

MINUTES OF THE TECHHNICAL COMMITTEE ON CHESS MESSAGING & ISO 20022 WEDNESDAY, 24 SEPTEMBER 2014 ASX LIMITED LEVEL 1, 20 BRIDGE STREET SYDNEY

- 1. Welcome and introductions
- 2. Update from recent Business Committee and Forum Meetings
- 3. Principles underpinning CHESS replacement project
- 4. Process and timing for the CHESS replacement project
- 5. Role and membership of the Technical Committee

ATTENDEES

MEMBERS			
Company	Name	Job Title	
BNP Paribas	Gary O'Brien	Head of CCS Change Management	
Bank of America Merrill Lynch	Ms Andree Hindmarsh	GMOT Asia Pacific, Vice President	
CBA	Mick Thompson	Business Solutions Consultant	
Chi-X Australia	Mike Aikins	Chief Technology Officer	
Citi	Lyall Herron	Project Manager, Citi PMO, Australia & New Zealand	
Computershare (by telephone)	Steve Malcolm	Oceania Development Manager, Technology Services Division	
Computershare	Leanne Bailey	Senior Business Analyst	
Deutsche Bank AG	Jonathan Cranley	Vice President, Group Technology & Operations	
HSBC Securities Services	Sandra Powell	Manager Business Management, Custody and Clearing	
Goldman Sachs	Darrel Schwarz	Director, Technology	
Morgan Stanley	Dorothy Wilson	Executive Director	
		Morgan Stanley Wealth Management, ISG Technology	
NSX (by telephone)	Scott Evans	General Manager & Company Secretary	
Pershing Securities	William Slack	Director	
UBS	Phil Legge	UBS Operations IT	
UBS	Brad Gorton	Head of Securities, Australia & New Zealand, UBS Group Operations	
UBS	Duncan Earl	Executive Director	
		Head of Change, UBS Group Operations	
ASX Management			
Name	Job Title		
Tim Hogben	Group Executive, Operations (Co-Chair of the Technical Committee)		
Tim Thurman	Chief Information Officer (Co-Chair of the Technical Committee)		
Andrew White	General Manager, Settlement Services		
Bill McDonald	General Manager, Clearing and Settlement Technology		
Katie McDermott	General Manager, Clearing and Settlement Operations		
Russell Eyre	Senior Manager, CS Development		
Karen Webb	Manager, Settlement Services		
Rodd King	Senior Manager, Clearing Services		
Diane Lewis	Senior Manager, Regulatory and Public Policy		

APOLOGIES

MEMBERS		
Company	Name	Job Title
APCA	Bob Masina	Head of Technology and Operations
Bell Potter Securities	Gary Stranger	Head of Operations
Computershare	Paul Walton	Senior Manager, Corporate Actions & New Business Development – Investor Services
Credit Suisse AG	Mr Ramprasad Joshi	Information Technology, IT Ops Cash Securities IT
Morgan Stanley	Heather Brandt	Executive Director, Corporate and Post-Trade Tech
Chi-X Australia	Peter Warton	Head of Market Operations

The meeting commenced at 4.00pm.

AGENDA ITEM 1: WELCOME AND INTRODUCTIONS

The Chair welcomed Technical Committee members to the meeting, including the members attending by telephone, Mr Scott Evans from NSX and Mr Steve Malcolm from Computershare.

The Chair informed members that the purpose of the meeting was to provide further information on the upcoming project to replace CHESS, including the key principles which may underpin the system that replaces CHESS, and the role and composition of the Technical Committee throughout the project. The Chair noted that industry collaboration would be critical in ensuring that the new system delivers the services and outcomes required by participants, investors and other industry stakeholders. To that end, a range of input – business, market practice, regulatory and technology input - would be required throughout the project.

The Chair reminded members of the key points of discussion from the last meeting held in February and noted that, in accordance with the feedback received at that meeting, ASX was examining the implementation strategies employed by other markets when replacing important systems, such as, CHESS is to the Australian market.

The Chair noted that while the roadmap provided to members prior to the meeting indicated an implementation date for the system that replaces CHESS in late 2017, the project timeframe and implementation timing would be dependent on the scope and services being delivered in the new system.

AGENDA ITEM 2: UPDATE FROM RECENT BUSINESS COMMITTEE AND FORUM MEETINGS

ASX's Senior Manager of Regulatory and Public Policy updated members on recent Business Committee and Forum meetings, including:

- that the Forum had endorsed an extension of the mandate of the Technical Committee to include providing input on the replacement of CHESS. As part of the discussion on the replacement of CHESS, the Forum had also identified global messaging standards as an important initiative to be introduced as part of the system that replaces CHESS;
- at its June 2014 meeting, the Forum recommended that a T+2 settlement cycle for the cash market be introduced in Q1 2016, and that the batch settlement cut-off time be pushed back to no later than 12.00pm to support the introduction of the shorter settlement cycle;
- that the precise timing of the change in the batch settlement cut-off is subject to consultation
 with participants, payment providers and the RBA, and will be determined by end-2014.
 Balancing a number of trades-offs between maintaining settlement efficiency, delays to
 post-trade settlement processes and less time for default management processes, the most
 feasible time for the batch settlement cut-off appeared to be 11.30am;
- that mixed views were expressed by Business Committee members in the last meeting in relation to the project timeframe and implementation timing set out in the roadmap for CHESS replacement. Some members indicated that implementation of the system to replace CHESS should be accelerated with a target implementation date in 2016, while a number of other members were comfortable targeting implementation in late 2017 given there would be a focus on implementing T+2 and new Basel requirements in 2015;
- the Business Committee indicated that having further clarity in relation to when participant testing would be required and what the proposed system changes would be by mid-2015 would be important for participants to be able to assess their ability to accommodate the proposed timeframes for the project; and
- that the Forum would discuss the roadmap for cash market post-trade services infrastructure at its next meeting on 1 October 2014.

The Chair invited questions or comments. No comments or questions were raised by members.

AGENDA ITEM 3: PRINCIPLES UNDERPINNING THE REPLACEMENT OF CHESS

ASX's General Manager of Settlement Services spoke to the paper circulated prior to the meeting, noting and seeking feedback on the following key principles for the system that replaces CHESS:

- maintaining "name on register". It was noted that while maintaining the name on register was
 the starting point, who holds title to securities and in what form may be considered as part of
 the overall system design;
- developing standard central securities depository functionality, including end-to-end processing of corporate actions and accrual-based asset servicing;
- introducing internationally standardised messaging interfaces (ISO 20022). It was noted that if DvP model 3 for settlement was carried over to the new system, the Australian market would be one of the first markets using ISO 20022 standard messages with a DvP model 3. This would likely require new ISO 20022 compliant messages to be developed;
- introducing multi-currency capability. It was noted that this would go beyond recent advances in facilitating RMB payments to listing securities in RMB and other currencies;
- introducing multi-asset class capability. It was noted that multi-asset functionality would not
 necessarily be implemented at the same time that the new system to replace CHESS is
 implemented. It was more likely that the new system would be designed with the possibility of
 bringing together Austraclear and the system that replaces CHESS at some point in the future
 so that customers of both systems would only need to connect to one interface;
- whether the settlement model should be maintained as a DvP model 3 or whether consideration should be given to the introduction of a DvP model 1. It was noted that while DvP model 3 provides the industry with a lot of efficiency benefits through netting, ASX is opening this issue up for consultation because there had been some participants who had expressed interest in DvP model 1 through discussions in the Business Committee. It was also suggested that another solution could be to offer both models by reference to the current RTGS functionality; and
- whether the batch settlement should continue to settle both novated and non-novated transactions. It was noted that the question of whether non-novated transactions should continue to be settled in the batch together with novated transactions was an issue that the regulators have previously expressed an interest.

ASX's General Manager of Settlement Services also noted that ASX would shortly be undertaking consultation on the principles and the industry requirements for the system that replaces CHESS.

Technical Committee members were broadly supportive of the system to replace CHESS being designed with standard central security functionality, multi-currency functionality, novated and non-novated transactions continuing to be settled together and ISO 20022 standard messaging. Members discussed the economic and administrative efficiency benefits of settling non-novated and novated transactions together in the batch.

In relation to moving to ISO 20022 standard messaging, it was acknowledged by members that while ISO 20022 was mainly proven in the payments settlement environment, there was a global move to ISO 20022 for equities post-trade underway. It was noted that by the time the new system to replace CHESS is implemented, DTCC will likely have implemented ISO 20022 messaging for all post-trade functionality.

In relation to maintaining "name on register", there were a range of views expressed by members. There was general acknowledgement that moving away from the current arrangements of name on register and legal title for shareholders to a "depository nominee" represented a significant change for the Australian market. It was also acknowledged that such a change would involve consideration by regulators. There was some support expressed for the "name on register" being reviewed and opened up for consultation on the basis of the operational efficiency benefits realised in other markets where shareholders do not have legal title. A member indicated that moving away

from "name on register" would lead to increased costs and complexities for issuers in communicating with shareholders, particularly in relation to corporate actions. It was noted that the costs for issuers in communicating with shareholders where significantly higher in markets, such as, the US and Canada, where shareholders did not have legal title.

In relation to the new system having multi-asset capability, a member expressed the view that the system that replaces CHESS should not be designed such that the multi-asset functionality is mandatory from the go-live date for the new system.

Members of the Technical Committee had a broad ranging discussion about the advantages and disadvantages of the different settlement models, including:

- whether DvP model 3 is being considered in the context of also maintaining a single batch. It was noted that ASX's starting point was a single batch. It was also noted that ASX had sought industry feedback on whether a single batch should be maintained recently in a consultation process undertaken on the introduction of a T+2 settlement cycle for the cash market. Through that process, the feedback received indicated that there was no appetite for more than one batch based on the operational duplication and significantly increased costs associated with a second batch. It was indicated that this could be tested again as part of the consultation on CHESS replacement;
- that model 3 with a single batch provided liquidity, netting and administrative efficiencies for the market:
- there was discussion of the importance of real time settlement of high value transactions (for example, in the wholesale market) in managing systemic risk and that DvP model 3 may be more appropriate for the settlement of cash market transactions which are largely low value and high volume;
- the benefit of knowing when settlement will be each day and when all processes must be completed with a single batch under a DvP model 3. It was noted that notwithstanding that Austraclear was DvP model 1 there was often a rush for settlement through Austraclear at the end of the day as a lot of participants were waiting for others to move first;
- the challenges and questions that would arise in moving to a DvP model 1 for the settlement of cash market transactions, including the impact on participants intra-day liquidity and margins, the period throughout the day that settlement would run and the implications for client accounting and end of day processing. In relation to whether DvP model 1 settlement could run 24 hours a day, a number of members expressed the view that it would be constrained by banking hours and that there would need to be fixed points in time where settlement wouldn't run to accommodate technology fixes and changes, and to accommodate overnight processing by share registries;
- the potential to have a hybrid of a DvP model 3 and a model 1, which allows for netting and runs with aggregated batches throughout the day; and
- feedback from foreign clients of participants which confirms ASX's starting point of not considering DvP model 2 as part of this process.

A member referenced the point included in the meeting paper regarding the need for the system that replaces CHESS to have multi-CCP capability should the Government decide to introduce competition in cash market clearing. The member also suggested that the system that replaces CHESS should not be locked into existing / legacy ASX architectural systems and it should have open access APIs to provide for better external access.

ASX's CIO confirmed that the system that replaces CHESS will be designed to sit on an new enterprise service bus and would not be designed and built to directly integrate with existing legacy systems.

A member queried whether consideration was being given to the potential for the new system to support different participant structures, including the potential for decoupling clearing and

settlement. ASX's General Manager for Settlement Services confirmed that ASX was considering that issue.

The Chair invited members to provide any further thoughts on the principles that should underpin the system that replaces CHESS to the Secretariat in the coming weeks.

AGENDA ITEM NO 4: PROCESS AND TIMING FOR THE CHESS REPLACEMENT PROJECT

ASX's CIO spoke to the roadmap timelines included in the agenda paper, noting that:

- there were three confirmed CHESS releases scheduled for H2 2014, H1 2015 and H2 2015, after which CHESS releases would be limited to avoid duplicate development work that would be required if it were released prior to the replacement of CHESS. Other initiatives prioritised by industry requiring a CHESS release could be incorporated in the CHESS replacement project;
- the three confirmed CHESS releases would deliver: TAS enhancements in H2 2014; account segregation, ISIN algorithms and ASX collateral in H1 2015; and the introduction of a T+2 settlement cycle for the cash market and FATCA for mFund in H2 2015. In response to a query from a member, it was noted that of the upcoming CHESS releases, only the client segregation and T+2 changes were external mandatory releases;
- ASX has been reviewing other markets (Bovespa, LME, Singapore) undertaking significant system changes for lessons learned, and has been engaged in discussions with technology providers about clearing and settlement systems;
- ASX would come back to the Technical Committee in the first half of next year with more detail around what is being considered, following which the project will move into the design phase;
- subject to the scope of change and design specifications, ASX expects that the project to replace CHESS will probably take around a two and a half years to complete; and
- the end of support for components of the CHESS hardware, which is mid-2019, is a key driver for the need to change.

In relation to the period in the timeline for the CHESS replacement project where CHESS releases will be limited, a member queried what ASX's approach would be to a market operator who requests a service enhancement (involving CHESS development) that would allow services in CHESS to be externally accessible and provide the opportunity for the market operator to provide a new service. The member noted that it such circumstances there would be little if no payback for such an investment as the code would become redundant with the replacement of CHESS in the near-term. ASX's CIO indicated that ASX would consider the matter and assess its prioritisation for the industry because it could have the potential to delay the timeline for the CHESS replacement project, which would impact all market users.

Members discussed that it would not be a 'like-for-like' swap between CHESS and the new system that replaces CHESS in terms of business processes and messages. In that context, it was noted that there were currently over 400 CHESS messages and that if the industry wanted to go through the process of having those messages adopted as part of the ISO 20022 standard it would be a significant undertaking.

Members also discussed the spectrum of options for implementation of the new system that replaces CHESS from a 'big bang' approach, such as that recently undertaken by LME Clear, through to a migration of one year which is being undertaken by Deutsche Börse with its new C7 platform.

AGENDA ITEM NO 5: ROLE AND MEMBERSHIP OF THE TECHNICAL COMMITTEE

The Chair noted that the Technical Committee had initially agreed that the membership should not be extended to include vendors early in the process when the business design was yet to be defined. The Chair invited members to express their views on whether this was still an appropriate approach and sought feedback on when members thought vendors should be brought into the discussions.

There was general agreement that ASX should engage with vendors to obtain input for inclusion in the upcoming consultation process, and that the vendors should be recipients of the consultation paper when it is released.

In relation to a discussion about whether the broader composition of the Committee was appropriate to obtain both technology and business input, members were generally of the view that the Business Committee was the appropriate mechanism to provide business input and that the technical committee would continue to provide the technology input. It was noted that members would liaise internally ahead of Technical Committee meetings to ensure that they brought a coordinated view from their organisations to those meetings.

A member raised the issue of how the views of issuers would be included in this process. It was noted that ASX would engage with issuers and investor groups through a broad public consultation process.

In relation to a discussion about next steps and the upcoming principles-based consultation on the replacement of CHESS, a member expressed the view that undertaking a high level principles-based consultation may not provide sufficient detail for participants and other stakeholder to either assess the impact of what is being proposed or provide useful and substantive feedback to ASX is response to that consultation. It was noted that it would be better to delay the commencement of the consultation to allow for the inclusion of greater detail than to have to undertake multiple consultations.

The Chair advised members that ASX would give consideration to the feedback received on the scope of the proposed consultation and would revert back to the members on the timing.

In relation to the timing of the next meeting, members agreed that the next meeting should be scheduled for Q1 2015.

The Chair thanked members for their input on this important project, and for participating in the meeting.

Signed as a correct record of the meeting.

Technical Committee Chair

Date