

Business Committee Report to the Boards of ASX Clear and ASX Settlement

Business Committee Meeting

At its 8 April 2020 meeting, the Business Committee was updated on the:

- operating performance of CHES for the March Quarter 2020 including the impacts of the recent extreme market volumes and volatility;
- CHES replacement, Corporate Action STP Phase 2, and CHES e-statement projects; and
- ISO 20022 Technical Committee's progress in developing the new message standards.

KEY ISSUES DISCUSSED

The impact of the record trading activity experienced during March was discussed. It was noted that while system availability of 100 per cent was maintained during the peak periods, customers experienced some delays with the receipt of information from ASX which had a negative impact on their operations. ASX noted the short, medium and longer-term approaches it is taking to enhance its infrastructure to manage system performance issues and committed to engaging with stakeholders as these initiatives progress.

Members were briefed on recent progress with the CHES replacement project, particularly the releases of software code into the customer development environment (CDE) and technical documentation; the state of play with rule amendment processes; and stakeholder engagement.

There was also significant discussion about the upcoming consultation on a revised implementation plan for CHES replacement. There were a range of views expressed about whether stakeholders would be in position to respond to a June consultation given the current market and work environment. A few members thought this may be too ambitious while others were keen for the new timeline to be settled as soon as possible to provide certainty for resourcing and planning processes.

ASX will monitor the state of the industry and its capacity to contribute to the consultation on the new implementation timeline when considering whether to proceed with, or delay, the proposed June start date.

Agreed Actions

The single action item raised at the last meeting was completed.

ASX committed to the following action at the April meeting:

1. Working with one of the industry association members to facilitate more effective engagement on the benefits that can be delivered to its constituents when the new system is implemented.

Minutes from the meeting are attached.

Agenda

Business Committee

Date	8 April 2020	Time	12:00pm – 2:00pm
Location	Teleconference		
1. Service Performance			12:00pm-12:45pm
<ul style="list-style-type: none"> a) Cash Market Clearing and Settlement - Operating Performance This standing item has been extended to allow for discussion of the operational impacts of recent market volatility and changed working arrangements. 			
2. CHES Replacement Project			12:45pm-1:45pm
<ul style="list-style-type: none"> a) CHES Replacement <ul style="list-style-type: none"> – Application – Infrastructure and ledger – Integration and reporting – Rules and regulatory engagement – Stakeholder engagement – Transition, cutover and system accreditation b) Industry consultation on revised implementation timeline c) ISO 20022 Technical Committee report and minutes 			
3. Service Enhancements			1:45pm-1:55pm
<ul style="list-style-type: none"> a) Update on the Corporate Action STP Phase 2 project b) Digitisation of CHES statements (verbal update) 			
4. Administration			1:55pm-2:00pm
<ul style="list-style-type: none"> a) Minutes from the 27 November 2019 Business Committee Meeting b) Forward work program c) Other matters 			
5. Next Meeting – 1 July 2020			

Business Committee Members

Company	Name	Job Title	Apologies
ABN AMRO Clearing	Barry Parker	Chief Executive Officer	
AFMA	David Lynch	Chief Executive Officer	
ASX	Peter Hiom	Business Committee Chair, Deputy CEO	
AIRA	Ian Matheson	Chief Executive Officer	
ACSA	Rob Brown	Chief Executive Officer	
ASA	Fiona Balzer	Policy & Advocacy Manager	
Automic	Astrid Raetze	Executive Director	
BAML	Rhys Cahill	Global Markets COO	
Bell Potter Securities	Rodd Kingham	Head of Operations - Transformation	
BNP Paribas	Mark Wootton	Head of Custody Product Aust & NZ	
Chi-X Australia	Mike Aikins	Chief Operating Officer	
Citi	Miles O'Connor	Director, Direct Custody & Clearing Securities & Funds Services	
CMC	Andrew Rogers	Director of Broking Business	
CBA (CommSec)	Sheridan Thompson	Head of Strategic Development	
Computershare	Scott Hudson	Head of Intermediary Services	
Credit Suisse	Winston Loke	Australia Equities COO	
Deutsche Bank AG	Geoffrey Plaisted	Chief Operating Officer, Equities	
Goldman Sachs	Yen Le	Executive Director	
GIA	Megan Motto	Chief Executive Officer	
HSBC	Nichole Alexander	Manager, Aust Market Advocacy & Development	
J.P. Morgan	Jonathan Evans	Head of Custody & Markets Operations	
Macquarie Group	James Indge	Cash Equities Business Manager	
Morgan Stanley	Rebecca Collins*	Head of Operations, Institutional Equities	Rebecca Hill
Morgans	Peter Chisholm	Manager, Transactional Services & Settlement Systems	
NAB	Anita Mead	Head of Business Management, Self-Directed Wealth	
NSX	John Williams*	Head of Admissions	Matthew Loughnan
Pershing Securities	Leigh Conder	Chief Operating Officer	
SAFAA	Judith Fox	Chief Executive Officer	
Sydney Stock Exchange	Antony Tolfts	Listings Director	
UBS	Conor Foley	Chief Operating Officer	

* Delegate

ASX Management

Name	Job Title	Apologies
Tim Hogben	Chief Operating Officer	
Daniel Moran	General Counsel	
Hamish Treleaven	Chief Risk Officer	
Cliff Richards	Executive General Manager, Equity Post Trade Services	
Dan Chesterman	Chief Information Officer	
Val Mathews	Executive General Manager, Operations	
Sally Palmer	Deputy General Counsel	
Katie McDermott	General Manager, Equity Post Trade Services	
Diane Lewis	Senior Manager, Regulatory and Public Policy	
Karen Webb	Senior Manager, Equity Post Trade Services	
Keith Purdie	Senior Manager, Equity Post Trade Services	
Andrew Jones	General Manager, Strategic Partnerships	
Con Korkofigas	Senior Legal Counsel & Senior Manager	
Gary Hobourn	Senior Economic Analyst, Regulatory and Public Policy	

Observers

Name	Job Title	Apologies
Nathan Bourne	Senior Executive Leader, Market Infrastructure (ASIC)	
Dodie Green	Senior Manager, Market Infrastructure, (ASIC)	

Invited

Name	Job Title	Apologies
David Raper	Executive General Manager, Trading Services (ASX)	

INTRODUCTION

The Chair welcomed members and delegates to the first meeting of the year and the first to be conducted solely via teleconference.

There was one apology from Leigh Conder (Pershing). Two other members were represented by delegates, Rebecca Collins (Morgan Stanley) and John Williams (NSX). ASIC (Nathan Bourne, Dodie Green) attended the meeting as observers. David Raper (ASX Trading Services) was invited to attend as a market operator.

The Chair noted that Scott Hudson has replaced Greg Dooley as the Computershare representative.

There was one action item arising from the November meeting that had been completed - members were provided with the proposed times for the remaining meetings of the year.

AGENDA ITEM 1: SERVICE PERFORMANCE

The normal discussion of operating performance of CHES was supplemented by a more detailed discussion on the impact of the recent market volatility and enhanced volumes as well as the challenges presented by new working arrangements as a result of the COVID-19 crisis.

- There was a 32 per cent increase in trade volumes during the March quarter with record trading activity on a number of successive days in March contributing to the higher quarterly averages.
- Daily average volumes increased to 4.1 million trades compared to 2.2 million trades in the year to February 2020.
- A record 7.1 million trades were registered on 13 March up from 5.4 million trades on the record from the previous day. This trading was netted down to 295,000 settlements, which compares to the normal average daily settlements of around 95,000. The associated batch process was only marginally longer than usual even with the record number of settlements. Around \$20 billion was settled on 17 March compared to a more normal settlement day of \$11 billion.
- The majority of the other performance metrics for the quarter were broadly consistent with earlier periods, including settlement efficiency (99.88%) and netting efficiency (99.01%). The percentage of novated transactions (69.8%) was actually slightly below the normal percentage of around 71%, driven largely by higher off-market volumes.
- There was an increase in the settlement failure rate for the quarter (0.392%) reflecting the significant spike in trades and settlement volume (average batch settlement size was up round 30%) as well as some specific issues including one key entity reducing their securities lending which created some challenges for participants.

Even with the extreme trading conditions during the period, the CHES and TAS systems remained operating and available for 100% for the quarter. However, there were several delays through the period, including seven extensions to the commencement of CHES batch settlement due to requests for delays to allow customers to complete settlement preparation. There were a couple of fall-back requests from payment providers and there were around three or four extensions to the CHES end of day processing.

Late February saw the first instances of delays to CHES MT164 trade acceptance messages due to increased trading volumes, prompting extensions to the end of day processing to try to catch up with the queuing of the messages. To better understand the significant impacts these settlement delays had on customers, ASX spoke to a number of participants and continued to introduce remediation measures.

ASX has always maintained at least a 100% capacity headroom over historical trade volume highs for CHES (and other core systems) but on the peak day activity was 218% higher.

In response to the first signs of the decline in system performance in late February, ASX introduced improvements and enhancements to the CHES infrastructure.

On 13 March, ASX undertook urgent maintenance on the CHES database (optimising data logging, purging historical data, and resequencing some of activities) which was implemented prior to running the end of day processes to deliver enhanced performance. This reduced the pressure on the critical parts of the system and ASX's operational

processes. No further delays have been experienced since this time and the CHES queues have significantly improved and the backlog is now cleared by about 4:30pm each day.

ASX appreciates the negative impact any delays to CHES processing can have on participant's operations. ASX has very granular monitoring of system performance and aims to communicate any issues as they arise in a timely manner to the market to enable participants to plan their resources and time.

ASX plans further short-term improvements and upgrades to the infrastructure which are currently being tested and will be implemented in the coming weeks and months. System notifications and market notices will continue to be used to provide appropriate visibility into these enhancements.

In the medium to long-term, ASX will continue to assess systems capacity (software and hardware) and fine tune the current CHES platform (where necessary) to manage elevated trading volumes. The recent experience will also inform decisions around the capacity of ASX's new post-trade system as well as participant's decisions on their own systems capacity.

Contemporising ASX's post-trade system, using up to date technology and data management processes, underpins the CHES replacement strategy. CHES was initially built in 1992 when trading volumes were of the order of 20,000 a day, compared to the peak 7.1 million trades registered on CHES. In recent years the growth in trades per day has greatly exceeded the growth in value traded, reflecting new trading technologies and strategies. ASX indicated it will continue to invest in systems and review processes to meet the needs of the market.

ASX will continue to engage with all of stakeholders around this topic and will keep them abreast of progress in enhancing systems in the lead-up to CHES replacement.

There were no questions from members on the performance report.

AGENDA ITEM 2: CHES REPLACEMENT PROJECT

a) CHES Replacement

ASX updated the Committee on the status of each of the CHES replacement workstreams.

Application design and build

- There have been several code drops into the customer development environment (CDE) since the last Business Committee meeting including: CDE 5 (mid-December 2019) and CDE 6 (early March 2020). CDE 6 was the largest code release to date and it included a number of new features.
- Three new updates of technical documentation were also released in the period.
 - End January - including API contracts or DAML contracts on accounts, batch settlement, and corporate actions.
 - February – including functionality for mFunds (applications and redemptions), as well as some investor dataprocesses.
 - 2 April 2020 – this release completed the publication of all functional and messaging specifications, subject to the incorporation of any feedback received at the 7 April ISO 20022 Technical Committee meeting.
- The market now has all the technical specifications to complete their development to the new system. ASX will continue to update the technical documentation in tranches to provide the market with the operational procedures and forms.
- An update to the forward release plan was released and discussed at a recent implementation and transition working group webinar.
- Some functionality initially earmarked to be in scope for CDE 7 has been deferred to a later date (to be advised).
 - The functionality includes investor data and pass-through information and changes for migration purposes for account management, code change class merger diary adjustments, DRP, entitlement offers in relation to corporate actions, mFunds, the isolate counterparty functionality, margin settlement, excess cash instruction, and demand and end of day reporting.

- While this functionality will not be available in the CDE 7 code drop at the end of May, the functional specifications have all been released to the market so firms' software development can commence, although testing cannot occur until the software is made available in the CDE.

A Member asked if ASX could give any guidance on the prospective timing of functions deferred from the CDE 7 code drop given it contains a couple of key functions of interest to issuers. It was noted that the information on the date would be made available as soon as possible, but no later than the upcoming consultation on the implementation timeline. It was also confirmed, in response to some rumours to the contrary, that none of these deferred features are being de-scoped from the new system.

Infrastructure and ledger

- The DLT infrastructure and ledger is now up and running on ASX's infrastructure and the industry testing environment (ITE) is still due to open from July 2020.

Integration and Reporting

- The work to deliver the revised integration scope for CDE 7 is underway. Key deliverables include the customer identity access management and Corporate Action STP Phase 2 functionality.
- Work on refactoring the CDE test tools to work in the ITE environment is underway. This will assist software developers test activity and enable those that are ready for testing to do so in the timeframe that they want to.

Transition, cutover and system accreditation

- The first round of technical accreditation scripts for messaging (identifying the required test scenarios by the different CHES user types) have been released. The first release relates to account management related functions. Additional scripts will be published in tranches as soon as they are available.
- ITE order forms were also published last week and some forms have already been received from vendors.

Rules and regulatory engagement

- Tranche one rule amendments - the consultation period closed on 17 January. Twelve submissions were received from a range of stakeholders including participants, registries, industry bodies, and vendors. ASX is working to provide a response to that feedback later in April and is engaging with regulators as part of that process.
- Tranche two rule amendments - the consultation paper was released on 21 February with comments initially due in early April but this period has now been extended to 29 May.
- Tranche 3 rule amendments – consultation was due to commence in early April but has been suspended until after the June consultation on the new CHES replacement implementation timeline.
- The process of further consultation on the rule amendments (eg. a consultation on a consolidated draft of rule changes across the three tranches) will form part of the June consultation.
- The rule amendments related to transfers to the CHES sub-register came into effect on 18 December 2019.

Stakeholder engagement

ASX updated the Committee on stakeholder engagement activities since the last Business Committee meeting.

- The Connectivity and Integration Working Group. The group has met regularly since October 2018 and has largely completed its work. Meetings are now only scheduled around new code drops. The most recent meeting was in February just prior to the CDE6 release and over 100 external attendees were updated on the new functionality and the CHES user interfaces. ASX also advised that SWIFT had indicated that the market infrastructure channel is not required as ASX's current SWIFT infrastructure will be sufficient for customers who choose to take on SWIFT. The next meeting will be held in May just prior to the CDE7 code drop.
- The Implementation and Transition Working Group has been meeting monthly since October 2019 including three meetings so far in 2020. The January meeting focused on plans to manage inflight transactions over the migration cutover weekend and feedback received from members indicated the proposed approach is feasible and supported. The February meeting focused on various aspects of technical accreditation. The most recent meeting

focused on providing background on the upcoming consultation on the implementation timeline and more detail on the ITE. The next meeting will likely be on the ITE and there will be a meeting on the CHES UI (browser).

- Presentation materials from these Working Group meetings, including the recordings of these webinars are available on the CHES Replacement web page and summarised in the monthly project newsletters.
- The series of focus groups have been completed but ASX continues to engage with payment providers through the Equity Settlement Payment Provider Sub-committee (ESPPSC).

Members had no other questions or comments on the CHES replacement updates.

b) Industry consultation on revised implementation timeline

ASX made a public announcement 25 March advising that it would be consulting in June on the timeline for implementation of CHES replacement. This was followed up with a webinar that provided some more detail. The decision to consult on the timeline reflected three factors:

- the amount of change generated through the consultation process and captured in the focus groups on particular topics and the ISO 20022 Technical Committee – responding to these requires additional system development;
- some users had expressed interest in having more time to complete their own readiness activities; and
- the impacts that working from home in response to COVID-19 and the challenges flowing from increased market activity have on firms' capacity to prioritise resources for CHES replacement.

ASX is still working to meet its existing internal project milestones leading up to the opening of the ITE in July, although with most staff working at home there is some impact on the time needed to turnaround some workflows.

The exact form of the market-wide consultation is still being considered, with the aim to make it as easy and efficient as possible for stakeholders. When the consultation feedback is received ASX will digest it as quickly as possible so it can respond to the market with the adjustments to the implementation timeline.

All the activities that were in the previously published timeline are still going ahead, for example around testing; accreditation of connectivity, vendors and systems; and dress rehearsal weekends. ASX will be consulting about the timing stakeholders think certain activities should commence and how long they should run for so it can have a greater understanding of the impacts these activities will have on users, particularly given the new working arrangements.

ASX acknowledged the existing challenges and uncertainties firms are facing in the current environment, and this meant that the consultation had been deferred to June, so firms would have time to consider their own operational capacity before the consultation commenced.

A number of individual members expressed their views on the proposed consultation:

- One thought that conducting a consultation in June was very ambitious and should be delayed until all the current work restrictions are completely removed and there is a business as usual operating environment in place. Another, noting the existing resource pressure on participants and the uncertainty around what market and work conditions might be like in June, asked whether there was a backup plan if conditions had not improved by June.
- One, while sympathetic to the views put forward for delay in the consultation, preferred to continue with the current timing given the need for certainty around the revised timelines (by say September this year) to support their annual budgeting cycle and planning into 2021. Another member supported this view as their firm were largely on track with the current timeline and further delays add costs.
- Another member also supported sticking with the June consultation date advocating that the risks to a successful delivery of the project should be the lens to guide the process, i.e. while the consultation can be short and sharp, it should not be too shallow. The consultation should address the risks and costs associated both with moving ahead with implementation in a timely manner as well as those associated with further delays.

ASX responded that at this stage and with what is known at the moment, it was thought that a consultation commencing in June was a reasonable target, but acknowledged that closer to that date it would be in a better position to consider the environment within which the consultation would be conducted. It was noted that further delays would likely present the industry with additional challenges given the important reasons behind CHES replacement, particularly the need to reduce paper-based and manual processes.

In its recent discussions with users around the proposed consultation, ASX had received feedback about the need to ensure the consultation process is not too onerous and focuses only on the questions that need answering. The June consultation will be used to provide insight into firm's timing preferences to allow ASX to develop a new implementation plan.

A member noted that in addition to having certainty about a new start date as soon as possible that there is a need for ASX to release the proposed pricing framework as soon as possible. ASX responded that while some indicative pricing associated with connectivity options has been released, the development of a pricing framework for clearing and settlement services is still underway. The specifications of the new system are now completed so the underlying information that will inform the pricing framework is available and the work can be further progressed.

A member asked if ASX currently had a preferred start date for the new system. In response, it was noted that any delay should only reflect the time necessary to accommodate reasonable requests for delay. Ultimately the date will be driven by the need to ensure user readiness and that all ASX systems meet the functional and non-functional requirements, including enhanced throughput capacity.

A member noted that the unprecedented events were putting pressure across all sectors of the economy and appreciated the decision to delay CHES replacement to reflect this but questioned if stakeholders (particularly listed companies) will have the capacity to meaningfully respond to any consultation in June. The member also asked if ASX would consider a reset of the approach to (and governance of) consultation, including the use of industry associations, to build a shared ownership of the planning and milestone delivery of the project.

ASX outlined the existing consultation processes and stakeholder forums and working groups that have been involved in developing the system functionality and implementation approaches. These processes have been comprehensive but have not always been able to accommodate everyone's requests. However, it was acknowledged that there would be value in further engagement, particularly with industry associations and their members, to discuss how DLT can solve challenges related to manual and paper-based processes. Recent market experience has again highlighted that paper-based and manual processes can challenge industry during periods of extreme market activity.

ASX agreed to consider how to progress that engagement to better articulate the benefits of the technology as well as the importance of implementing the new system as quickly and safely as possible, but at a pace that industry can accommodate.

c) ISO 20022 Technical Committee Report and Minutes

The Technical Committee met a couple of times since the last Business Committee meeting, with its 7 April meeting potentially being the last one.

Since the Committee commenced its work in December 2016, the suite of 420 in scope CHES proprietary messages has been reduced to 106 ISO 20022 multifunctional messages. This has reflected an extraordinary effort from the Committee in working constructively across a great deal of technical detail.

There is a lot of interest from regional exchanges, other infrastructure operators, and securities and payments service providers on Australia's experience as a case study to guide their own similar exercises.

There were no questions on the ISO 20022 Technical Committee report.

AGENDA ITEM 3: SERVICE ENHANCEMENTS

a) Update on the Corporate Action STP Phase 2 project

ASX provided an update on the project.

Since the last Business Committee meeting the focus has been on delivering the first releases for the project on 30 November 2019 and 22 January 2020. These focused on standardising the structure of selected corporate action announcements to facilitate straight through processing including a number of new (online and Word document) forms.

There has been good feedback from issuers on the functionality of these new forms with some changes incorporated in the January 2020 release. The remaining changes will be included in the next major release. One of the key priorities is providing additional tax information on the forms related to dividends and other distributions.

The project team are also preparing for the second major release which is currently scheduled for June 2020 but may be affected by the revised CHES replacement timeline and the impact of changes to working arrangements on user preparedness. This release will include the updates to the existing and introduction of the new ISO 20022 corporate action notification messages.

In March updated usage guidelines or specifications for each of the events covered by the service were released for review and are expected to be finalised by the end of April.

The industry working group assisting with key aspects of the project continues to operate, via emails or virtual meetings, on the future deliverables and also the implementation timeline.

Members had no questions on the update.

b) Digitisation of CHES statements (verbal update)

ASX reported that work on the technical, electronic delivery, solution (based around an email to holders providing a link to a secure portal) is well underway although it may be delayed by a couple of months due to the practical implications of new working from home arrangements.

There have also been good discussions with a number of broker participants about the practical aspects of delivering client email details via messaging, although the timing of how that might be rolled out will differ amongst brokers. Some may have the ability to deliver emails from Day One of the new CHES system, while others might not be in a position until later. There have also been indications that, if investors consent to their email addresses being passed through to issuers, brokers would assist in that process which could be facilitated by the new CHES system.

ASX continues to work on the details of the pricing arrangements for the new service, confirming it will involve substantial cost savings for issuers as the take-up of the electronic delivery option grows.

Members had no questions on the update.

AGENDA ITEM 4: ADMINISTRATION

a) Minutes from the 27 November 2019 Business Committee Meeting

The minutes of the 27 November 2019 meeting were approved without further change to those noted in the meeting pack.

b) Forward work program

The Chair noted that the next meeting will focus on the replanning of the implementation timeline for CHES replacement.

c) Other matters

There were no other matters raised by members.

AGENDA ITEM 5: NEXT MEETING

The next meeting is currently scheduled for 1 July 2020. The Chair noted that, given the next meeting will focus on the implementation timeline for CHES replacement it may be rescheduled to a date after the upcoming consultation has



closed and ASX has had time to digest the feedback received. Members will be advised if there is any change to the next meeting date.

The meeting closed at 1.30pm.

Signed as a correct record of the meeting.

A handwritten signature in black ink, appearing to read 'Peter Han', is written over a light blue rectangular background.

Chair

14 October 2020

Date