CHESS Replacement Technical Committee

13 September 2023



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

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Housekeeping: trouble shooting

- 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 minute taking
- Dial in details (audio only):
 - <u>+61 2 7208 4607</u>
 - Phone Conference ID: 486 431 578#
- Presentation materials were distributed before the meeting

Important information – Competition Law reminder

Committee 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.

Welcome, agenda & open actions



Agenda

- Welcome and open actions
- Member feedback from last meeting
- Project status and governance
- Project scope Discussion of scope recommendation survey results and endorsement of Business Committee proposal
- Approach to interface options playback and discussion of interface options survey results
- Forward work plan
- Observer playback



Open actions Captured from previous Technical Committees

ltem #	Action	Follow-up	Due	Status	Owner
2023 June (1)	ASX to include the solution's messaging protocol (e.g. EIS versus ISO messaging) as a TC topic.	To address as part of the connectivity options Technical Committee agenda item	28 September 2023	Open	ASX
2023 August (1)	ASX to provide clarity on the level of customisation the ISO 20022 base messages leveraged by CHESS Replacement (as at pause).	Update in committee (refer to slide 8)	13 September 2023	Open	ASX



Summary

- ASX engaged SWIFT in 2016 to map all existing EIS messages to ISO 20022 to ensure the standard was fit for purpose. This uncovered gaps in the ISO 20022 message catalogue for select cash management messages (5) and collateral messages (2). In 2018, a business justification was submitted to the ISO 20022 registration authority to address these gaps, noting the cash management messages have since been used in other markets.
- ASX analysed 496 proprietary CHESS EIS messages and, in consultation with the market from 2018 to 2021, mapped 275 EIS messages to 106 ISO 20022 base messages. Of the 106 total messages:
 - 71% (75) were compliant with ISO 20022 standards, requiring no additional customisation or supplementary data.
 - 29% (31) required supplementary information, a majority (15) requiring only a single additional element mostly to add balance information.



106 Messages Developed for CHESS Replacement (as at pause)



Member feedback



Project status & governance

Redesign plan update Plan for solution design

	CY Q1	CY Q2	СҮ Q3	CY Q4
Product Definition & Business Case	 ✓ Business Vision & Strategy ✓ Program Objectives 	 Scope and business requirements refined 	 Scope and business requirements baselined Business case submitted 	
Solution Assessment	 ✓ Current state evaluation ✓ Solution decision framework developed 	 ✓ Solution decision framework approved ✓ Solution options refinement ✓ Solution options evaluated 	 Solution design finalised Project estimation completed 	Announcement o solution design
Sourcing & Commercial	✓ Market Scan✓ Vendor solution RFI	 ✓ Vendor RFI evaluation ✓ Vendor RFP issued and responses received ✓ Solution integrator RFP 	 Vendor commercial and contracting processes SI selection and contracting 	Market engagement on readiness and
Testing & mplementation	 Implementation options review 	 ✓ Implementation impact assessment ✓ High level test strategy 	 Implementation strategy Test strategy & approach completed 	implementation planning

ASX

Project scope

Endorsement of Business Committee proposal

Technical Committee – Next steps

Key dates for recommendations on scope





Scope Recommendation Survey

How recommendations are made to the Business Committee

Process



What does the outcome look like?

The outcome of the scope recommendation process is quite broad. For example, it can be:

- that all scope objective recommendations are brought to the Business Committee
- that none of the scope objective recommendations are brought to the Business Committee
- that some of the scope objective recommendations are brought to the Business Committee
- a negative outcome would be the inability for the Technical Committee members to decide whether a scope objective is or isn't brought to the Business Committee
- in the instance where consensus on a scope objective cannot be reached, it will not be brought to the Business Committee until a time when consensus is achieved



Scope Recommendation Survey

Results playback – 93.75% Response Rate

Response Rate



Participation by Cohort

Recommendation

The initial proposal categorises the Scope Objectives under one of the following:

- 1. Proceed to CHESS Replacement design consultation
- 2. Proceed to CHESS Replacement design consultation (and evaluate the opportunity to make improvements in current CHESS)
 - The feasibility of these objectives will also be explored in current CHESS.
- 3. Further consideration
 - These objectives will either be brought back to the Technical Committee, or supporting industry forum, for further discussion.

4. Not supported

• These objectives have not received sufficient support and will not be brought forward at this time.

Scope Recommendation Survey

Results playback

Торіс	Functionality	Ref	Scope Objective	Not relevant to my business	Strongly support	Somewhat support	Not supportive	Majority
	Registration Details and	1.1	Standardise, improve and better synchronise the data sharing between participants and share registries	5	18	5	2	Strongly support
	Investor Information	1.2	Foreign restricted securities - review and simplify the current processes for holdings and transfers	7	10	12	1	Somewhat support
Sub-register	SRN Enquiry & Validation	1.3	Implement a faster and more efficient SRN enquiry process	5	19	4	2	Strongly support
and issuer sponsored	Issuer Sponsored Holding Locks	1.4	Reduce settlement risk in relation to issuer sponsored sales	9	8	9	4	Somewhat support
-	ETF Creations & Redemptions	1.5	Reduce operational risk in relation to the current ETF creation/redemption workflow	15	7	5	3	Strongly support
	Continuous Holding Balance	1.6	Provide more efficient, reliable and faster access to holding information	9	11	8	2	Strongly support
	Bilateral Matching Improvements	2.1	Reduce operational risk by ensuring participants are able to submit and match transactions in the system as soon as practical whilst minimising the likelihood of incurring a failed settlement (e.g. being able to separately match and schedule a transaction)	12	10	5	3	Strongly support
		2.2	Reduce operational risk by minimising mismatches and failed matches by increasing the data sharing and matching fields available and/or making use of information available in upstream systems	10	9	9	2	Somewhat support
Sattlamont	Standing Instructions	2.3	Reduce operational overhead in relation to payment provider authorisations by allowing for automated approvals in the system within cash limits.	15	5	7	3	Somewhat support
Settlement	Preliminary Payment Notifications	2.4	Provide more certainty by enabling more frequent and/or configurable access to preliminary payment data.	15	2	9	4	Somewhat support
	N/A	2.5	Bilateral Matching – use of Transaction Basis (on and off-market)	17	5	5	2	Somewhat support
	N/A	2.6	Scheduled Settlement CHESS to CHESS Transfer Request (MT107) - support usage within a participant group structure	22	3	4	0	Somewhat support
	N/A	2.7	Deferred settlement securities – review process to ensure/improve settlement efficiencies	12	7	8	3	Somewhat support
	Electronic Dividend Claims	3.1	Review and enhance the current processes for automated claims (diary adjustments) to ensure it continues to meet the market needs.	7	12	7	4	Strongly support
	Corporate Action Election	3.2	Provide standardised straight through processing capability for corporate action elections and cost effective associated payments.	8	14	6	2	Strongly support
	and Acceptance				14	8	3	Strongly support
	Cum Entitlement Balance Transfer	3.4	Evaluate opportunities to facilitate the transfer of entitlements (pre and/or post Record Date) ensuring this does not impact issuer schedules.	7	11	7	5	Strongly support
Corporate Actions	Electronic Notification of Payment Advice	3.5	Provide standardised electronic transmission of corporate action distribution information to create opportunities for automation and process improvement. Evaluate whether ASX can help with the transmission of bank account information in relation to bid offers		12	8	4	Strongly support
Actions	Other Corporate Action Efficiencies	3.6			9	12	3	Somewhat support
	Other Corporate Action Efficiencies	3.7	Ensure holding adjustment reason codes are up to date and being used correctly	5	16	9	0	Strongly support
	Other Corporate Action Efficiencies	3.8	Make sub-register state more readily available to participants to help improve processes in relation to de-listings	7	7	16	0	Somewhat support
	Other Corporate Action Efficiencies	3.9	Standardised electronic proxy voting	9	4	14	3	Somewhat support

Sub-register and issuer sponsored enhancements Initial proposal

Торіс	Functionality	Ref	Scope Objective	Summary Rating	Summary	Recommendation for Consideration	Rationale		
	Registration Details and	1.1	Standardise, improve and better synchronise the data sharing between participants and share registries	Strongly support	The majority of members strongly support improving and standardising investor data, citing increased operational efficiencies, fewer rejections and better access to data. One organisation was not supportive due to concerns with the cost vs benefits.	Proceed to design for CHESS Replacement.	ASX proposes continued assessment of the way information is shared during the design process, supported by benefits developed via industry associations.		
	Investor Information	1.2	Foreign restricted securities - review and simplify the current processes for holdings and transfers	Somewhat support	Industry feedback indicates a majority of members somewhat support this objective, however a large cohort of Custodial participants with high business impacts strongly support improving the foreign ownership flag to reduce administrative burden. One organisation was not supportive because they are satisfied with the current process.	Further consideration needed	ASX proposes to review the current process and usage in relation to FOR securities, and the appropriateness of the functionality going forwards.		
Sub-register and issuer	SRN Enquiry & Validation	1.3	Implement a faster and more efficient SRN enquiry process	Strongly support	The majority of members strongly support improvements to this feature as a high priority to provide better information in the SRN response and timeliness of the SRN enquiry processing. One organisation was not supportive due to concerns with the cost vs benefits.	Proceed to design for CHESS Replacement.	ASX proposes a review of the end-to-end process in relation to SRN enquiries and issuer sponsored sales to identify any		
sponsored	Issuer Sponsored Holding Locks	1.4	Reduce settlement risk in relation to issuer sponsored sales	Strongly support	General feedback indicates that this feature has a low impact on the industry, however a cohort of participants with medium business impacts strongly support and view this as a core issue leading to settlement fails. Several members were not supportive of this change citing concerns about the complexity involved with minimum benefit.	Proceed to design for CHESS Replacement.	improvements that can be made.		
	ETF Creations & Redemptions		Reduce operational risk in relation to the current ETF creation/redemption workflow	Strongly support	The majority of members are not impacted by this process, however the cohort of participants whom are involved in the ETF creation process view this function as critical. Current processes are inefficient and the market strongly support improvements in this space. Two organisations were not supportive due to concerns with the cost vs benefits.	Proceed to design for CHESS Replacement (and evaluate opportunities in current CHESS).	ASX proposes evaluating with affected stakeholders what changes could improve the process for ETF creation and redemption, including whether any improvements are appropriate for the current system.		
	Continuous Holding Balance	1.6	Provide more efficient, reliable and faster access to holding information	Strongly support	Overall industry feedback cites high impact and strongly support higher visibility and greater access to holding balance information on CHESS. One organisation was not supportive due to concerns with the cost vs benefits.	Proceed to design for CHESS Replacement.	ASX proposes to review access to holding balances in the context of the selected solution and connectivity channels.		



Settlement enhancements

Initial proposal

Торіс	Functionality	Ref	Scope Objective	Summary Rating	Summary	Recommendation for Consideration	Rationale	
	Bilateral Matching Improvements	2.1	Reduce operational risk by ensuring participants are able to submit and match transactions in the system as soon as practical whilst minimising the likelihood of incurring a failed settlement (e.g. being able to separately match and schedule a transaction)	Strongly support	This objective has a high business impact on Participants that strongly support , however there are concerns relating to the proposed solutions and benefits provided. A further deep dive into the root causes of failed settlements and a feasibility study is recommended by the market. Two organisations were not supportive citing changes could lead to increased uncertainty and that this was not a priority.	Proceed to design for CHESS Replacement.	ASX proposes to facilitate a re-review of the matching rules, criteria and processes in the	
		2.2	Reduce operational risk by minimising mismatches and failed matches by increasing the data sharing and matching fields available and/or making use of information available in upstream systems	Somewhat support	There is concern from the market this may cause regression if matching criteria is not optional. Members somewhat support the addition of a unique transaction identifier to trade messages to improve matching rates. Two participants were not supportive due to the increased risk of mismatches.	Proceed to design for CHESS Replacement.	context of the selected solution.	
	Standing Instructions	2.3	Reduce operational overhead in relation to payment provider authorisations by allowing for automated approvals in the system within cash limits.	Somewhat support	There is low impact to the industry for this objective, as the majority of members are not payment providers and participants have internal risk management processes. The market somewhat supports the ability to automate payment authorisations. Two organisations were not supportive of changes as this was not a priority for their business.	Further consideration needed	ASX proposes to gain feedback from payment providers via the ESPPSC (Equity Settlement	
Settlement	Preliminary Payment Notifications	2.4	Provide more certainty by enabling more frequent and/or configurable access to preliminary payment data.	Somewhat support	Feedback indicates there is limited benefit in providing projected net payment data as exposure is dynamic until post batch. The market somewhat supports the ability to projected payment data. Three organisations were not supportive of changes as this was not a priority for their business.	Further consideration needed	Payment Provider Sub-Committee) before a determination is made.	
	N/A	2.5	Bilateral Matching – use of Transaction Basis (on and off-market)	Somewhat support	Industry feedback indicates a majority of members somewhat support this objective, however comments suggest that the objective was not adequately worded as the preference is to remove the requirement for transaction basis. Two organisations were not supportive of the use of transaction basis.	Further consideration needed	ASX will undertake a review the rationale for the current on/off-market transaction basis indicator in the context of the current system and continue to consider for CHESS Replacement.	
	N/A	2.6	Scheduled Settlement CHESS to CHESS Transfer Request (MT107) - support usage within a participant group structure	Somewhat support	Majority feedback is somewhat support as there is limited use of this transfer request message industry wide, deemed as low impact and low priority to most participants. Most members deemed this functionality as not relevant to their business.	Proceed to design for CHESS Replacement (and evaluate opportunities in current CHESS).	ASX proposes to review the whether this request can be considered in the context of the current system and continue to consider for CHESS Replacement.	
	N/A	2.7	Deferred settlement securities – review process to ensure/improve settlement efficiencies	Somewhat support	Members agree that the process can be improved and somewhat support a review. This objective is viewed as low priority at this point in time. Two organisations were not supportive of changes as this was not a priority with limited benefits for their business.	Further consideration needed	ASX will undertake a review the deferred settlement process to ensure it remains fit for purpose and aligns to international standards.	



Corporate Action enhancements

Initial proposal

Торіс	Functionality	Ref	Scope Objective	Summary Rating	Summary	Recommendation for Consideration	Rationale
	Electronic Dividend Claims	3.1	Review and enhance the current processes for automated claims (diary adjustments) to ensure it continues to meet the market needs.	Strongly support	The market strongly supported a review and further evaluation of the process and is unclear on the how CHESS can materially improve this. The deferral of payments will also have a flow on effect with sourcing franking credits from the failing Participants. Four members were not supportive of this process citing that the current process is ideal and changes should be reviewed at a later stage.	Proceed to design for CHESS Replacement.	ASX proposes to re-review of the diary adjustment processes in the context of the selected solution, including identification of any improvements that can be made.
Corporate Actions	Corporate Action Election and	on 3.2 Provide standardised straight through processing capability for corporate action elections and cost effective associated payments.			Feedback strongly support improvements in this area, however the solution would need to be a cost and time efficient process as there are high impacts to the industry. Two members were not supportive due to increased operational overhead and low priority.	Proceed to design for CHESS Replacement.	Corporate Action Elections were previously in scope for CHESS Replacement Day 2, and DRP Elections are still a part of the scope baseline. ASX proposes to facilitate a re-evaluation of the process design, supported by
	Acceptance Processing	3.3	Reduce operational risk in relation to DRP standing instructions.	Strongly support	The industry is very strongly supportive of this change, citing positive benefits to customers and reduction of manual input for dividend instructions. One organisation was not supportive due to concerns with the cost vs benefits.	Proceed to design for CHESS Replacement.	benefits developed via industry associations. Consideration should be given to critical path and release scheduling, and benefits should be supported by industry associations.
	Cum Entitlement Balance Transfer	3.4	Evaluate opportunities to facilitate the transfer of entitlements (pre and/or post Record Date) ensuring this does not impact issuer schedules.		There is greater efficiency and flexibility for stock lenders and when resolving market failures resulting in strong support from a large number of Participants. Concerns regarding the long term benefits of this feature have been raised in light of progression towards T+1. Three organisations were not supportive due to concerns with the cost vs benefits.	Further consideration needed	ASX proposes to facilitate a re-review of the current Cum Entitlement Balance process and it's use cases more generally in relation to the selected solution, and it's appropriateness if the market was to move to T+1.
	Electronic Notification of Payment Advice	3.5	Provide standardised electronic transmission of corporate action distribution information to create opportunities for automation and process improvement.		There is strong support as the market can see benefit in digitising this information for downstream reporting. Two organisations were not supportive due to concerns with the cost vs benefits.	Proceed to design for CHESS Replacement.	Corporate Action Distribution information is currently used in CHESS for mFund securities. ASX proposes to facilitate an evaluation of the feature in relation to other instruments. Consideration should be given to critical path and release scheduling, and benefits should be supported by industry associations.
	Other Corporate Action Efficiencies	3.6	Evaluate whether ASX can help with the transmission of bank account information in relation to bid offers		There is somewhat support to adopt change as the market eliminates cheques and looks to improve the distribution of income/dividends from Issuers. Two members were not supportive due to low priority.	Proceed to design for CHESS Replacement (and evaluate opportunities in current CHESS).	ASX proposes to review the transmission of bank account information in the context of the current system and continue to evaluate for CHESS Replacement.
	Other Corporate Action Efficiencies	3.7	Ensure holding adjustment reason codes are up to date and being used correctly	Strongly support	A review of adjustment codes is broadly strongly supported by the industry to allow for increased accuracy in reporting and processing consistency.	Proceed to design for CHESS Replacement (and evaluate opportunities in current CHESS).	A review of the holding adjustment reason codes was previously undertaken for CHESS Replacement. ASX proposes for this to be re-reviewed and additionally evaluated in the context of current CHESS.
	Other Corporate Action Efficiencies	3.8	Make sub-register state more readily available to participants to help improve processes in relation to de- listings		There is somewhat support to adopt change and to improve the existing process. Additional functionality to track suspended and delisted stocks would be helpful in trade management.	Proceed to design for CHESS Replacement (and evaluate opportunities in current CHESS).	Additional security state notifications was previously included in CHESS Replacement. ASX proposes this remains in scope and is also reviewed in the context of current CHESS.
	Other Corporate Action Efficiencies	3.9	Standardised electronic proxy voting		There is somewhat support for ASX to provide some facilitation for proxy voting, however it is noted that this is a material change that is deemed a lower priority at this point in time. Three organisations are not supportive , citing concerns regarding the difficulty to standardise this process and legislative changes required.	Further consideration needed	Broader industry and potential legislative change is required to facilitate proxy voting. ASX can continue to review and evaluate whether there is a role for CHESS to play in this process.

Proposal for Business Committee

Next Steps

To facilitate the endorsement process at the 11 October Business Committee and subsequent approval to the C&S Boards, we ask members to:

- > Align internally
 - Ensure that you are aligning internally on this process and outcomes with your Business Committee representative.
- > Remember
 - Business Committee and subsequently C&S Board endorsed scope objectives are taken to design consultation There will be a future checkpoint where final scope is reviewed.
 - Where scope requires further discussion, we will also be leveraging industry association forums to aid the assessment of the benefits/viability of these scope objectives.
- Note 28 September Technical Committee
 - ASX has brought forward the October Technical Committee to provide an additional session to review and approve the recommendation prior to submitting to the 11 October Business Committee.

Interface options

Playback and discussion of interface options survey results

Approach to interface options Industry engagement



Approach Re-cap

- ASX released the interface options survey post the 21 August Technical Committee
- The survey asked members to nominate their preferred transaction and data interface option/s including a free-text field to provide rationale and use cases.
- Members had the ability to skip nominating a preference where applicable.
- Members could also nominate any alternative interface options not listed.

Cohort Response Rate

Topics gauged member preferences on interface options for transaction processing and data access.





Transaction Interfaces – Results Playback Summary

- 12 top ranked responses for AMQP 1.0 transport (noting AMQP 1.0 is also the preferred transport for vendor/in-house build respondents)
- 6 top ranked responses for "Other" (expanded on next slide)
- 3 top ranked responses for Ledger API (with one respondent noting they are reserving judgement until new solution is known)
- Survey covered 76% of organisations that were building to ITE1 (noting all non-surveyed organisations were building to AMQP in ITE1)







Transaction Interfaces – Results Playback *Other* - drill down

Summary

- **Kafka** "Redesign Ledger API that was built in paused CHESS (remove DAML-LF, define as gRPC messages)."
- IBM MQ <no comment provided>
- gRPC "We are progressively standardising towards gRPC organisation-wide."
- **REST** "Consider using a concise well designed REST interface, with clean and fit for purpose JSON content rather than a dated, verbose, poorly designed and confusing XML format. Being an international standard does not mean it is a modern sound format."
- **SWIFT/REST Hybrid** "SWIFT for Standard Messaging whilst allowing for processing of high-volume messaging e.g. market trades and netting (if netting includes market trades) through an API (REST API as a preference, not Ledger API). Would be beneficial for all messaging to be in a SWIFT compatible format, in the recent global standard. Additionally, investigating offerings like Reverse Billing for SWIFT would be beneficial."





Scheduled and ad-hoc reports

Results playback

Summary

- 10 top ranked responses for message based reporting (noting that is also the preferred method for vendor/in-house build respondents)
- 8 top ranked responses for REST API
- 2 top ranked responses for "Other"
 - SFTP Sterling File Gateway (SFG) STP would be a good option
 - Dependency on vendor (presumably want independent access)

Notable comments:

- *"For larger, bulk reports, CSV over SFTP or via REST API might be more suitable."*
- "Combination of REST API and SFTP. Trigger via report generation by REST API and consume report via SFTP"
- *"EOD Registry reporting results in updates to the register and are therefore critical in nature. Timing and sequencing of these updates is very important."*





Data streaming Results playback

Summary

- Majority of respondents have use cases for data streaming
- Accounts/Holdings and Obligations were popular
- 9 top ranked preferences for "Other streaming API" but a lot of diversity proposed within that including Kafka, gRPC, Apache Spark or equivalent, messaging, "ODS style" offering (where ASX provides populated DB that can be accessed), and "need to wait to see solution first





User interface Results playback

Summary

Majority of respondents have use cases for a browser-based CHESS UI

- Ad-hoc query and csv export is the main use case
- Supplementary transaction functionality also seen as useful
- Potential to be used for low volume functions/processes that do not meet cost benefit benchmarks to build into the interfacing application
- Potential to be BCP option to settle large value transaction in an emergency
- Request to support a BCP file upload capability

More information sought regarding

- Cost structure to access
- What data is available to be queried/exported





Forward work plan



Forward work plan

Calendar invitations have been shared for monthly meetings in 2023





Forward work plan

Topics for the Technical Committee will be in line with the project timeline and phasing

Topics for consideration with this Technical Committee* will likely include:

- Project status updates
- Project risks and issues
- Access channels / interface options
- Industry readiness activities
- Accenture recommendations

(*) Member feedback on additional agenda items is welcomed.

Observer playback



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Thank you.



