ASX
CHESS REPLACEMENT

Business Design Working Group
Cum Entitlement Balances and Settlement Features

22 August 2024

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Acknowledging Country

ASX acknowledges the Traditional Owners of Country throughout Australia. We pay our respects to Elders past and present.

Artwork by Lee Ann Hall, *My country My People*

Housekeeping

Troubleshooting

> Please mute yourself when not speaking

> Please use the 'raise hand' feature on MS Teams if you would like to ask a question

> Please introduce yourself when talking for the benefit of all members

> Meeting is being recorded for the purposes of capturing decision and actions

> Dial in details (audio only):

- **+61 2 7208 4607**

- Phone Conference ID: **823 589 260#**

> Presentation materials were distributed before the meeting and will be published on the website

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Important Information

Competition Law Reminder

Workshop members are reminded to have regard to their obligations under competition law. In particular, please note that the Competition and Consumer Act prohibits a corporation from engaging with one or more persons in a concerted practice that has the purpose, effect or likely effect of substantially lessening competition.

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Agenda

01
Introduction and Agenda

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01 – Detailed Workshop Agenda

#		Topic	Duration
01		**Introduction and Agenda**	**15 mins**
	>	Workshop objectives and outputs	
02		**Cum Entitlement Balances**	**60 mins**
2a	>	Recap of TCS BaNCS capabilities	
	>	ISO20022 standard messages	
2b	>	Cum entitlement balances & basis of movement overview	
2c	>	Ex transaction use cases	
2d	>	Eligible balances proposal	
Break			**15 mins**
03		**Settlement Features (continued from the Settlement Design BDWG)**	**45 mins**
3a	>	Settlement linking	
	>	Reserving units for settlement	
	>	Auto-hold pending stock	
3b	>	Leveraging upstream platforms	
04		**Next Steps**	**15 mins**
Total workshop duration			**2.5 hours**

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01 – Workshop Objectives and Outputs

The purpose of the BDWG is to achieve broad consensus on additional scope for CHESS Replacement and to develop the Business Design Document for each objective.

Objectives	Outputs

Objectives

> Collect advice and expertise to understand industry needs in relation to their settlement processes

> Evaluate ways to simplify the cum entitlement balance and basis of movement in the context of Release 2

> Deeper dive on features that could enhance participant settlement processes

> Establish any industry design considerations for new or changing scope items

> Evaluate proposed solutions for CHESS Replacement

Outputs

> Business Design Document that includes:

- Functional outcomes

- Process Flow (high level)

- Access channels (e.g. User Interface, ISO20022 messaging)

- Any non-functional considerations

- Any other considerations

What outcomes would you like to achieve for your organisation from this workshop?

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02a

Corporate Actions: Recap of TCS BaNCS Capabilities & ISO20022 Standards

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02a – Corporate Actions Capabilities of TCS BaNCS (Recap)

TCS BaNCS supports a full suite of corporate action services that support multiple markets, including those operating full CSDs.

This functionality includes:

> Corporate action setup, maintenance and announcement

> Option instruction and processing

> Eligibility determination

> Calculation of entitlement

> Disbursement of payments (in cash and securities), including confirmation of disbursements

> Workflows that facilitate the interactions with agents of Issuers (e.g. Share Registries)

Given the unique corporate actions ecosystem we currently have in Australia, we plan to leverage elements of the above capabilities to meet the needs of the Australian market.

This session will focus on the Cum Entitlement Balance and how current features of the TCS BaNCS product could be leveraged.

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Overview
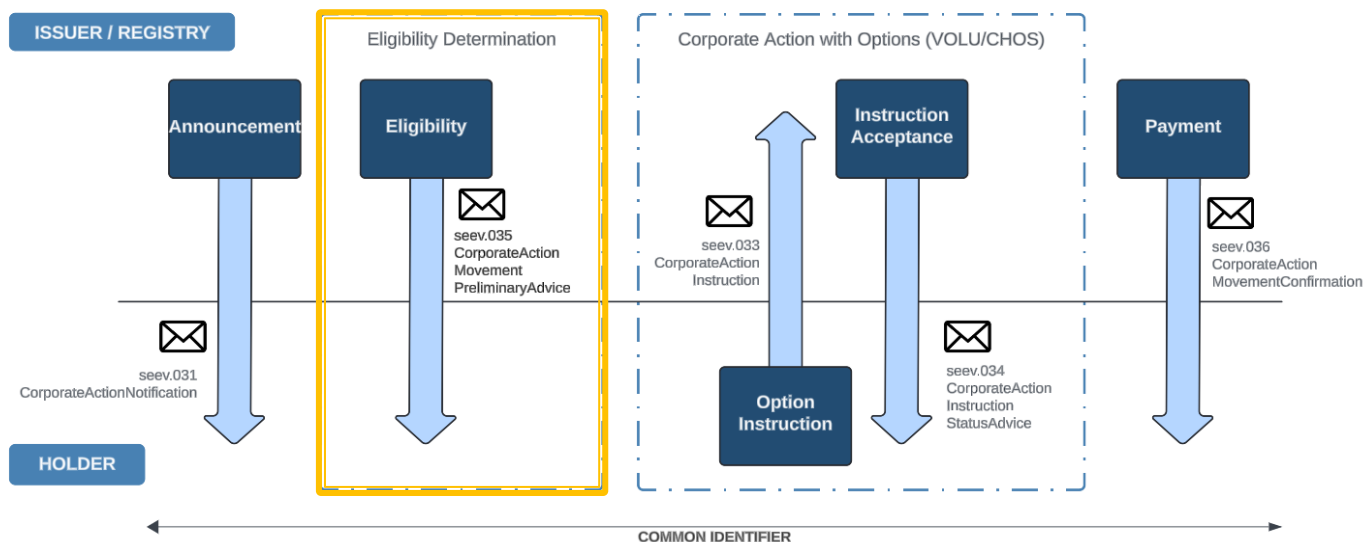
> ISO 20022 provides a full suite of corporate action messages that allow for typical business flows. In the July BDWG we covered corporate action option instruction and payment workflows.
>
> In this session we will focus on eligibility determination processes.

Eligibility determination

> In other markets, a central party (usually the CSD) is often responsible for determining eligibility to the corporate action

> In the Australian market, for CHESS sponsored holdings, this responsibility lies with the Share Registry leveraging functionality in CHESS

> CHESS will calculate and provide eligible balances on record date and the Share Registry will apply additional eligibility rules (e.g., residency restrictions) prior to payment

> In the ISO20022 standards, the seev.035 (CorporateActionMovementPreliminaryAdvice) is typically used to notify holders of their eligibility to the corporate action

02b

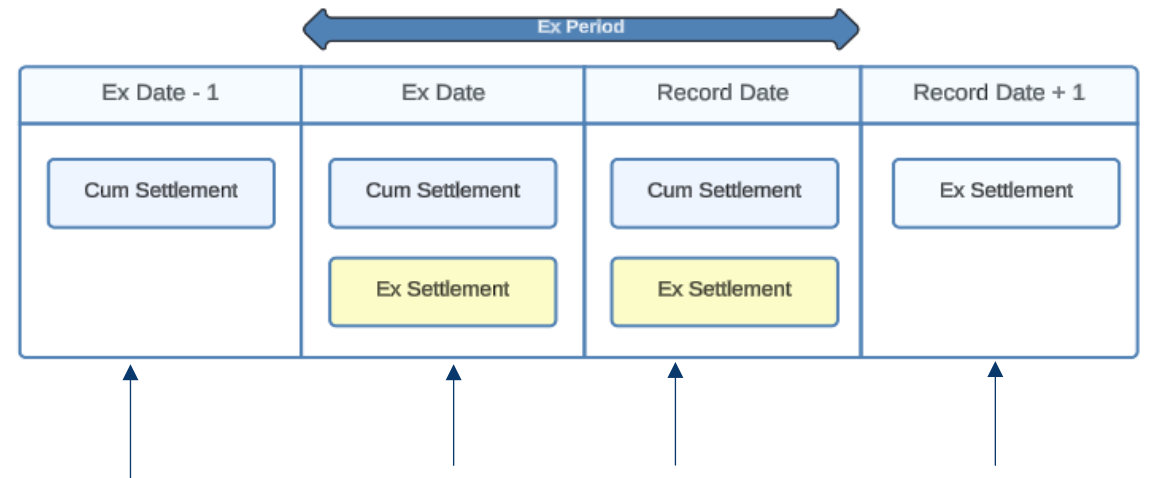## Cum Entitlement Balance & Basis of Movement

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Introduction

Currently, CHESS supports a set of **Basis of Movement** fields which allow for the movement of securities in relation to their entitlement to a corporate action, either:
- "**Cum**" - i.e. with entitlement to the corporate action
- "**Ex**" - i.e. without entitlement to the corporate action

This is permitted during the "**ex-period**" of the corporate action which runs from start of day on ex date to end of day on record date. In a T+2 settlement cycle the ex-period typically spans two business days.

The ability to specify a **Basis of Movement** is supported by the **Cum Entitlement Balance** which tracks eligibility to the corporate action and is maintained separately to the holding balance.

This is required to support the exceptions that require settlement of an "ex transaction" during the ex-period.

	Ex Period		
Ex Date - 1	**Ex Date**	**Record Date**	**Record Date + 1**
Cum Settlement	Cum Settlement	Cum Settlement	Ex Settlement
	Ex Settlement	Ex Settlement	

Transactions settled prior to ex date are "cum" given these transaction settle prior to the ex-period.

Transactions settled during the ex-period have the optionality of being settled as "ex" or "cum", requiring the system to maintain separate "cum" balances.

Transactions settled after record date are "ex" given they settle after ex period. Any failing "cum" transactions are subject to automated claims processing.

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02b – Cum Entitlement Balance & BOM

Background

The Cum Entitlement Balance is generally understood to be a **unique feature of the Australian market** that was introduced when **settlement periods were significantly longer** than the current T+2 settlement regime (at least T+5).

While this unique feature provides some benefits to the Australian market, providing the ability for securities to be transferred without their entitlement, it **substantially increases overall system complexity for both ASX and Software Providers**, leading to higher industry costs, testing and maintenance overhead.

With the compression of the settlement timeframes to T+2 **the usage appears to have diminished** and with a potential transition to T+1 usage may continue to reduce.

In this session we will discuss ways in which the design of this functionality could be simplified with a view to **reducing complexity**, **lowering costs** and **streamlining the operational overhead** while continuing support use cases that are valuable for the Australian market.

The number of **bilateral settlement instructions** (101s) agreed on an ex basis is less than **0.0001%**.

The number of **demand transfers** (001s and 005) on an ex basis is approximately **0.002%.**

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Current State
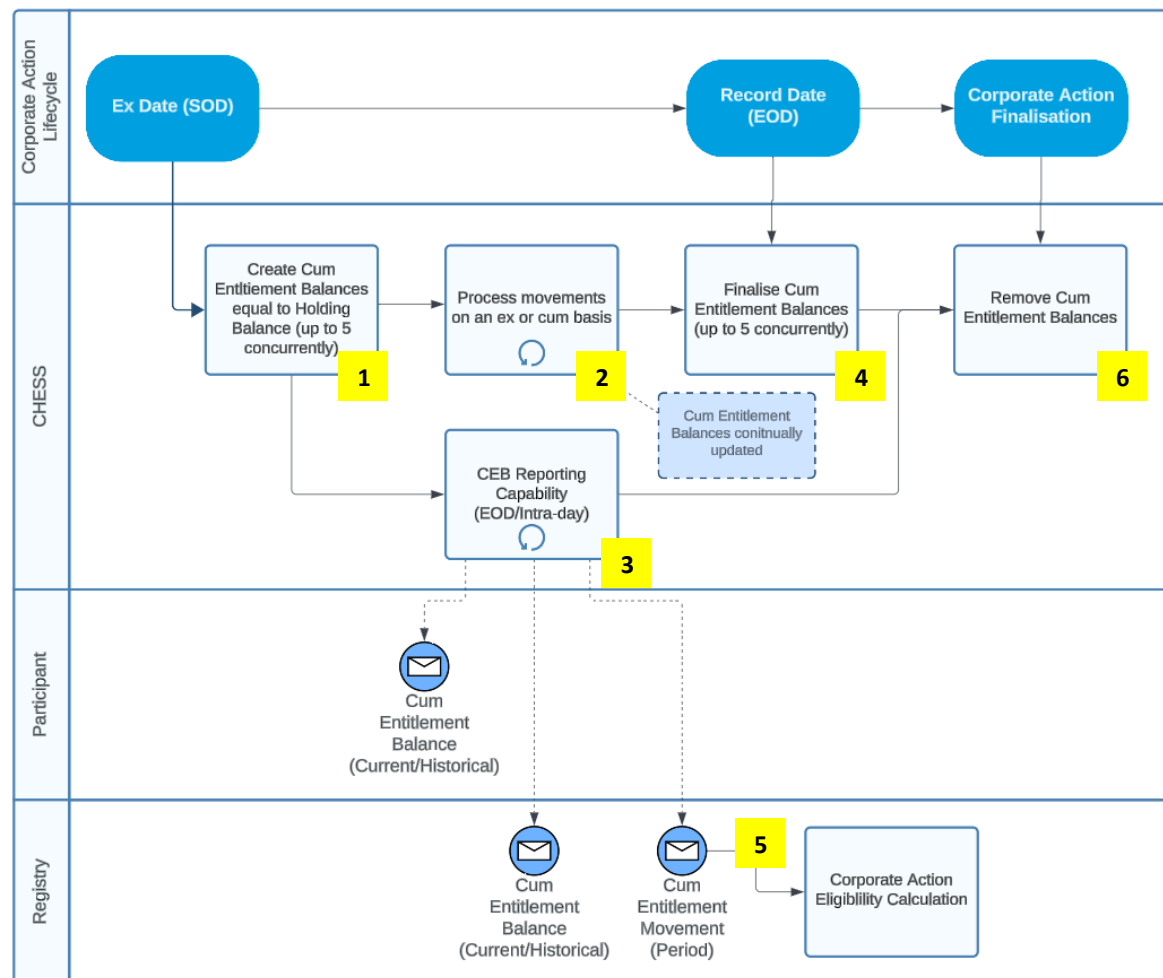
1. Overnight on ex date - 1, CHESS creates cum entitlement balances equal to the holding balance of the security code. There is support for up to 5 concurrent balances (though in practice only 2 are used currently)

2. Between ex date and record date all transfers are processed on a "cum" or "ex" basis (or combination). "Cum" transfers require the additional movement of cum balances

3. Reporting capabilities are made available to registries and participants to allow for the balances and movements to be retrieved during the ex-period (intra-day and scheduled). Historical queries are also permitted for a period of time after record date

4. At end of day on record date, no further transfers on a cum basis are permitted, effectively preventing the cum entitlement balances from changing

5. The registry uses the cum entitlement balances as input into the eligibility calculations for corporate action payments

6. After a period of time, the cum entitlement balances are archived in CHESS and can no longer be queried.

02b – Cum Entitlement Balance & BOM

Inherent complexities

The below table outlines the attributes of Cum Entitlement Balance processing that result in complexity, and the proposed simplifications which will be discussed during the session.

#	Complexity	Trade-off	Proposal
1	Consideration of ex and cum movements across all transaction types in current CHESS	Complexity, testing and maintenance overhead	Support for limited transactions – *slide 18*
2	Customisation of batch settlement processes to support the settlement of multiple additional balances	Complexity, significant customisation of core system	Support for non-batch transactions – *slide 18*
3	Creation and maintenance of a materialised "cum" balance for each holding of a security during the ex-period	Complexity, overnight processing time	Alternative approach – *slides 22-25*
4	Support for mixed "ex"/"cum" basis of movements for up to five concurrent corporate actions	Complexity, testing and maintenance overhead	Simplified representation – *slide 26*
5	Complex basis of movement defaulting and management rules, including lookups against corporate action types	Complexity, testing and maintenance overhead	Record "ex" transactions by exception – *slide 26*
6	Utilising non-standard iso fields in ISO messages to support the above	Market specific customisations and supplementary data	Align closer to ISO standard – *slide 26*
7	Flexible reporting functionality that relies upon a materialised cum entitlement balance	Complexity, testing and maintenance overhead	Simplify reporting – *slide 22*

Are there any additional attributes of Cum Entitlement Balances that result in complexity for Participants and Software Providers?
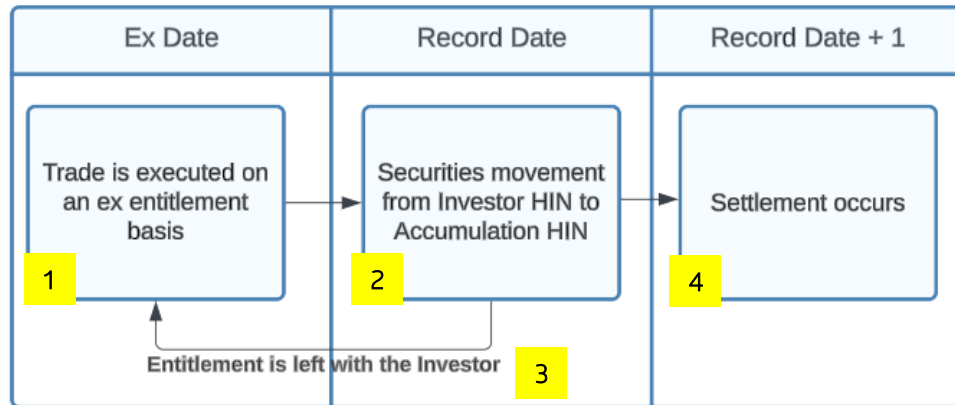
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02c
Ex Transaction Use Cases

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02c – Ex Transaction Use Cases

Usage Statistics

CHESS Transaction	Ex transactions over a 14 month period	% transactions overall	Additional information	Proposed Support (for discussion)
001 – Demand Single Entry CHESS to CHESS Transfer	48,756	~0.002%	Transfers to Sponsored to Accumulation (priming) - 86% Transfers between Direct Accounts – 10%	Support
003 – Transferor Submitted Demand Transfer	6,681	-	Transfers to Accumulation (priming) - 98%	Support
005 – Demand Dual Entry CHESS to CHESS Transfer	5,573	~0.002%	Market Transactions – 65%, Off-Market – 1% Securities Lending – 32%	Support – extended to include DvP
007 – Demand CHESS to Issuer Sponsored Transfer	57	-	-	No longer support
011 – CHESS to Issuer Sponsored Conversion	11	-	-	No longer support
015 – Issuer Sponsored to CHESS Transfer	1294	-	Transfers to Accumulation (priming) - 95%	Support - Accumulation only
017 – Issuer Sponsored to CHESS Conversion	4	-	-	No longer support
101 – Dual Entry Settlement Notification	6,470	>0.001%	Market Transactions – 92% Off-Market – 2.5% Securities Lending Transactions – 5%	No longer support – replace with non-batch DvP
105 – Single Entry Settlement CHESS to CHESS Transfer	43	-	Transfers to Accumulation Entrepot Transfers between Direct Accounts (Custodians)	No longer support – demand only
107 – Scheduled Settlement CHESS to CHESS Transfer	3,404	-	Transfers to Sponsored to Settlement Entrepot – 100%	No longer support – demand only
421 – Securities Transformation	0	-	-	No longer support
425 – Holding Adjustment	41	-	ETFs with ADJ or ALT reason code	No longer support
431 – Takeover Transfer	0	-	-	No longer support
Market Trades	0	-	-	No longer support

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02c – Ex Transaction Use Cases

Scenario 1 - Priming

Ex Date	Record Date	Record Date + 1
Trade is executed on an ex entitlement basis **1**	Securities movement from Investor HIN to Accumulation HIN **2**	Settlement occurs **4**
Entitlement is left with the Investor **3**		

Priming can occur on T+1 for a trade executed on 'T' where settlement is after record date. In this case, ex transactions are used to ensure the entitlement remains with the seller.

This assumes a T+2 cycle, but it would also have applicability to T+1 if priming is to occur on 'T' rather than the *morning of T+1* (i.e. prior to record date balances).

1. Trades are executed on an ex entitlement basis on ex date (T)

2. On record date (T+1), many brokers will move securities from the Investor HIN to the Accumulation Entrepot's HIN in preparation for settlement

3. Movements into the Accumulation Entrepot HIN are processed on an "ex" basis to ensure the entitlement is left with the investor

4. Settlement instructions are scheduled to move the securities from the Accumulation Entrepot's HIN to the Settlement Entrepot HIN on record date + 1 (T+2) for settlement. As these are processed after record date balances have been generated, they are settled on an ex entitlement basis
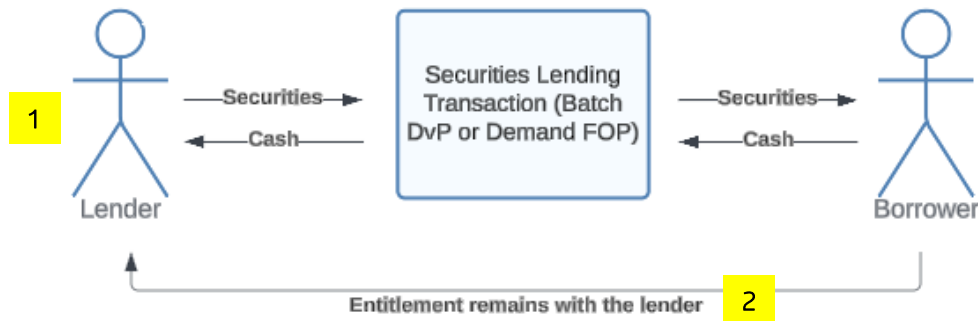
Alternatively, the Accumulation Entrepot can be bypassed by scheduling from the Investor's HIN directly to the Settlement Entrepot on settlement date.
This would negate the need for an ex transaction.

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02c – Ex Transaction Use Cases

Scenario 2 – Securities Lending

Securities lending transactions may be entered into during the ex-period. In these cases the Borrower may not want to receive the corporate action and so requests the stock is loaned on an "ex" basis, such that it remains with, and is processed by, the Lender.

1. A securities lending transaction is entered to lend securities from Participant 'A' to Participant 'B' for settlement on record date

2. As part of the securities lending agreement the corporate action is agreed to remain with the Lender and as such the securities lending transaction is entered on an "ex" basis and the entitlement remains with the Lender.

Are there additional use cases for ex balance transfers that should be discussed?

02d
Eligible Balances Proposal

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02d – Eligible Balances Proposal

Future State (proposal)
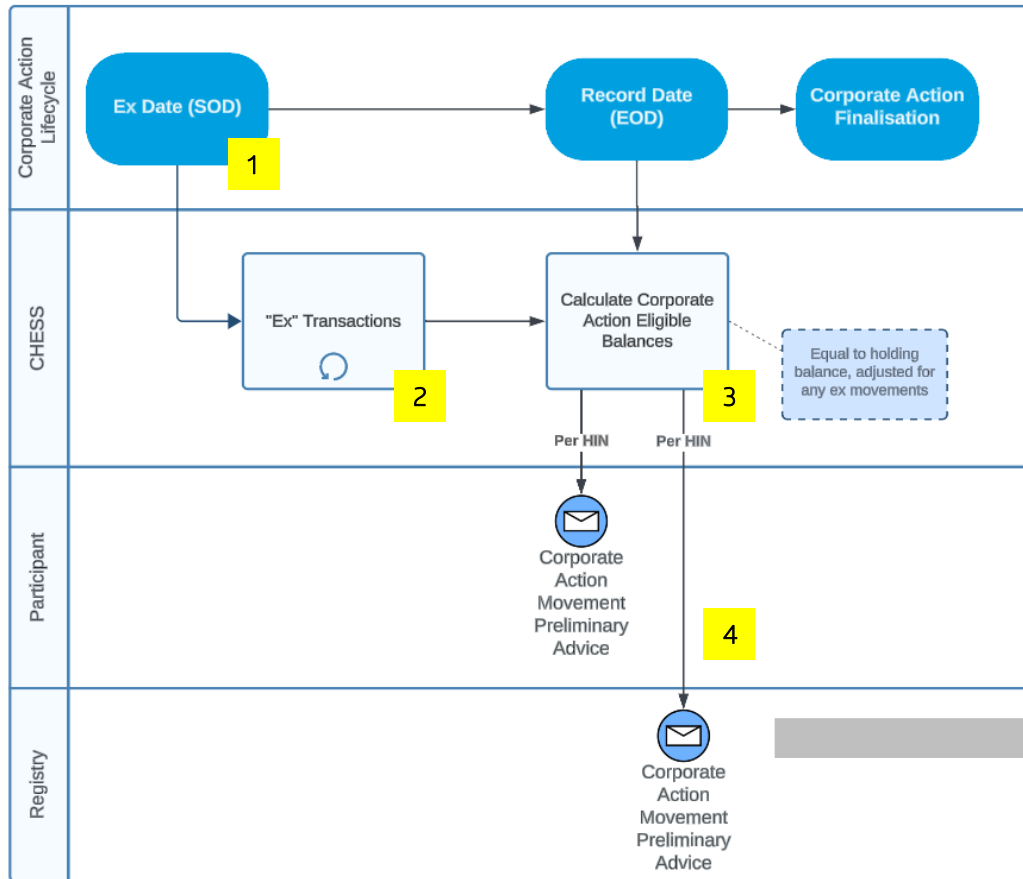
1. No Cum Entitlement Balances are materialised in the system on ex date
2. Between ex date and record date transactions are permitted to be tagged as "ex" for limited use cases
3. At EOD on record date a process will calculate eligible balances based on the holding balance as at the end of record date. These balances will then be adjusted to account for any ex transaction movements during the period
4. The Participant and Share Registry are automatically notified of the eligible balances for each HIN at end of day on record date using the seev.035 (CorporateActionMovementPreliminaryAdvice)

Eligible balances would be calculated at EOD as:
Current Holding Balance
plus Delivering Transactions on an Ex Basis
minus Receiving Transactions on an Ex Basis

Are there industry use cases that require preliminary eligible balance reporting prior to record date?

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02d – Eligible Balances Proposal

Basis of Movement

Currently, Basis of Movement on a "cum" basis is only permitted if there is an available Cum Entitlement Balance. This prevents scenarios where securities are transferred on an ex basis and subsequently transferred for a second time, on a cum basis.

It appears from the data and use cases that there is a low likelihood of this scenario occurring – if it were to occur, it would create complexity in being able to confirm who is entitled to the corporate action.
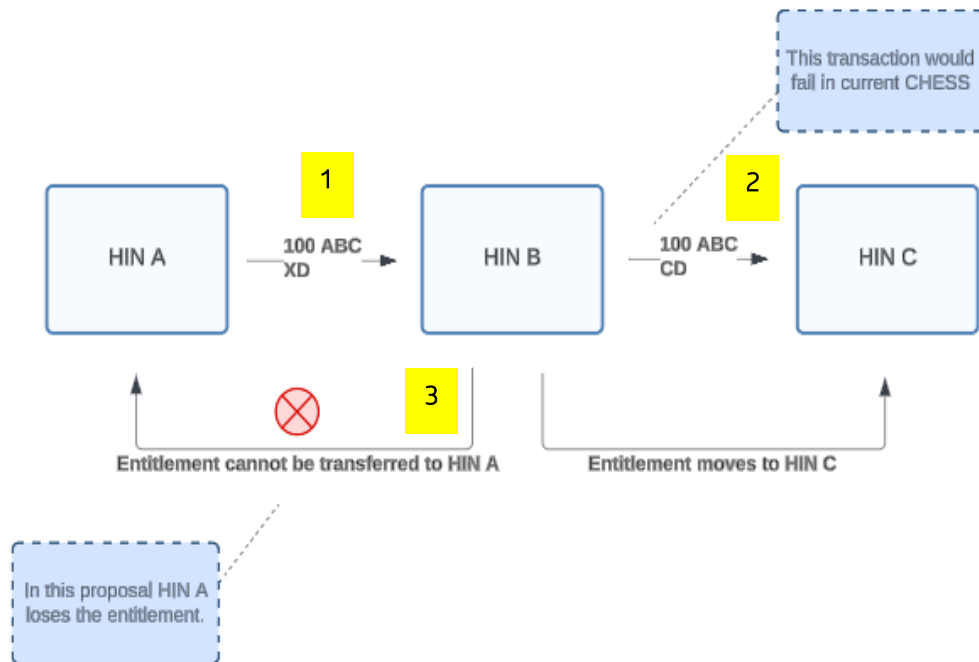
1. 100 ABC is transferred from HIN A to HIN B on an "ex" basis.
2. A transaction to move 100 ABC from HIN B to HIN C on a "cum" basis is requested. In current CHESS, the Cum Entitlement Balance would prevent this movement due to lack of an available balance.
3. Permitting these transactions may cause issues in identifying which HIN is eligible to the corporate action (HIN A vs. HIN C)

# 02d – Eligible Balances Proposal

Basis of Movement – Locking Ex Balances
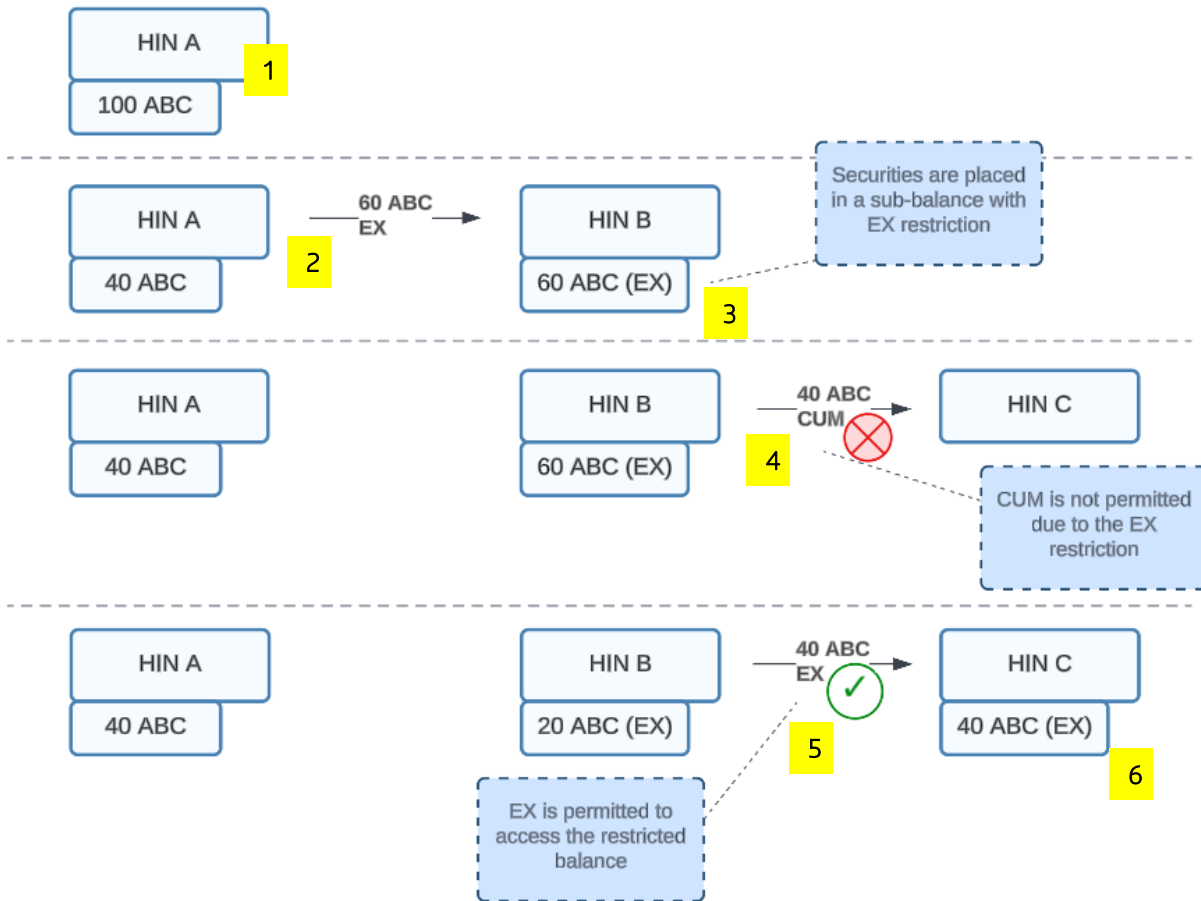
1. At start of day on ex date HIN A has 100 ABC, no Cum Entitlement Balances are generated
2. During the ex-period a transaction is entered to move 60 ABC from HIN A to HIN B on an "ex" basis
3. The securities are automatically placed in a sub-balance in HIN B with an "ex" restriction
4. A transaction is entered to move 40 ABC from HIN B to HIN C on a "cum" basis. This transaction is not successful as the only available balance has an "ex" restriction
5. A transaction is entered to move 40 ABC from HIN B to HIN C on an "ex" basis. This transaction is permitted to access the sub balance and is successful. The securities are then placed in HIN C with an "ex" restriction
6. At end of day on record date all "ex" restrictions are automatically lifted

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02d – Eligible Balances Proposal

Basis of Movement – Locking Ex Balances
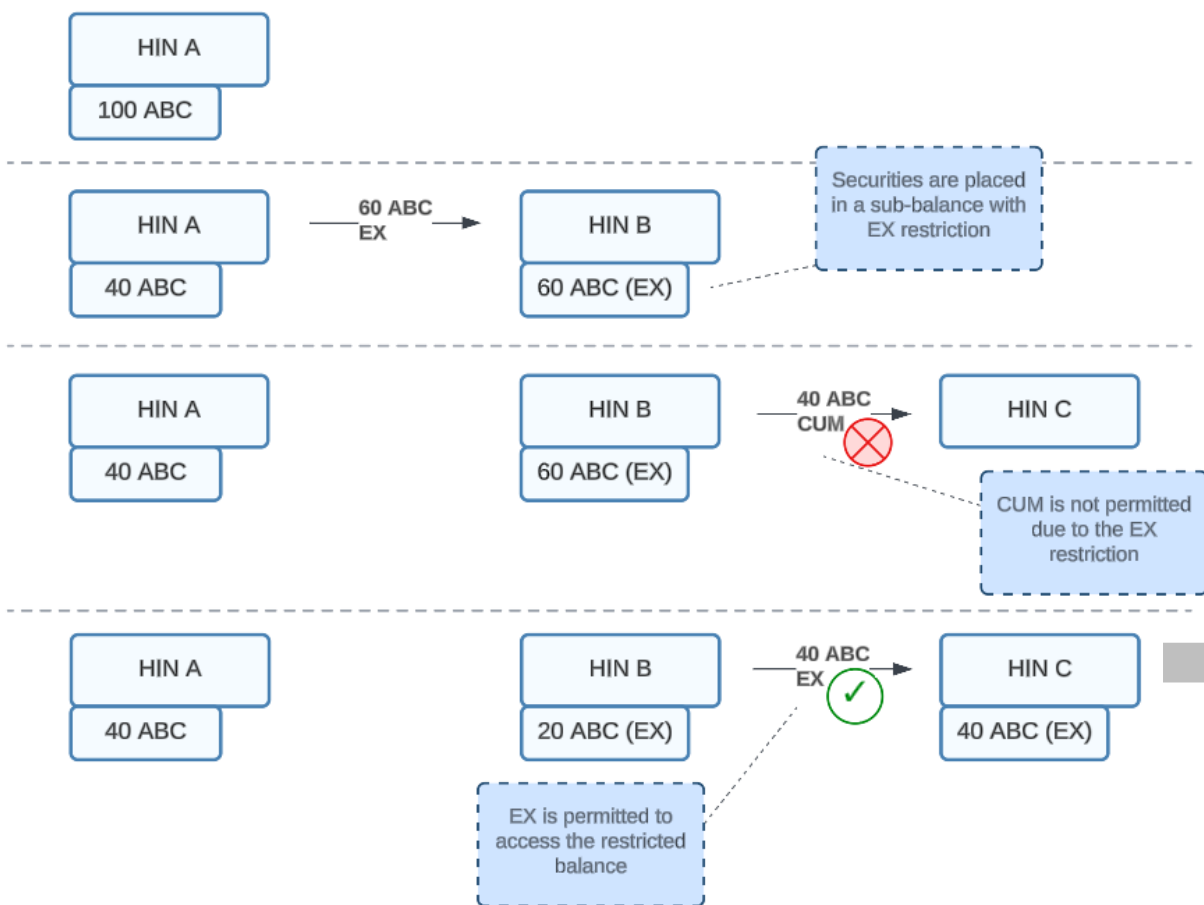
Eligible balances would be calculated at EOD as:

HIN A
Current Holding Balance (40)
plus Delivering Transactions on an Ex Basis (60)
minus Receiving Transactions on an Ex Basis (0)
Eligible Balance = 100 ABC

HIN B
Current Holding Balance (20)
plus Delivering Transactions on an Ex Basis (40)
minus Receiving Transactions on an Ex Basis (60)
Eligible Balance = 0 ABC

HIN C
Current Holding Balance (40)
plus Delivering Transactions on an Ex Basis (0)
minus Receiving Transactions on an Ex Basis (40)
Eligible Balance = 0 ABC

02d – Eligible Balances Proposal

Basis of Movement - Simplifications

Current State	Valid Values	Defaulting Rules
Override Basis of Movement 1 Override Basis of Movement 2 Override Basis of Movement 3 Override Basis of Movement 4 Override Basis of Movement 5	'CD' = Cum Dividend 'XD' = Ex Dividend 'CR' = Cum Rights issue 'XR' = Ex Rights issue 'CB' = Cum Bonus issue 'XB' = Ex Bonus issue 'CE' = Cum Entitlement 'XE' = Ex Entitlement 'CC' = Cum Capital return 'XC' = Ex Capital return 'CM' = Cum Premium return 'XM' = Ex Premium return 'CI' = Cum Interest 'XI' = Ex Interest 'CQ' = Cum Equal Access Buyback 'XQ' = Ex Equal Access Buyback 'CZ' = Cum Non Pro Rata Balance 'XZ' = Ex Non Pro Rata Balance	Trade Date prior to Ex Date and Settlement = Cum Trade Date after Ex Date = Ex Any other transactions = Cum (except Securities Transformations = Ex)

Future State	Valid Values	Defaulting Rules
Basis of Movement	"EX" or blank	Blank implies "Cum"

This results in the following simplifications:

> Reduction in complex processes for edge cases where ex date, record date or settlement dates are changed

> No need for complex defaulting rules, and re-evaluation of rules in case of change

> Reduced complexity in relation to up to 5 different overrides and the need to maintain separate cum/ex restrictions per concurrent corporate action

> No longer required to look-up the corporate action against the Basis Of Movement and maintain mappings between the two values

> Alignment to the ISO standard field (cum/ex)

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03a
Additional Settlement Features
(continued topics from Settlement Design BDWG)

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03a – Additional Settlement Features

Settlement Instruction Linking & Pooling

> Settlement Links can be used by Participants to link multiple transactions for contingent settlement
> These links are used to inform both the batch settlement process and any non-batch settlements (e.g. demand transfers)
> Links remain private to the requesting party and are not made known to the counterparty.
> Multiple links can be added to a single transaction (up to 10*), or transactions can be placed in pools
> Settlement instructions can be linked to other types of transactions in the system such as intra-position movements (e.g. collateral

Link by	Linkage Type	ISO 20022 Definition	TCS BaNCS functionality
Transaction ID	AFTE (After)	Specifies that the transaction/instruction is to be executed after the linked transaction/instruction	Information purposes only
Transaction ID	BEFO (Before)	Specifies that the transaction/instruction is to be executed before the linked transaction/instruction	Information purposes only
Transaction ID	WITH (With)	Specifies that the transaction/instruction is to be executed with the linked transaction/instruction	The linked transactions will be settled together.
Transaction ID	INFO (Informational)	Specifies that the transactions/instructions are linked for information purposes only	Informational purposes only
Pool Reference	N/A	Specifies that all transactions is to be executed with the linked transaction/instruction	The transactions in the pool will settled together. Currently only supported for system generated transactions.

*Maximum links will need to be evaluated by ASX from a settlement optimisation perspective
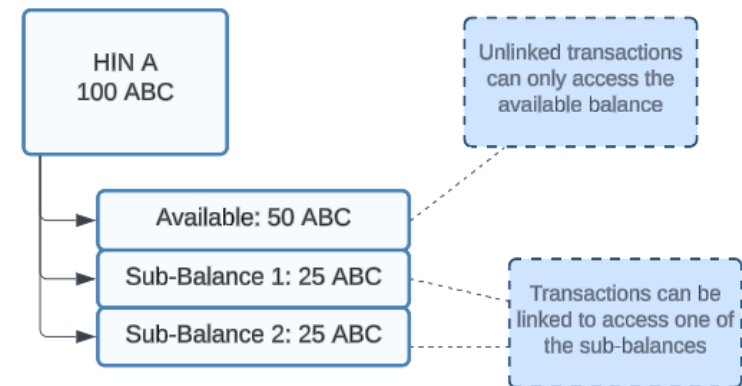
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03a – Additional Settlement Features

Reservation of Securities for Settlement

> A quantity of securities can be added to a sub-balance, placing a restriction on those securities for settlement purposes within an account

> One or more sub-balances can be created which must have a unique identification

> This sub-balance can then be linked to one or more transactions for settlement purposes

> The restricted securities may still be accessible to ASX or the Share Registry for defined purposes (e.g. court order, processing reconstruction events).

Potential Use Cases

> Mandatory locks in the Accumulation Entrepot account when scheduling for settlement

> Reserving securities for specific settlement purposes in an omnibus account

> Reserving securities for settlement in an Investor HIN prior to settlement

HIN A
100 ABC

Available: 50 ABC
Sub-Balance 1: 25 ABC
Sub-Balance 2: 25 ABC

Unlinked transactions can only access the available balance

Transactions can be linked to access one of the sub-balances

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Auto-hold Pending Stock

> Currently, in CHESS, entering a demand transaction (e.g. 001, 003, 005) where the specified quantity of securities is not available will result in a rejection

> In TCS BaNCS transactions entered where there is not a sufficient unit quantity available are held in a pending state

> Once sufficient securities become available TCS BaNCS will automatically process the transaction. Alternatively, the transaction request can be withdrawn.
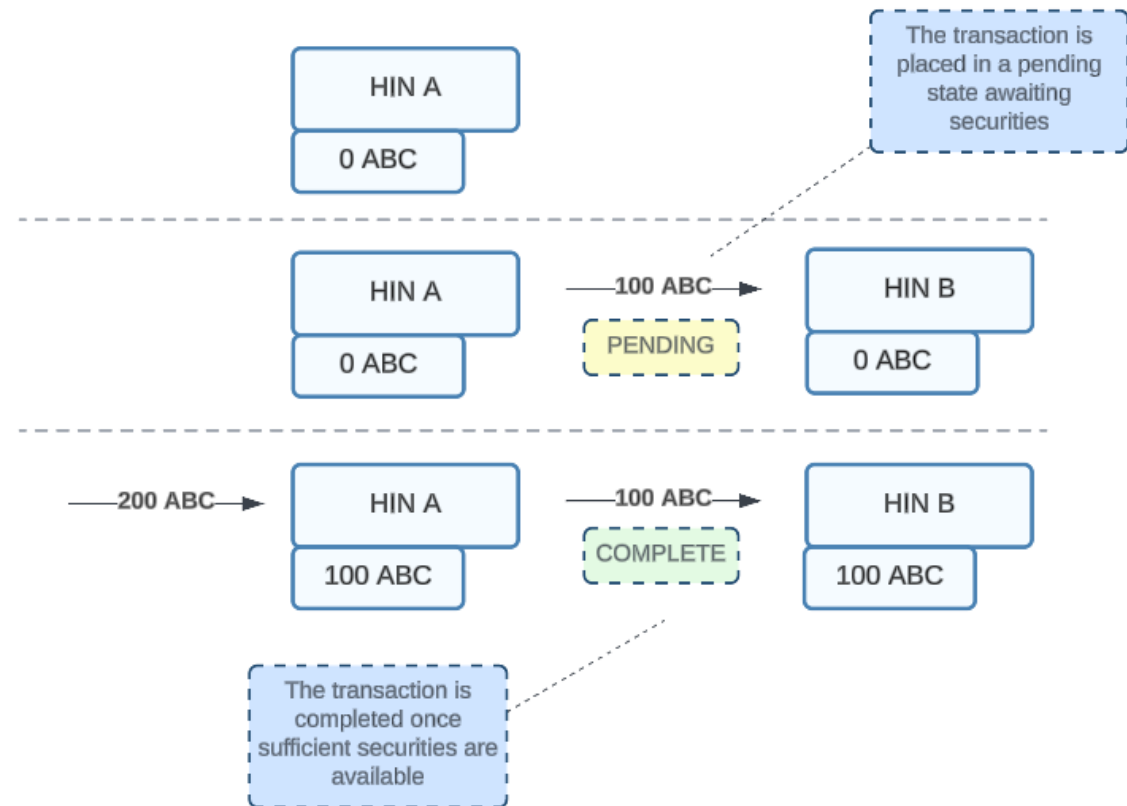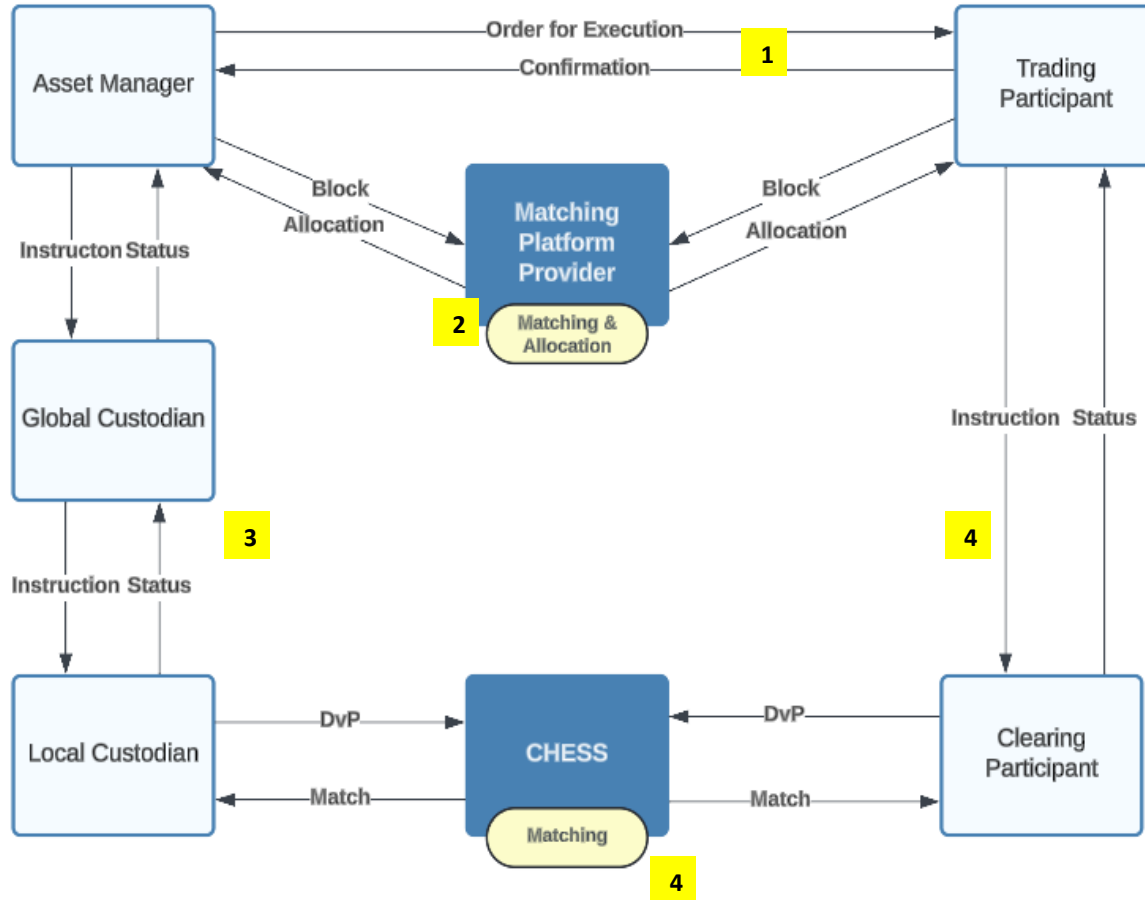
03b
Leveraging Upstream Platforms
*(continued topics from Settlement Design BDWG)*

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Current State (example)

1. The Asset Manager sends an order to their Broker (Trading Participant) for execution

2. Following execution, the Broker and Asset Manager utilise a matching platform provider to allocate the block trade

3. Following allocation, the Asset Manager instructs their Global Custodian who instructs the Local Custodian (where applicable), and the Trading Participant instructs their Clearing Participant

4. The Clearing Participant and Custodian then send in their DvP instructions to CHESS, which matches the instructions and schedules for settlement.

O3b – Leveraging Upstream Platforms

Common Identifier
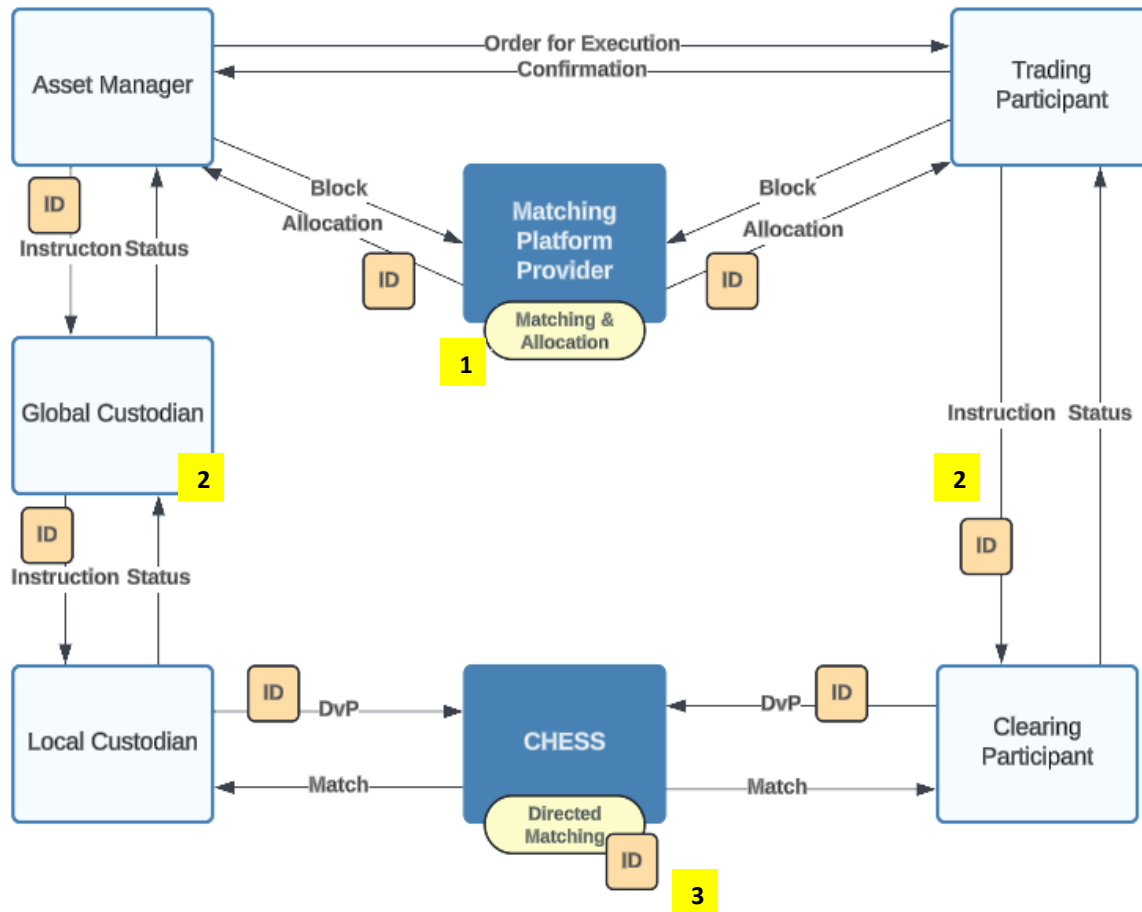
1. A common identifier could be created upstream at the point of allocation (such as a UTI)
2. This common identifier could be passed through the different parties to the transaction and on to CHESS
3. The common identifier could then be used by CHESS for a directed match

This would allow CHESS to perform a directed match on a specific ID, preventing mismatches and potentially increasing operational efficiency.

Is there an identifier currently being generated in upstream systems that could be leveraged? Would this be a new identifier?

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O3b – Leveraging Upstream Platforms

Integration with Hold/Release
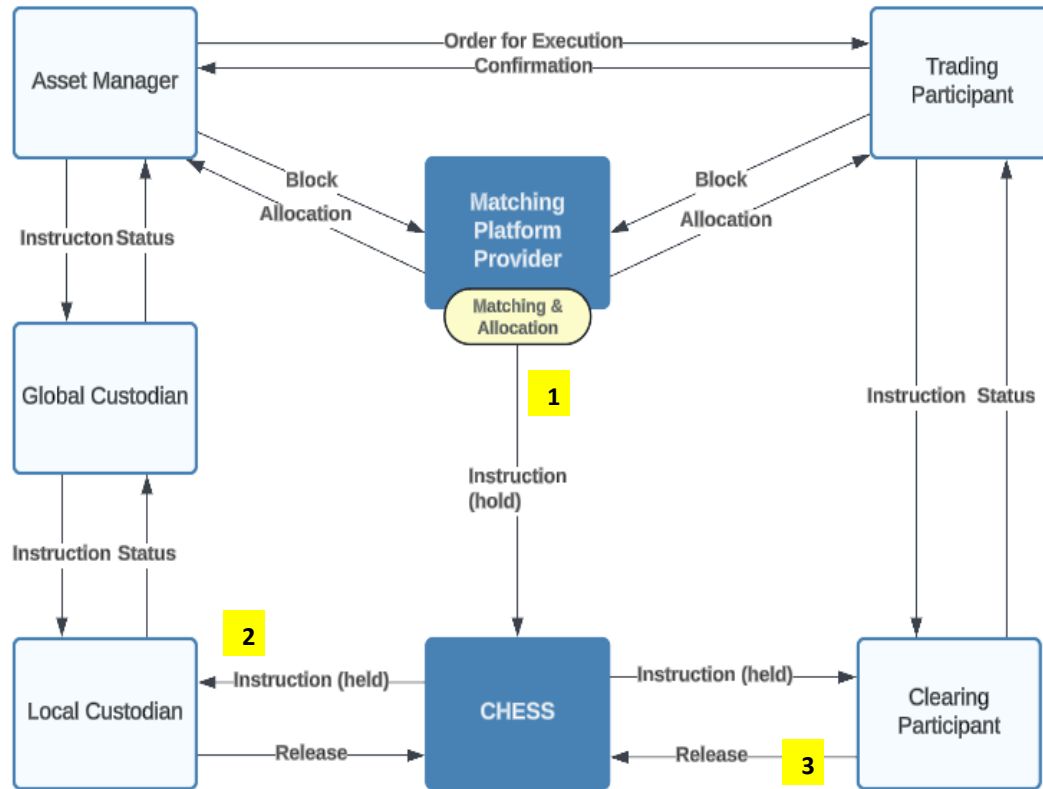
1. Direct integration between the matching provider and CHESS would allow for the DvP instruction to be scheduled directly into the system, without the need for matching

2. The instruction could be input with a 'hold' status on both sides of the transaction. This would be notified to the Custodian and the Clearing Participant.

3. The Clearing Participant and Custodian could 'release' the instruction, effectively affirming it and scheduling for settlement.

Would this change in process provide benefits to the industry, such as reduced latency and points of failure?

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04
Next Steps

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04 – Next Steps

Summary

> ASX will create a Business Design Document on Settlement for your review.

> This will include information in relation to:

- Cum Entitlement Balance & Ex Transfers
- Access channels (UI, ISO20022)
- Non-functional considerations
- Any other considerations

Preparation Steps to Complete

> Review the draft Business Design Document when received and provide feedback to us within the required timeframe.

> A BDWG will be held in September 2024 for Market Claims and Diary Adjustments.

> We will also hold deep dives on ETF creation and redemption processes and usage of transaction basis later this year.

> Please inform us of any changes to your nominated representatives to CHESSReplacement@asx.com.au

> Please complete the feedback request that will be shared with you after this workshop.

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Questions

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