiency in the use of collateral, (ii) risk for settlement fails and (iii) market	UCMS should have a robust framework for the proper storage and management of collateral information (standard settlement instructions (SSI)).	Priority 2?	Actors: ? By when: [tbd]	Actors: ? By when: [tbd]	Actors: [?] By when: [tbd]	(1) Is this a general activity? (2) Is the analysis valid for non-T2S markets? (3) How will this ensure settlement efficiency and prevent delays? (4) What data /information

Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
		risk of having to settle the transaction on the next value date.						(static /dynamic data received in collateral instructions)?
1 1	Managing multiple places of safekeeping and settlement (in bilateral coll mgmt) Harmonise procedures/ workflows to manage multiple place of safekeeping and settlement	UCMS have to cope increasingly with cross-border complexity in management of safekeeping and settlement processes (in bilateral coll mgmt)	UCMS and CMSPs should use harmonised procedures/workflows to ease inventory management functions (related to managing multiple places of safekeeping and settlement) in bilateral coll mgmt.	Priority 2?	Actors: ? By when: [tbd]	Actors: ? By when: [tbd]	Actors: [?] By when: [tbd]	(1) Is this a modified activity? Or general? (2) Is this relevant for non-T2S only? (3) Is it a requirement on the message fields themselves or external information flows apart from sett messages? (4) Is this connected to CMHA13&14]?
1 2	Source/move collateral to/from triparty agents Harmonise procedures/ workflows to source collateral to/from TPAs	The complexity of cross-border transfers mainly appears when it is necessary to source/move collateral from domestic markets to the custody network of a triparty agent.	TPAs should have harmonised procedures for cross-border sourcing of assets to/from the custody network of the TPA (involving non-T2S markets)	Priority 2?	Actors: ? By when: [tbd]	Actors: ? By when: [tbd]	Actors: [?] By when: [tbd]	(1) Is this a specific activity for collateral management? (2) Is this in relation to intraday collateral relocation? (3) Is this related to cut-off's CMHA18 (including operational procedures of links with external (Non-T2S) CSDs?

	Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
3. Collateral operating frameworks (workflow/interface/exchanges)	13	Data exchanges via interfaces on asset information Harmonise data exchanges (interfaces/ workflows) on asset information with external systems of (I)CSDs/TPAs as data providers.	Several non-harmonised interfaces are currently being used for certain data elements, i.e. for valuation of assets, on properties of assets, limits on assets. For example, TPA exchange information with UCMS e.g. list of eligible assets, prices of assets, own-use and close link information.	*UCMS and CMSPs* should use harmonised interfaces to ensure that harmonised data exchange can be used by participants.	Priority 1	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: TPA, (I)CSD By when: [tbd]	(1) Is this a specific activity for collateral management? (2) Analyse which *workflows* are relevant in the message provided by the (I)CSDs with a view to receiving relevant information via a ISO20022 message or standardised data feed
	14	Data exchanges on fee/billing information Harmonise data exchanges for billing/fees period	The dates/timing for sending information on billing periods differ amongst (I)CSDs meaning that UCMS may receive multiple billing dates if collateral is held in more than (I)CSD (which are relevant for efficient collateral management). .	CMSPs should offer harmonised data exchanges for billing periods (across all (I)CSDs, [TPAs]).	Priority 1 [see CMHA 6]	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: TPA, (I)CSD By when: [tbd]	(1) Is this a modified activity for collateral management? (2) Investigate the exact period to have a harmonised billing across all (I)CSDs for collateral held by the participants, for example 1st to 31st of each month ?
	15	Common triparty processes for interaction of TPAs with UCMS (for collateral allocation and risk control measures) Harmonise data exchanges between UCMS and TPAs (for providing /allocating collateral and risk controls)	The processes are different for UCMS when interacting with TPAs for providing/ allocating collateral. There are also differences related to risk control measures, .e.g. to receive intraday information on the securities collateralising triparty global amounts.	TPAs should offer harmonised processes for interacting and exchanging data (for collateral allocation and to allow for the application of intraday risk control measures).	Priority 1 [see CMHA 1]	Actors: AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: TPA By when: [tbd]	(1) Is this a specific activity for collateral management? (2) Investigate the high-level and generic steps related to triparty collateral management that would need to be supported by a UCMS?

	Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
	1 6	Data exchanges for CA processing Harmonise the exchange of data/informatio n for CA	CMSPs' processes are different to receive information on CA	CMSPs should offer harmonised CA information exchange	Priority 1 [see CMHA 3]	Actors : AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: TPA, (I)CSD By when: [tbd]	(1) Is this a modified activity for settlement and custody? (2) Investigate harmonisation to receive CA information?
	1 7	Data exchanges for tax processing	CMSPs' processes are different to exchange tax information	CMSPs should offer harmonised tax information exchange	Priority 1	Actors : AMI-SeCo By when: [tbd]	Actors: NUGs By when: [tbd]	Actors: TPA, (I)CSD By when: [tbd]	(1) Is this a modified activity for settlement and custody? (2) Investigate harmonisation to exchange tax information?
	1 8	Collateral and settlement cut-off's times Harmonise cut-off times for collateral operations	Some major collateral management service providers (e.g. in ICSDs) are moving to extended cut-offs for their real-time markets (up to 8.00 pm) while T2S value day is up to 6.00 pm. This creates frictions between non-T2S market and T2S market to mobilise freely collateral. [In addition, cross-border transactions involving links with non-T2S (I)CSDs have varying cut-off times.]	[CMSPs] should align the [settlement/collater al] cut-off's and times for collateral operations [in non-T2S markets?]	Priority 2?	Actors : [tbd] By when: [tbd]	Actors: [tbd] By when: [tbd]	Actors: [tbd] By when: [tbd]	(1) Is this a modified activity for collateral management? (2) If the differences in cut-off times are related to non-T2S markets, what could improve the situation? (3) Need to specify 'non-T2S markets'?

	Id	Activity	Problem	Solution	Priority	Def.	Mon.	Impl.	Remarks
	1 9	Framework for triparty connections /interoperability	Arrangements are not (yet) available for mobilising securities via (interlinked) arrangements involving different triparty collateral management agents (TPAs), CCPs and (I)CSDs. Work has started on a framework for collateral managed by TPAs when used in CCP-cleared triparty repo products.	TPAs should establish triparty interoperability. (See report "Euro repo market: improvements for collateral and liquidity management", July 2014 – Page 13).	Priority 2?	Actors: [tbd] By when: [tbd]	Actors: [tbd] By when: [tbd]	Actors: [tbd] By when: [tbd]	(1) Is this a specific activity for collateral management? (2) What could improve the situation?
4. Non-euro collateral management	2 0	Non-euro collateral management Harmonise the handling of non-euro collateral.	Procedures for the handling of non-euro collateral differs amongst (I)CSDs, for example the handling of foreign currency payments for CA may differ per CSD (the FX proceeds may be converted to euro).	CMSPs should harmonise procedures related to the handling of non-euro collateral.	Priority 1	Actors: [tbd] By when: [tbd]	Actors: [tbd] By when: [tbd]	Actors: [tbd] By when: [tbd]	(1) Is this a modified activity for settlement and custody?