# ASX CHESS Replacement

**Business Design Working Group** 



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# 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: 212 835 866#
- > Presentation materials were distributed before the meeting and will be published on the website



# **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.



01 – Introduction and Agenda

02 – TCS BaNCS New concepts and overview

Agenda

03 – Clearing and Settlement Design

04 – House Client Segregation







# 01 – Introduction

# Detailed workshop agenda

Topic	Duration
<ul><li>Introduction</li><li>Workshop objectives and outputs (5 mins)</li><li>Introduction and settlement design (15 mins)</li></ul>	20 mins
TCS BaNCs - New concepts (20 mins) - TCS BaNCS overview (30 mins)	50 mins
<ul> <li>Clearing Design</li> <li>Trade registration (10 mins)</li> <li>Netting (10 mins)</li> <li>Scheduling for settlement (15 mins)</li> <li>Survey playback and discussion (15 mins)</li> </ul>	50mins
Break	15 mins
House Client Segregation  - Position account structure (20 mins)  - Survey playback and discussion (10 mins)	30 mins
Next Steps	15 mins
Total workshop duration	3 hours



# 01 – Workshop objectives

# **Key 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**

- Collect advice and expertise to understand industry needs in relation to a modular clearing and settlement design, and house client segregation.
- Define the scope for trade registration, netting, and scheduling for settlement in the context of Release 2.
- Establish industry appetite for house client segregation.
- Agree on proposed solutions for the clearing service and its integration with the settlement service.

### **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?



# 01 – Staged Implementation

Release 1 and Release 2

Release 1

- Migrate AMOs to the FIX interface
- Migrate trade registration to the new clearing component of the solution
- Implement the technical infrastructure for the strategic solution
- Clearing solution ensures backwards compatibility to minimise impact on the market

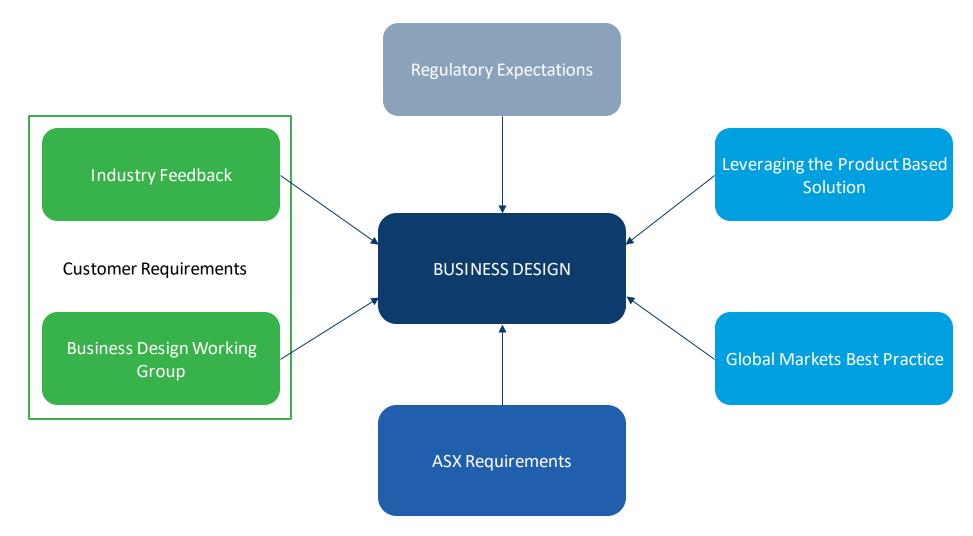
Release 2

- The topics discussed in this workshop are in relation to the full solution implementation in Release 2. This includes all remaining clearing functionality such as trade registration, netting positions, and scheduling for settlement in a modular technology platform.
- Implementation of the full settlement and sub-register functionality,
   including enhancements are to be worked through in future BDWGs.



# 01 – Introduction

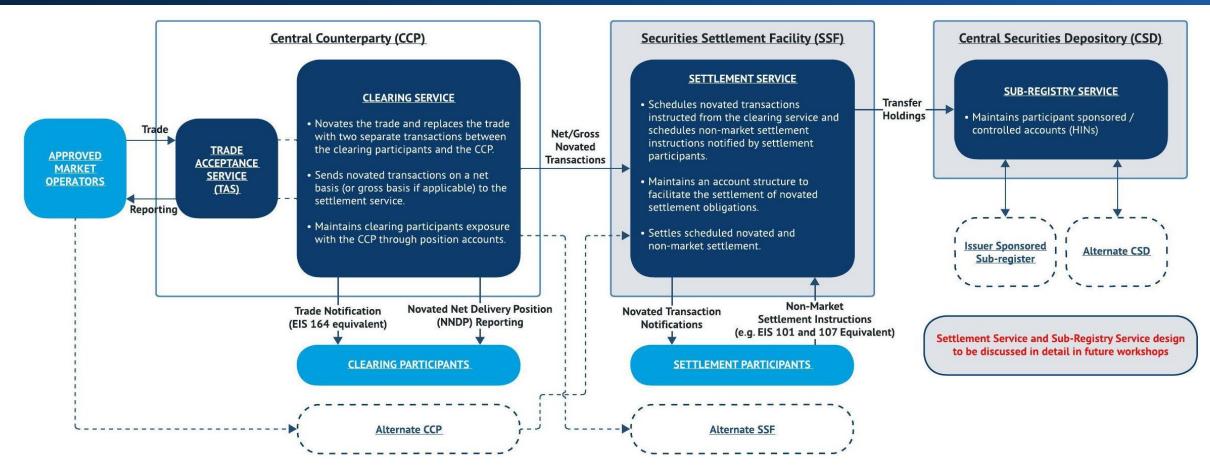
# **Clearing and Settlement Design Considerations**





# 01 – Introduction

## **Modular Design**



- The TCS BaNCS product offers a modular technology platform for clearing and settlement services.
- Enables ASX and unaffiliated operators to access and interoperate with separate clearing, settlement and sub-registry services using standardised interfaces.
- A modular design is considered a pre-requisite to facilitate interoperability in clearing and settlement services.







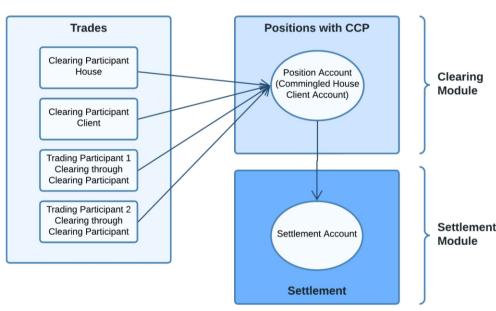
# 02 – TCS BaNCS – New Concepts

## **Position Account – CHESS Equivalent**

- The TCS BaNCS clearing module requires clearing members to maintain "Position Accounts".
- Position Accounts are used to record and maintain a clearing participant's Novated Net Delivery Position (NNDP)
- Single delivery or receipt position (securities and funds) to/from the CCP (per security and settlement date for the position account).
- Trades registered for clearing and settlement will be allocated to a Position Account.
- A Position Account will map to nominated Settlement Account in the settlement module.
- Settlement Accounts facilitate the delivery and receipt of securities (as per current CHESS).

Example of a clearing participant that clears house and client trades and is also a third party clearer; and utilises a single commingled account with the CCP (with a single clearing and settlement PID).

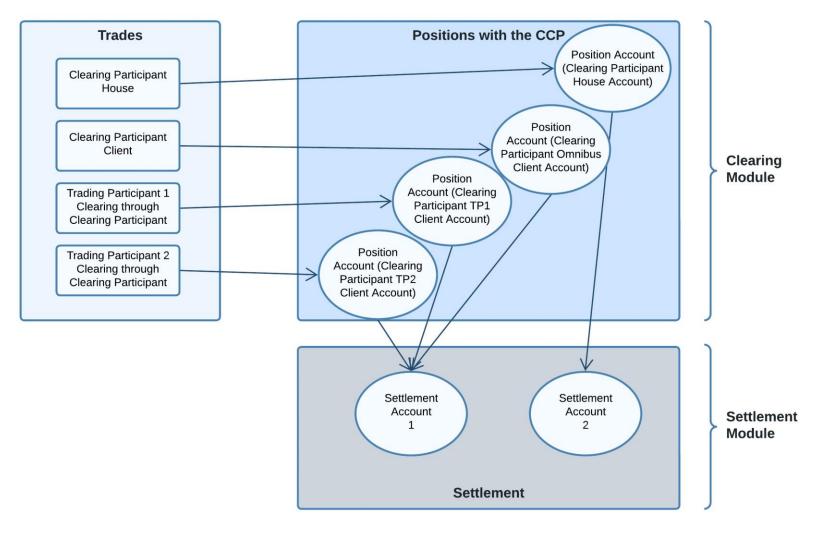
- Clearing participant in this case could maintain a single position account.
- Trades cleared by that participant would be allocated to that position account.
- Batch instructions would be generated to deliver or receive securities to/from CCP from/the nominated settlement account (for that position account).





# 02 – TCS BaNCS – New Concepts

# **Position Account – Additional Capabilities**



- Trades can be allocated to position accounts at the point of trade registration (subject to details made available on the trade and/or configurable trade mapping & enrichment rules) OR posttrade (subject to a workflow made available to clearing participants to re-allocate a trade to another position account).
- Product supports netting positions in 1 or many position accounts into netted settlement obligations transferring securities into or out of 1 settlement account.



# 02 – TCS BaNCS – New Concepts

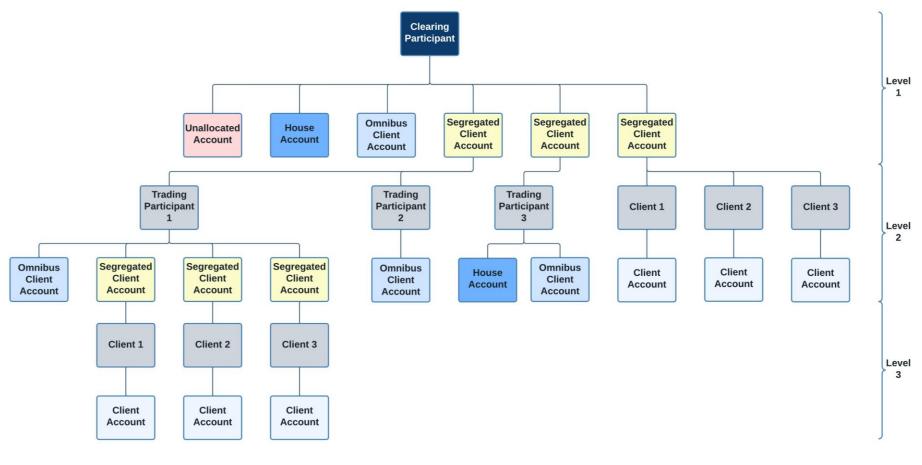
## **Position Account Hierarchy**

- Position account structure conforms to IOSCO and EMIR Guidelines.
- Supports segregation of house, omnibus, and individual client positions.
- Configurable position account setup.
- Flexibility to support

  a hierarchical account structure

  that can be expanded horizontally

  and vertically.





Are there any members who have experience with this type of structure?

Can you share your observations?



## **Clearing and Settlement Design Example**

- The following slides provide an example of the standard workflow for trade acceptance, trade registration and novation, netting of positions, and scheduling for settlement.
- A North American market has followed the workflow described in this example for the clearing and settlement of cash equity products in their TCS BaNCS implementation.





## **Trade Registration & Positions**

The following trades are executed on the trading platform of an AMO between two participants SAF03 and SAF04.

Trade	Trade Ref	Security	Quantity	Settlement Amount	Settlement Date	Buyer	Seller
Trade 1	Y005000000053	USBHA123K402	356	\$ 3,718.69	25/12/2026	SAF04	SAF03
Trade 2	Y005000000055	USBHA123K402	210	\$ 2,193.61	25/12/2026	SAF03	SAF04

Upon registration and novation of the trades in the system, the system notifies the following transactions to clearing participant SAF03

Trade	Trade Ref	Security	Quantity	Settlement Amount	Settlement Date	Receiver	Deliverer
Trade 1	Y005000000053	USBHA123K402	356	\$ 3,718.69	25/12/2026	ССР	SAF03
Trade 2	Y005000000055	USBHA123K402	210	\$ 2,193.61	25/12/2026	SAF03	ССР

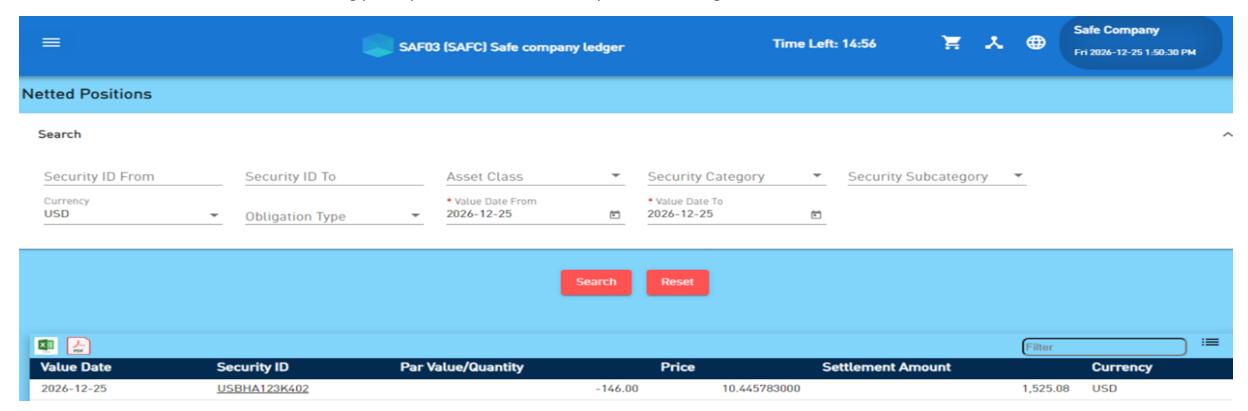
Trade enrichment rules allocate SAF03's transactions to their nominated position account "SAF03GA000" resulting in the participant positions in the position account being netted in real-time.

Following acceptance and processing of Trade 1					
Security	Settlement Date	Deliver/Receive	Quantity	Pay/Receive	Settlement Amount
USBHA123K402	25/12/2026	Deliver	356	Receive	\$ 3,718.69
and processing of Tr	ade 2 - i.e. Netted	Position will net Trac	le 1 and Trade 2		
Security	Settlement Date	Deliver/Receive	Quantity	Pay/Receive	Settlement Amount
USBHA123K402	25/12/2026	Deliver	146	Receive	\$ 1,525.08
	Security USBHA123K402 and processing of Tra Security	Security USBHA123K402 25/12/2026 and processing of Trade 2 - i.e. Netted Security Settlement Date	Security USBHA123K402 25/12/2026 Deliver  and processing of Trade 2 - i.e. Netted Position will net Trace Security Settlement Date Deliver/Receive	Security Settlement Date Deliver/Receive Quantity USBHA123K402 25/12/2026 Deliver 356 and processing of Trade 2 - i.e. Netted Position will net Trade 1 and Trade 2 Security Settlement Date Deliver/Receive Quantity	Security Settlement Date Deliver/Receive Quantity Pay/Receive USBHA123K402 25/12/2026 Deliver 356 Receive  and processing of Trade 2 - i.e. Netted Position will net Trade 1 and Trade 2 Security Settlement Date Deliver/Receive Quantity Pay/Receive



## **Netted Positions**

Clearing participants can view their net positions through the TCS BaNCS UI Screens

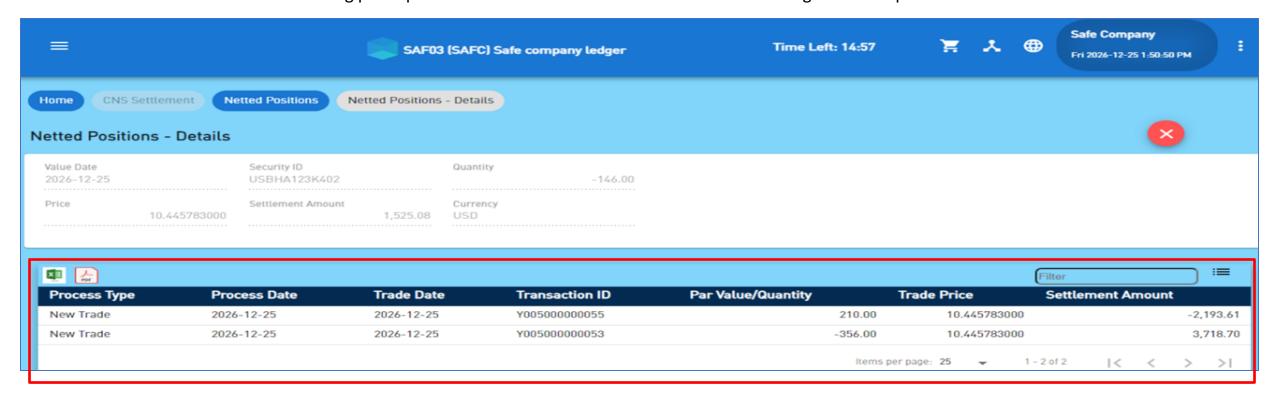


• The system is also capable of notifying clearing participants of their net positions at set frequencies.



## **Netted Positions**

Clearing participants can also view the individual trades contributing to the net positions.





What are the benefits from being able to view individual trades for net positions from an operational standpoint?

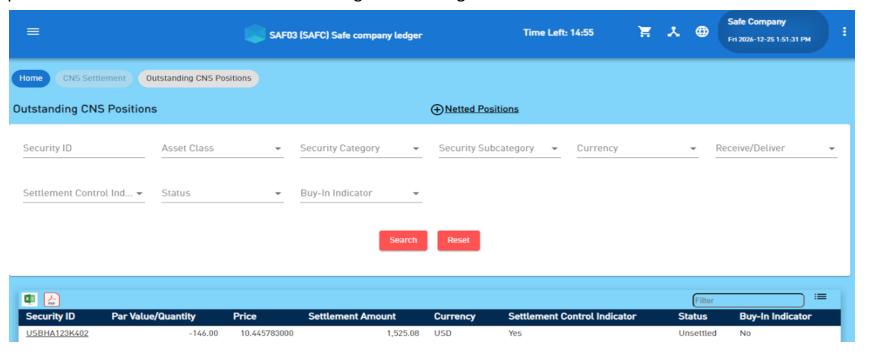


## **Settlement Scheduling**

- At the beginning of settlement date, settlement obligations are generated and scheduled to deliver or receive securities from the settlement account.
- The obligations are calculated based on the net positions in the participants position account(s) mapped to the settlement account.
  - Note in the example: SAF03's Position Account "SAF03GA000" maps to SAF03's Settlement Account "10009044".

Obligation Ref	Settlement Account	Security	Settlement Date	Deliver/Receive	Quantity	Pay/Receive	Settlement Amount	Counterparty
SOBN000000560673	10009044	USBHA123K402	25/12/2026	Deliver	146	Receive	1 575 08	CCP

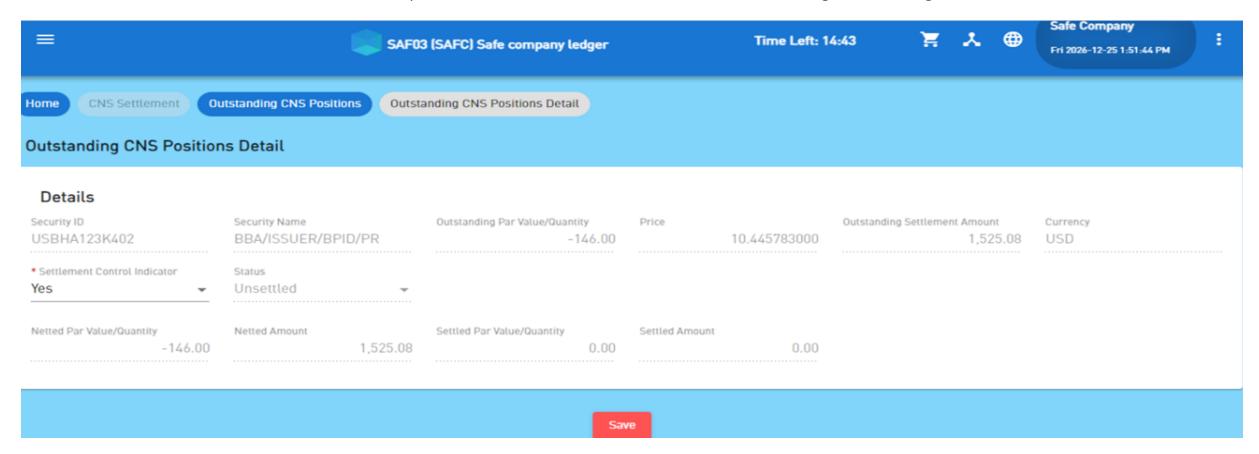
Settlement Participants can also search for their settlement obligations through the TCS BaNCS UI screens





# **Settlement Scheduling**

Settlement Participants can also view the details of their settlement obligations through the UI



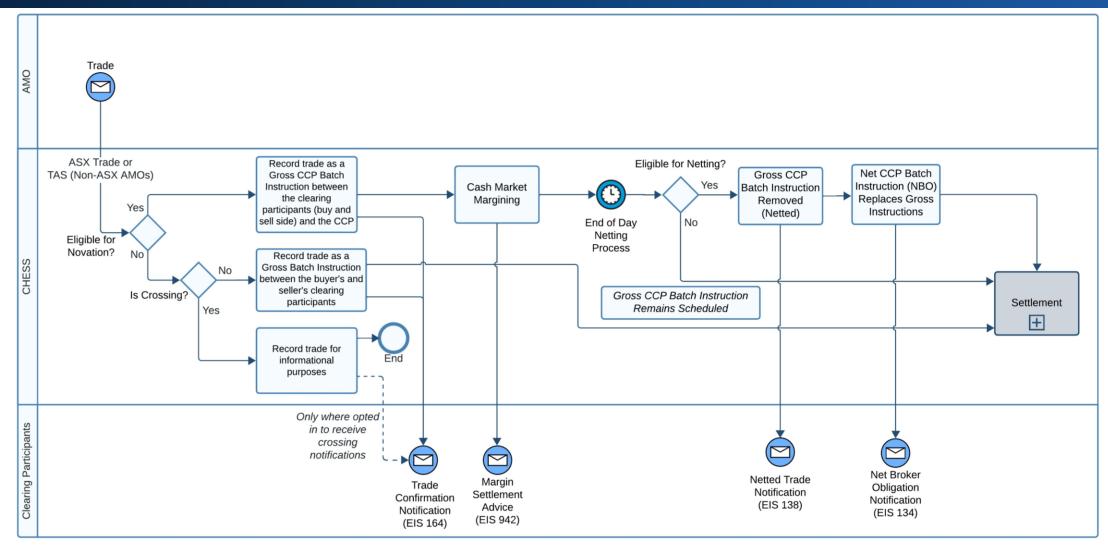






# 03 – Trade Registration and Netting

## **Current CHESS Process**





# 03 - Trade Registration and Netting

# **Current CHESS Netting Eligibility**

- At the end of the trading day, a netting process is run where all eligible delivering and receiving gross cash CCP batch instructions by clearing participant and security combination scheduled to settle in 2 business days are netted into a single net CCP batch instruction (i.e. 'Net Broker Obligation' or NBO).
  - Trades settling the following business day ("As at" or Option Exercise trades & Special Market trades) will remain as a gross instruction.
  - Trades executed for during a period of deferred settlement are not netted at the end of trade date but will be netted, where eligible, in the netting process run in the evening 2 business days prior to the settlement date.
- Netting eligibility criteria:
  - Security Eligibility Securities are routinely marked ineligible for netting due to certain corporate actions
  - Condition codes on the trade which make the trade ineligible these include:
    - OR Overseas Resident
    - P1 Put through trade report \$1M
    - P2 Put through trade report \$0.5M
    - PR Prompt Rebooking
  - As requested by the relevant clearing participants "Blocking"
  - Trades ineligible for novation (including crossings)

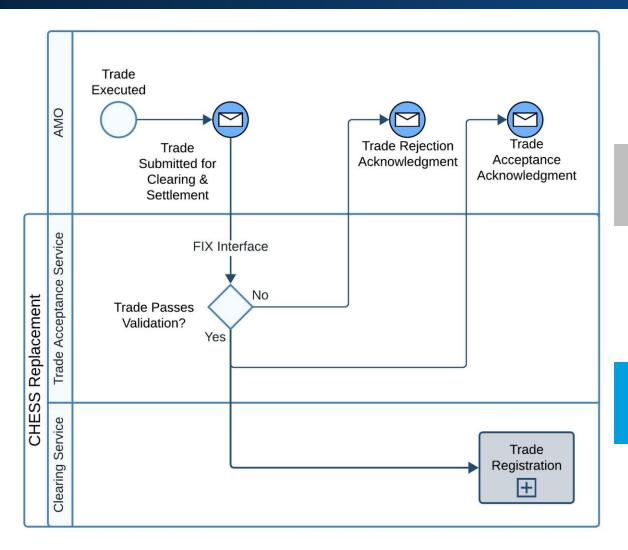


Are there any recommendations or pain points from your organisational processes that you would like to discuss?



# **Trade Acceptance**

# **CHESS Replacement**



Release 1

- The CHESS replacement system will adopt FIX interface for accepting trades into ASX's clearing and settlement facilities.
- Trades executed on the trading platform of all AMO's (ASX Trade and other AMOs) will be submitted to be cleared and settled by ASX Clear and ASX Settlement via this FIX Interface.

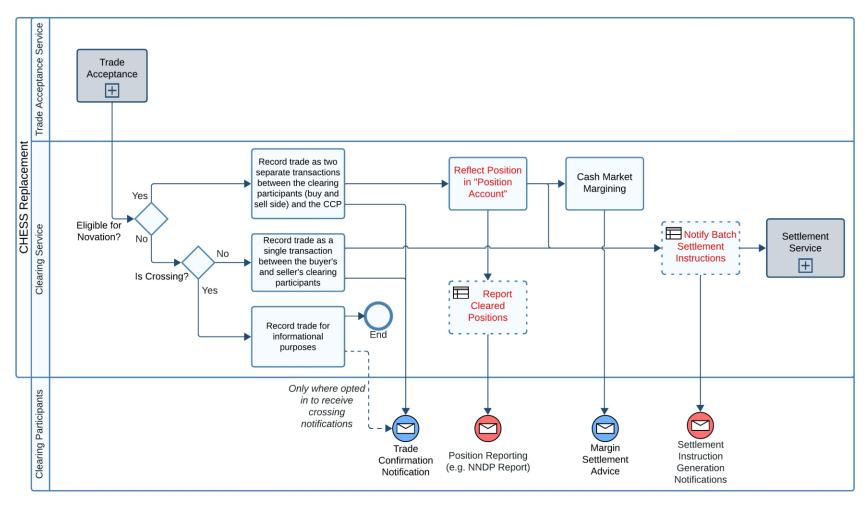
Release 2

 Depending on industry requirements to support remaining clearing, settlement and subregister functionality, FIX interface changes may be required.



# 03 – Trade Registration and Scheduling for Settlement

# **CHESS Replacement – Clearing Service**



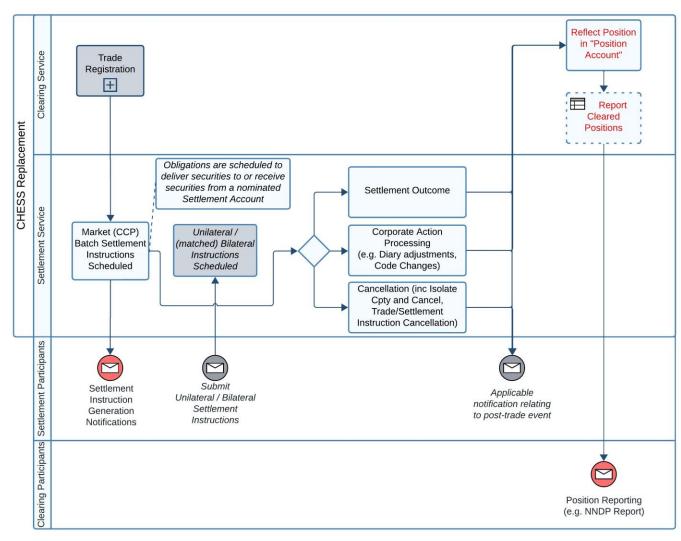
- No change is proposed to the trade registration confirmation and cash market margining process.
- Clearing participants notifications will be transmitted in ISO 20022 message format.

**To be designed** – in the context of a modular architecture that facilitates interoperability in clearing and settlement services:

- Any function required by participants to view or be notified of cleared positions.
- Netting of trades for settlement and netting eligibility rules.
- Timing of instructing trades/positions for settlement and any clearing participant notification requirements.
- Any use cases for mapping different trade types to different position accounts.
- Other expectations of the clearing service vs settlement service.

# 03 – Trade Registration and Scheduling for Settlement

## **CHESS Replacement – Settlement Service**



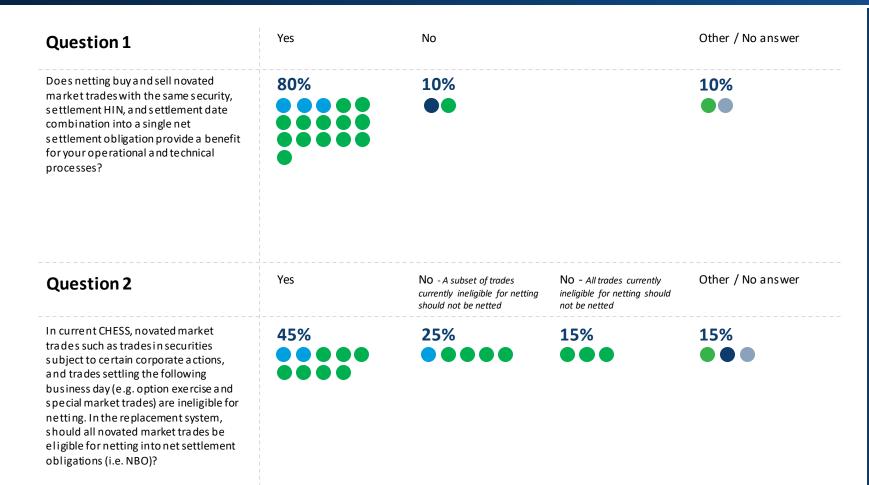
**To be designed** – in the context of a modular architecture that facilitates interoperability in clearing and settlement services:

- Materialising and notifying settlement obligations.
- Rescheduled obligations (e.g. fails) to be kept separate from new obligations in any net.
- Position reporting could be provided incorporating failed novated settlement obligations with other outstanding positions
- Other expectations of the settlement service vs clearing service.
- Reconciliation of settlement obligations back to positions and trades.



# 03 – Survey Playback

## **Net Novated Settlement Obligations**



## Insights

#### Question 1:

- Netting reduces the requirement for technical change, it reduces settlement obligation volumes by approximately 75% for some participants which significantly reduces the operational processing overhead.
- Keeps volume load on messages to a minimum. Reduced CHESS msg cost benefits for participants

#### No

• There is no impact to our operational or technical processes.

#### Question 2:

#### Yes

There should be a minimum number of exceptions to the netting process and it should be designed to capture all daily on market trading activity. A cut off should be imposed to exclude late transactions.

#### No - a subset of ineligible trades should not be netted

- Exclusion of a subset is required to support complex Corporate Actions. Inclusion of Options exercise would require the ASX to adjust the Options expiry processes by generating expiry 164 messaging the evening before settlement.
- ETO's netting could be deferred to after ETO EOD
- Late trades a re-netting event with new 134 messages could occur at 8am on T+1.

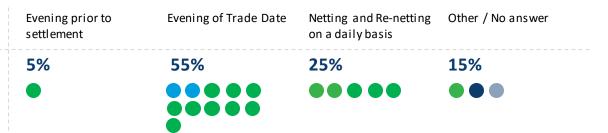


# 03 – Survey Playback

# **Net Novated Settlement Obligations**

#### **Question 3**

In current CHESS, netting eligible novated market trades are generally netted into a single net settlement obligation (i.e. NBO) on the evening of trade date. This means that some trades received late are not netted. In the replacement system, when do you wish to be notified of your net novated settlement obligation?



#### **Question 4**

Please provide any further comments that should be taken into consideration when netting novated market trades into net novated settlement obligations.

- Status quo (evening of trade date) should prevail at until such time as T+1 is ruled out. And then, if T+1 were ruled out—the idea of netting and re-netting daily seems an unnecessary processing overhead; much better to find strategies to reduce or eliminate late trades altogether.
- Netting and re-netting should only be supported in terms of deferred settlements when the settlement date is greater than T+1. As above any adjustments performed on a T+1 should be handled on a gross un netted basis or alternatively captured in a separate net which ring fences the late trades.
- · Based on experience with netting arrangements in other markets we prefer a model in which all net transactions have a clear trade date and settlement date (i.e. a single net transaction comprises only trades from the same trade date and which share the same settlement date)
- Obligations that have previously failed settlement (or the failed portion of a larger obligation) must remain separate from the nightly netting process to ensure that the correct settlement ladder is maintained for the instrument and that these failing obligations are settled with priority over subsequent obligations.

## Insights

#### Question 3:

#### **Evening prior to settlement**

- Inline with other global markets, ASX should net on SD-1 evening after market close to ensure the solution is extensible for T+1.
- Would allow some late trades to be incorporated into the net, but only while processing under T+2, under T+1, late trades would still be reported too late for netting.

#### **Evening of trade date**

- Try and eliminate late trades or re-netting for securities that have been impacted by the late trades and not a full re-netting of all securities.
- Netting timed for the evening of Trade Date should be consistent with the move to T+1 without having to change processes.

#### Netting and re-netting on a daily basis

This is the netting approach practiced in the US DTCC CNS system and would appear to be the most operationally efficient.



# 03 – Survey Playback

# **Clearing Service Design**

Question 5	Yes	No		Other / No answer
In current CHESS novated market trades are registered for settlement immediately, and netting-eligible gross settlement obligations are later cancelled via the netting process (EIS 138 message). Would you benefit from novated market trades being registered and notified to clearing participants initially for clearing, and then instructed for settlement and notified to settlement participants via a subsequent process?	55%	30%		15%
Question 6	Yes	No		Other / No answer
As a Clearing Participant, would your operational and technical processes benefit from the replacement system notifying your net cleared positions separately from your novated settlement obligations, and in addition to trade notifications?	50%	20%		30%
Question 7	In the evening via messaging as part of the EOD reporting	At set times per day via messaging	On a continuous basis via a user interface	Other / Not required
If you responded 'Yes' in question 6, when do you wish to be notified of your net cleared positions? (Select all that apply) Note: these are the answers from 50% of respondents in Q6 who selected Yes.	50%	14%	29%	<b>7</b> %

## Insights

#### Question 5

- Far better simply to notify trades intraday without scheduling them for settlement, and then to schedule settlement once and for all at the end of the day (and on a net basis as far as is practicable). Further, this decoupling of settlement function from clearing function seems integral in providing interoperability of alternate clearing and/or settlement venues.
- There is support to remove 138 CHESS messages, however still receive the 134 message to complete the reconciliation process

• There is no impact to our trade processing from such messages.

#### Question 6

#### Yes

- Expected to assist with determining projected short positions and provide a settlement ladder workflow.
- Our own internal design will dictate whether or not to use this additional information, and how.

#### No

Our systems already track the intra-day clearing position and would not benefit from this. Receiving these messages would add to processing volume,



# 03 – Survey Results

## **House Client Segregation**

#### **Question 8**

In other markets and asset classes, settlement accounts and clearing accounts are typically maintained separately. Do you see any benefit to this approach and/or do you have any feedback in relation to separated clearing and settlement accounts?

- With the objective of interoperability of alternate clearing and/or settlement venues in mind, this may be a necessity.
- Clearing and Settlements should not be co-mingled, The costs for the Clearing Obligations need to be reviewed 'HIN to HIN' transfer, as it is a market requirement to move stock to the Clearing HIN to complete the obligations
- No real difference but if clearing and settlement are segregated, then this would have to occur.
- Our existing workflow essentially already segregates our clearing and settlement accounts and workflow
- Where accounts are set up in this way in other markets, we have not found that processing of transactions greatly changes, and the difference of this account structure is not impactful to our processing
- The key perceived benefit is clarity between the separate clearing and settlement processes and future flexibility.
- ASX should make reference to COFR objectives for competition considerations in clearing and settlement and validate if these changes would be required to support.

#### **Question 9**

Please provide any further comments that should be taken into consideration in the design of the clearing service.

- Margining and collateral to be included in the development of the clearing service solution.
- Clearing service must cater for T+1 settlement, and eventually T+0 settlement.
- Our preference is that there is no redesign of the clearing, netting, and settlement
- workflow at this time in order to reduce time to market and realise benefits from the work already undertaken.
- We feel this is an excellent opportunity to standardize the Australian market to a more global model, thus reducing overall costs for participants operating in the market and improving transparency.
- Note: Some feedback relates to settlement processes and will be carried forward to the May BDWG



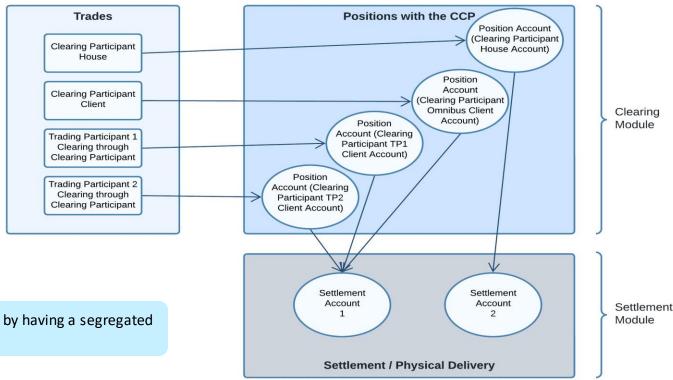


# 04 – House Client Segregation

## **TCS BaNCS House Client Segregation Functionality**

- The RBA's Financial Stability Standards (FSS) for Central Counterparties (CCPs) Standard 13: Segregation and Portability (FSS 13):
  - A CCP should have rules and procedures that enable the segregation of positions of a participant's customers and the collateral provided to the CCP with respect to those positions; or otherwise
  - Have arrangements in place that provide materially equivalent protection of customer assets by alternate means.

The TCS BaNCS product-based position account structure enables the ASX CCP to offer clearing participants an omnibus or individual client segregated account structure, noting that there may be significant effort required by participants to operationalise this functionality, depending on industry requirements.





What benefits can you see for your organisation and clients by having a segregated account structure?



# 04 – House Client Segregation

## **Market considerations**

### Further market considerations would include:

- Whether clearing participants would utilise a house/client segregated account structure and when a segregated account structure should be implemented (technically and/or operationally with or after CHESS Replacement)
- · Process for allocating trades/positions to house and omnibus or individual client accounts
  - New post-trade workflow would need to be implemented for clearing participants to reallocate trades to the applicable account.
  - AMO FIX interface and trade enrichment rules would need to be enhanced to support allocation at point of trade registration
    - Assumes Trading Participants would tag orders with a house/client designation or other applicable details pre-trade, and AMOs could pass these details onto CHESS
- Cash market margin would be calculated on the net position in each segregated account and house collateral would be segregated from client collateral. Existing cash market margin advice and collateral workflows would require enhancement to support this.

- Broader design considerations:
- Order aggregation on trading platforms of AMOs
- Modular architecture and interoperability between separate clearing and settlement services
- Industry views and further market considerations:
  - The transferability (portability) of client positions and collateral to another participant at scale within the T+2 (or shorter) settlement cycle
  - Should client assets be used to fund cash market margins relating to client positions, and are regulatory changes required to enable this?
  - Protection of client collateral and protection of clients against replacement cost, in the event of a clearing participant default and positions are closed out.
- Other considerations (effectiveness of current client asset protections, NGF, feasibility of portability, enablers to move to segregated account structure).



Are there any other considerations that you would like to discuss?



# 04 - Survey Results

# **House Client Segregation**

Question 10	Yes Omnibus client account only	Yes Individual client account only	Yes Omnibus & Indiv. client account	Yes Other – please specify	No	No response
ASX Clear currently operates a commingled house/client accounts tructure for the holding of cash market positions. If ASX offered an optional segregated account structure in the CHESS replacement system (omnibus, individual or other), would you be likely to use it? (Select one)	0%	0%	20%	<b>5%</b>	50%	25%
Question 11	1 					
If a segregated account structure was to be implemented in the Australian cash market, should	Industry build and test as part of CHESS Replacement Release 2, to be operationalised at go-live?		Industry build and test as p Release 2, but operational	•	Industry build and test in the new system after CHESS Replacement?	No response
it be implemented (Selectone):	20%		5%		60%	15%

## Insights

- On a rare occasion we might have a long error position that doesn't clear same day, but will usually clear the following day, so by the time the long leg settles the holding will be needed for a sold market obligation anyway.
- It would double our processing for separation of only a few house trades.
- Optionality may be required to support clients with varied business models and market regulation. It is understood the current model of intraday trust has previously met the Financial Stability requirements.



# 04 – Survey Results

## **House Client Segregation**

#### **Question 12**

If ASX were to enable a house/client account structure for the holding of cash market positions, what information or mechanism could be used to allocate novated trades to segregated accounts?

- A solution should support a means for allocating a trade to the correct account on trade registration
  via enhanced allocation rules (based on details at pre-trade level provided by trading participant
  pre-trade and passed through by AMOs) to or re-allocation of a trade to the correct account via a
  new post-trade transactional workflow.
- In the event one or more trades are allocated to the incorrect clearing account, participants should be able to move a position on an aggregate basis.
- Additional technical change should be avoided to reduce additional cost and reduce the industry's and ASX's ability to deliver CHESS Replacement Release 2 on schedule.
- More detail is required on the features of a solution with house/client segregation.

#### **Question 13**

Please provide any further comments or any other factors that should be taken into consideration if the Australian cash market moved to a segregated account structure.

- Significant change required in clearing and settlement platforms to support house/client segregation
- Allow clients to be able to be margined
- Limited number of participants that need to segregate house and client positions but change will impact the whole market
- Segregated account structures may increase the cash market margining requirements of participants due to reduced netting efficiency
- A move to T+1 will further reduce risk to clients in a commingled account structure
- Further clarity is required in the number of payment facilities, number of funds obligations and how crossings will be determined in a segregated account structure







# 05 – Business Design Document

## Summary

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

This will include information in relation to:

- Continuous netting of positions and net settlement obligations
- Position account structure
- Process flow considerations
- Notifications
- Access channels (UI, ISO20022)
- Non-functional considerations
- Any other considerations
- > Industry feedback regarding House Client Segregation will be noted for further discussion or workshops as applicable.



# 05 – Next Steps

# **Preparation steps to complete**

- > Review the draft Business Design Document when received in approximately 2 weeks and provide feedback to us within the required timeframe.
- > The Settlement Design BDWG will be held in May 2024.
- > Please inform ASX of any changes to your nominated representatives to <a href="mailto:CHESSReplacement@asx.com.au">CHESSReplacement@asx.com.au</a>
- > Complete the feedback request that will be shared with you after this workshop.





# ASX QUESTIONS?



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# THANK YOU.



