

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

Business Committee Meeting

At its 7 December 2022 meeting, the Business Committee was updated on:

- the operating performance of CHES for the December quarter 2022 (data to end November 2022);
- the CHES replacement project, including Accenture's independent review, ASX's perspective on Accenture's findings and next steps, and the assurance program; and
- work being done to maintain the longevity and stability of existing CHES.

KEY ISSUES DISCUSSED

Key points from the discussion about the CHES replacement project included:

- i. Summary of bilateral stakeholder feedback on ASX's 17 November 2022 announcement
- ii. Interest and discussion on the purpose, scope and membership of the new industry forum, with members invited to provide additional feedback
- iii. Scope of future CHES replacement work, including purpose, functionality, extent to which work done to date will be re-used (e.g. DLT, ISO 20022, connectivity options)
- iv. Learnings for the assurance program

Members also expressed interest and a desire to understand the longevity of current CHES from a supportability, capacity and resiliency perspective.

AGREED ACTIONS

Three new actions were raised at the meeting:

1. Members to provide feedback on the proposed structure, membership, frequency and material to be discussed at the new industry forum
2. ASX to engage with members on the purpose and objectives of the CHES replacement project
3. ASX to provide any update from ACCC on whether the pricing review will be made public

Minutes from the meeting are attached.



ASX

Agenda

Business Committee

Date	7 December 2022	Time	4:00pm- 6:00pm
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Location	ASX offices – Level 1, 20 Bridge Street, Sydney/MS Teams
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1. Minutes and Actions	4:00pm- 4:20pm
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- a) Minutes from the 5 October 2022 Business Committee Meeting
 - b) Open actions
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2. Service Performance	4:20pm- 4:30pm
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- a) Cash Market Clearing and Settlement - Operating Performance
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3. CHES Replacement	4:30pm- 5:30pm
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- a) Accenture's independent review
 - b) ASX's perspective on Accenture's findings and next steps
 - c) Assurance program update
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4. Maintaining the stability of existing CHES	5.30pm- 5.45pm
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5. Other Matters	5:45pm- 6.00pm
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- a) Forward work program
 - b) AOB
 - c) Next meeting – 22 March 2023
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End of Year Drinks

Business Committee members are invited to stay for drinks to thank members for their participation throughout 2022.

Action Items*

*For historical action items please refer to archived minutes [here](#).

Item number#	Action	Due date	Status	Owner
2021 Dec (1)	ASX to follow up bilaterally with Chi-X on the planning and timeframe to manage any potential industry impacts with Chi- X's planned move to the Cboe platform prior to CHES replacement go-live	April 2022	Completed	ASX
2021 Dec (2)	ASX to table contingency planning for CHES replacement for discussion at a future business committee meeting	July 2022	Completed	ASX
2021 Dec (3)	ASX to table at the April 2022 meeting the current take-up and the trajectory rate for investors opting in for electronic CHES holding statements to determine possible next steps	April 2022	Completed	ASX
2021 Dec (4)	ASX to include T+1 in the forward work program for further discussion; in the interim any member feedback on the materials presented would be welcomed	April 2022	Completed	ASX & BC Members
2022 Apr (1)	ASX to consider forums in which non-cash equity conversations can be undertaken, including Austraclear and recent issues and challenges for market repo transactions	July 2022	Completed	ASX
2022 Oct (1)	ASX to amend the draft minutes from 13 July 2022 meeting to reflect the status of the 17 streams of CHES replacement work	Dec 2022	Completed	ASX
2022 Oct (2)	ASX to consider publishing a policy regarding treatment of ETO expiry on a closure day (e.g. late announced public holiday, core technology outage etc)	Dec 2022	Open	ASX
2022 Oct (3)	ASX to discuss with ASIC demands on the industry, in the context of the potential concurrency of consultation on ASIC Report 708 and CHES replacement	Dec 2022	Completed	ASX
2022 Oct (4)	ASX to review the wording in its Clearing and Settlement Fee Schedule describing the discount available	Dec 2022	Completed	ASX
2022 Dec (1)	Members to provide feedback on the structure, membership, frequency and material to be discussed at the new industry forum	Mar 2023	Open	ASX and BC Members
2022 Dec (2)	ASX to engage with members on the purpose and objectives of the CHES replacement project	Mar 2023	Open	ASX
2022 Dec (3)	ASX to provide any update from ACCC on whether the pricing review will be made public	Mar 2023	Open	ASX

Business Committee Members

Company	Name	Job Title	Apologies
ABN AMRO CLEARING	Barry Parker	Chief Executive Officer	
AFMA	Damian Jeffree	Senior Director of Policy	
ASX	Val Mathews	Business Committee Chair and Chief Customer and Operating Officer	
ASX	Jamie Crank	Acting Co-Group Executive, Markets and General Manager, Trading	
AIRA	Ian Matheson	Chief Executive Officer	Apology
ACSA	David Travers	Chief Executive Officer	
ASA	Fiona Balzer	Policy & Advocacy Manager	
AUSIEX	*Te Okeroa	Head of Sales, Trading & Customer Relationships	Patrick Salis, Chief Executive Officer
BANK OF AMERICA	Stephen Hacker	Director, Head of Operations	
BELL POTTER SECURITIES	Robert Tesoriero	Settlements Manager	
BNP PARIBAS	Mark Wootton	Head of Custody Product Aust & NZ	
BOARDROOM	Martin Jones	General Manager Corporate Governance & Director	
CBOE	Mike Aikins	Chief Operating Officer, APAC	
CITI	Christopher Moore	Manager – Direct Custody & Clearing	
CMC	Andrew Rogers	Director of Broking Business	
COMMSEC	Sheridan Thompson	Head of Industry Engagement & Process Improvement	
COMPUTERSHARE	Scott Hudson	General Manager – Market Liaison	
CREDIT SUISSE	Winston Loke	Australian Equities COO	
FINCLEAR SERVICES	David Ferrall	Founder, Managing Director & CEO	
GOLDMAN SACHS	Yen Le	Executive Director	
GIA	Megan Motto	Chief Executive Officer	
HSBC	Toni Icevski	Head of Client Services, Securities Services	Apology
J.P. MORGAN	Jonathan Evans	Head of Custody & Markets Operations	
LINK MARKET SERVICES	Peter Jackson	Chief Operating Officer	
MACQUARIE GROUP	James Indge	Cash Equities Business Manager	
MORGAN STANLEY	*Carrie Barrack	Country Business Manager (Australia)	Rebecca Hill, Chief Operating Officer
MORGANS	Daniel Spokes	Director, Client Support Services	
NAB	Anita Mead	Head of Business Management, Self- Directed Wealth	
NSX	Chan Arambewela	Chief Operating Officer	
SIAA	Judith Fox	Chief Executive Officer	
SYDNEY STOCK EXCHANGE	Steven Larkins	General Manager, SSX Market Operations	
UBS	Scott Hanlon	Head of Operations, Executive Director	

* Delegate

Name	Job Title	Apologies
Tim Hogben	Group Executive, Securities and Payments	
Hamish Treleaven	Chief Risk Officer	
Dan Chesterman	Group Executive, Technology and Data, and CIO	
Tim Whiteley	Project Director, CHES Solution Design	
Sally Palmer	Deputy General Counsel	
Katie McDermott	General Manager, Equity Post Trade, Securities and Payments	
Diane Lewis	General Manager, Head of Regulatory Affairs	
Andrew Jones	General Manager, Issuer Services, Securities and Payments	
Suzy Munro	General Manager, Securities and Payments Operations	
Sabra Mott	General Manager, Securities and Payments Technology	
Karen Webb	Senior Manager, Issuer Services, Securities and Payments	
Keith Purdie	Senior Manager, Equity Post Trade, Securities and Payments	

Observers

Name	Job Title	Apologies
Nathan Bourne	Senior Executive Leader, Market Infrastructure (ASIC)	
Dodie Green	Senior Manager, Market Infrastructure (ASIC)	
Andia Petropoulos	Senior Analyst, Market Infrastructure (ASIC)	
Kylie Stewart	Senior Manager, Financial Market Infrastructure, Domestic and Payments (RBA)	
Stephanie Bolt	Manager, Financial Market Infrastructure, Domestic and Payments (RBA)	

AGENDA ITEM 1: MINUTES AND ACTIONS

The Chair welcomed members and delegates to the meeting and noted one recent membership change; Jamie Crank was welcomed as the member for ASX Markets (replacing Bradley Campbell).

Ian Matheson (AIRA) and Toni Icevski (HSBC) were apologies. Patrick Salis (AUSIEX), was represented by a delegate, Te Okeroa. Rebecca Hill (Morgan Stanley), was represented by a delegate, Carrie Barrack.

Jonathan Hicks and Srikant Yenamandra from Accenture attended the meeting as guests for the CHES replacement independent review update (agenda item 3a).

Mike Orman and Juan Carlos Martin from Ernst & Young (EY) attended the meeting as guests for the CHES replacement assurance program update (agenda item 3c).

Attending as observers were ASIC representatives Greg Yanco, Nathan Bourne, Dodie Green and Andia Petropoulos, and RBA representatives Kylie Stewart and Stephanie Bolt.

Two new ASX management attendees were also noted, Tim Whiteley (Project Director, CHES Solution Design) and Sabra Mott (General Manager, Securities and Payments Technology), for ongoing future attendance.

The agenda and papers were distributed to all members in advance of the meeting.

The Chair acknowledged recent scrutiny ASX had come under following the publication of Accenture's independent report on 17 November, and ASX's announcement to reassess all aspects of the CHES replacement project and derecognise capitalised software of \$245-255 million pre-tax in first half FY2023. Key themes ASX had been hearing from Committee members and more broadly from bilateral engagement with CHES stakeholders regarding the CHES replacement project included:

- Most not surprised by the decision given the delays but there was an element of surprise that ASX is reassessing all aspects of the project
- Keen interest in the work done to date and how much is going to change, noting feedback about the value of retaining work already completed where possible e.g. connectivity choices and the ISO 20022 messaging layer
- Interest in retaining the benefits of a DLT environment
- Keen interest in timelines to facilitate resource planning
- The importance of certainty regarding the path forward
- Understanding whether rebates would be offered, in recognition of stakeholder commitment on the project
- Further information about the industry forum
- Interest in further transparency and investment in relation to the existing CHES system, and whether consideration will be given to building new features

The Chair noted that ASX would expand more on CHES Replacement in agenda item 3.

Member discussion:

Members did not raise any questions in respect of the Chair's update.

a) Minutes from 5 October 2022 Business Committee meeting

The Chair noted that ASX received no comments on the draft minutes circulated on 31 October in advance of the meeting, however ASX had made one further edit to correct a typographical error. The minutes of the 5 October 2022 meeting were approved without any further changes.

Member discussion:

Members did not raise any questions in respect of the update.

b) Open actions

With regard to the four open actions raised at the last meeting, the following updates were provided:

- **Action:** ASX to amend the draft minutes from 13 July 2022 meeting to reflect the status of the 17 streams of CHES replacement work.

The Chair confirmed ASX circulated updated draft minutes with feedback due on 26 October 2022. ASX received no further feedback and the minutes were finalised. Accordingly, the action has been recorded as closed.

- **Action:** ASX to consider publishing a policy regarding treatment of ETO expiry on a closure day (e.g. late announced public holiday, core technology outage etc).

The ASX Markets member noted the precedent formed from the one-off 22 September public holiday, as well as a policy published by ASX on 26 February 2013. The ASX Markets member offered to circulate this policy to members (available [here](#)). In the event of a sustained market outage on ASX Trade, with the possibility of recovery prior to 4.00pm, the existing policy contemplated extension of trading on that day to run a separate Closing Single Price Auction (CSPA) at 6.00pm, finalising anywhere up to 6.59pm. In the context of ASX's consultation on ASIC Report 708 and management of market outages, ASX had received feedback that in the instance of an outage, there was little appetite to extend trading hours. ASX would consider this feedback and consider refreshing the existing policy. A member noted this update, but indicated certainty is key for their organisation, and that ASX had been speaking about consultation on this topic for some time. The action remains open.

- **Action:** ASX to discuss with ASIC demands on the industry, in the context of the potential concurrency of consultation on ASIC Report 708 and CHES replacement.

The ASX Markets member provided an overview of the three phases of ASIC Report 708 consultation. ASX was regularly meeting and discussing feedback received with ASIC, and would continue to discuss strains being reported by market and industry participants to ASIC. Accordingly, the action has been recorded as closed.

- **Action:** ASX to review the wording in its Clearing and Settlement Fee Schedule describing the discount available.

The ASX General Manager, Equity Post Trade, Securities and Payments confirmed ASX was reviewing the published wording. ASX confirms post the meeting that an updated description of the discount available for 'Holder/Holding Details Partial/Bulk Change of Participant' had been published on the [Clearing and Settlement Fee Schedule](#). Accordingly, the action has been recorded as closed.

AGENDA ITEM 2: SERVICE PERFORMANCE

a) Cash Market Clearing and Settlement - Operating Performance

The ASX General Manager, Securities and Payments Operations provided an update on the operating performance of the cash market clearing and settlement services (October and November):

- Service availability for CHES and the Trade Acceptance Service had remained at 100%.
- The daily average fail rate was unusually high during the months of September and November, exceeding 0.3% in both months. The September fails rate was attributed to unilateral fails within one participant. Factors contributing to the November fails rate exceeding 0.3% on 12 of the 22 business days included a combination of:
 - Stock-related fails where a security has netting turned off

- Participant-related fails. Some of these fails occurred over multiple days in relation to a PID change where participants needed to update their counterparty instructions.
- There were three extensions to CHES batch settlement in November, requested by different participants on different days due to different technical issues.
- ASX had engaged with relevant participants regarding fails and extension activity, and was confident each event was unrelated, had been resolved, and that the performance of the settlement batch had returned to normal levels.

Member discussion:

Members did not raise any questions in respect of the update.

AGENDA ITEM 3: CHES REPLACEMENT

a) Accenture's independent review

The ASX Group Executive, Securities and Payments noted ASX's announcement regarding the project on 17 November, and acknowledged that ASX had work to do to ensure trust and transparency with customers and regulators.

The findings from Accenture's report on solution design, project governance and delivery, as well as an internal assessment by ASX, had led to the difficult decision by ASX to pause current work on the project. The ASX Group Executive, Securities and Payments acknowledged the effort from Committee members and the regulatory agencies on development and testing, consultation, working groups, committee meetings, and tracking to project timelines. ASX had endeavoured to deliver a post trade solution that balanced innovation and state of the art technology with safety and reliability. The importance of ASX's clearing and settlement licences was noted, as was ASX's decision to derecognise the project cost to date. From a project governance perspective, ASX had appointed Tim Whiteley as Project Director. ASX was confident that the existing CHES system would continue to serve the industry well into the future, and would continue to invest in existing CHES.

The Accenture Managing Director noted Accenture was appointed in August 2022 to perform a 12 week assessment of the CHES replacement application delivery and outlined the scope of Accenture's review. The intent was to review aspects of the CHES replacement application being built by Digital Asset using the Daml smart contracting language and VMware's ledger platform. It was noted that this forms one part of the wider CHES ecosystem, which includes messaging, channels and infrastructure. Accenture's work also focused on understanding confidence in the execution of the application delivery plan, and the execution model between Digital Asset and ASX. A number of interviews were conducted with ASX and Digital Asset, and Accenture reviewed a number of artefacts around progress to date.

Accenture's engagement was structured in three separate phases:

1. Understanding core issues, what was contributing to those core issues and how they could potentially be solved. The six core issues identified by ASX and Digital Asset related to holdings, batch settlement, batch settlement processing and batch resiliency, bilateral matching, issuer HIN notification and support for ex-transactions.
2. Reviewing the delivery and execution model of the CHES replacement application delivery between ASX and Digital Asset, in the context of underlying themes identified by Accenture around latency, batch processing, constraints around the transaction size or batch size that could be processed in a batch (i.e. the number of transactions that could be grouped together).
3. Reviewing the draft delivery plan that had been provided by Digital Asset to understand completion to date, levels of confidence with the plan, and how to address some of the challenges that were presented from the core issues.

Accenture's work culminated in 45 recommendations, spanning 12 key focus areas, ranging from solution design to aspects of quality engineering, governance and design artefacts.

Member discussion:

A participant member asked Accenture whether they had previous experience auditing similar projects using digital asset technology (the technology, not the vendor). The Accenture Managing Director confirmed Accenture had run a number of these assessments globally – both from a product offering perspective and also technology, assessing both the capabilities and how to bring it to market. Accenture had worked with exchanges and clearing houses across the globe around their modernisation journey. The participant member asked whether there were any commonalities between their audit of CHES replacement and those other projects. The Accenture Managing Director noted Accenture didn't consider this body of work an audit per se, rather an assessment, and characterised other comparable assessments as being on a smaller scale (both in size and impact).

b) ASX's perspective on Accenture's findings and next steps

The ASX Group Executive, Securities and Payments noted external feedback of surprise at the figure of 63% complete (delivered and mostly tested by ASX) in Accenture's report, which included functional and non-functional aspects of the delivery as well as taking into account the six core issues that collectively were contributing to the challenges in the current solution design. While ASX had previously cited a figure of 95%, it was noted that this figure related only to functional aspects which were available in external test environments.

The complexity of the integrated solution (the application and its integration into the underlying ledger) was also highlighted in Accenture's report. The ASX Group Executive, Securities and Payments noted contributing factors to the complexity included meeting industry requirements and design considerations, which had led to scalability as well as future supportability challenges.

Accenture's findings on project governance called out the need for better ways of working between ASX and Digital Asset, and this was acknowledged as needing to be addressed.

The ASX Project Director provided a brief overview of intentions for the next phase of the project, with a wide ranging and thoughtful review of all options to validate the path forward. A decision framework was being created, to provide transparency around how the decision would be made. In early 2023 ASX was planning to be in a position to share a timeline on the solution redesign phase.

Member discussion:

A participant member asked whether ASX was trying to hold on to work done to date at the risk of going out to market and assessing the right software for the job. The ASX Project Director confirmed that as part of ASX's redesign process, all options would be explored and evaluated based on a decision framework.

An industry association member asked whether ASX would consider other clearing and settlement software (e.g. Austraclear), noting the demand from industry to see other initiatives progress independent to CHES replacement. The ASX Group Executive, Securities and Payments noted ASX would consider its technology and the post-trade environment as a portfolio of systems, and ASX had an ongoing strategy to maintain and support contemporary technology, and to provide customers with better integration, better data and better opportunities to innovate. ASX was not currently contemplating one single platform for debt and equity, although there were upgrade paths and continual work on each.

A registry member asked for ASX's thoughts on its framework for assessing the path forward and any early thinking, including how much would be internal input from ASX, Digital Asset and Accenture versus more external market feedback into the process. The ASX Project Director confirmed ASX had established its team, and was in the process of setting out the scope of work, with some of that work and timelines for the solution redesign phase likely to be shared externally around the time of ASX's half year results.

An industry association member asked whether functionality that had been deemed Day 2 functionality for CHES replacement would now be contemplated for Day 1 scope, and asked how ASX would consider future functionality needs in the new system. The ASX Project Director noted ASX's starting point was the current Day 1 scope, and that ASX would consider whether any Day 2 scope was dependent on technology choices made. ASX would weigh up delivery risk against scope.

A participant member asked whether ASX was considering moving from proprietary CHESSE messaging to ISO 20022 messaging as a separate (and potentially earlier) stream of work to the CHESSE replacement project, to introduce stakeholder benefit at different intervals as well as to reduce the risk involved in doing everything at once. The ASX Group Executive, Securities and Payments confirmed that the implementation options would be considered again as part of the solution design work being done, and noted it would be a significant body of work to introduce ISO 20022 messaging into current CHESSE, but it was certainly being considered for the replacement system.

Regarding the importance of the stability of existing CHESSE, a participant member noted feedback from their technology team regarding concerns about CHESSE running on COBOL and older servers, and asked whether the age of the language and servers was a real risk. The ASX Group Executive, Technology and Data, and CIO acknowledged that COBOL was not the language ASX would select for a new software build but noted that ASX had succeeded in recently hiring additional COBOL skillsets and that there were approaches that could be taken to make this technology work on newer servers. The biggest constraints related to the ability to make substantial change to existing CHESSE simply and easily, as well as the impact business changes would have on ASX and participants. ASX was confident in its ability to keep current CHESSE safe, stable and supportable. However, challenges would arise in making substantial business change, in the event that such change was required.

The participant member also asked how ASX would balance the need for continued investment and upgrades to existing CHESSE against any impacts to CHESSE replacement, noting ASIC could stipulate further terms on current CHESSE especially since the timeline for CHESSE replacement was currently unknown. The ASX Group Executive, Securities and Payments confirmed that dedicated teams of people managed each body of work, with dedicated governance for each, and that ASX did not see contention arising on that front, but that priority would always be given to the current production system. ASX had a risk management process around its technology stack and the supportability of that technology. ASX's Project Director noted that a number of large institutions in Australia were still using COBOL.

An industry association member asked for further information on the industry forum, including what it would look like and how it would interact with the Business Committee. A registry member asked whether the industry forum would be a higher level of governance than the Business Committee, or a more technical sub-committee. The Chair advised that ASX was still working through the proposed approach, and ASX was keen to understand member's expectations around the group, but preliminary views included:

- The new industry forum could be a sub-committee of the Business Committee – a more detailed forum at a project level
- The industry forum would meet more frequently than the Business Committee to facilitate ASX's provision of timely updates
- Members would likely have project skillsets and subject matter expertise, with the relevant attendee from Business Committee member organisations invited to participate

The Chair welcomed member feedback and asked for input on the structure, membership, frequency and material to be discussed at the industry forum. ASX expected to engage further with Committee members towards the end of January on the industry forum, and for it to be stood up in the first quarter of 2023.

An industry association member confirmed members would need time to consider their views, and that if the new industry forum ends up being a detailed technical sub-committee of the Business Committee, the interaction and connection between the two would be very important.

An AMO member asked how much influence ASX expected its regulators to have over its governance structure going forward and the structure of the forum. The Chair confirmed ASX would continue to engage with its regulators, to clarify and agree the approach forward.

A participant member noted that from a custodian perspective, a key area for clarity going forward is the identity of the CHESSE replacement project – will it be a project to update/replace existing clearing and settlement architecture, or is the project a launching pad for future functionalities. In other words, will it be a like-for-like technological upgrade, or a transformational upgrade delivering new corporate actions functionality, real time gross settlement etc. The member noted this distinction was important and would give the industry clarity on the purpose with respect to

clearing and settlement, and the level of investment and energy required from industry. The Chair acknowledged this feedback as extremely valuable. An industry association member commented that given this is national infrastructure the purpose and objectives of the solution redesign are critical.

c) Assurance program update

ASX's Chief Risk Officer advised that following ASX's announcement on 17 November, the assurance program had been temporarily paused. The assurance program as it existed pre 17 November needed to be closed out; EY's third report under ASX's additional licence conditions still had to be completed. EY was on track to deliver its report to ASX the week before Christmas.

From a forward-looking perspective, ASX was working on what the assurance program will look like for the solution design phase of the project, the topics it will cover and how wide and deep it will be. ASX was in discussion with a few firms that could potentially be engaged for that work, and ASX needed to build out a statement of work for approval by its Clearing and Settlement Boards and to be shared with regulators. The assurance work would need to be completed around the time of a decision on the solution design, and ASX was considering whether the assurance report would be shared with members. After that decision point, the program of assurance work would be developed, and would continue to be subject to EY's six monthly public reports.

Member discussion:

A participant member noted that ASX's announcement to pause the project on 17 November felt sudden, and asked about lessons learned from a project governance and continuous disclosure perspective. ASX's Chief Risk Officer confirmed that ASX was still working through lessons learned for the assurance program, and that they would be built into the assurance program for the execution phase of the new project. The assurance program had reviews scheduled on some but not all of the topics that were covered by Accenture's review (for example, performance and scalability), and these reviews had been delayed at the beginning of 2022 and then became superseded by Accenture's review. The assurance program also included a range of governance reviews with some findings that the project responded to. The assurance program was subject to EY's independent expert reports and they twice found the program to be fit for purpose. ASX would assess any additional topics to be added to the assurance program for the execution phase, and this would be dependent upon the chosen solution. ASX's Chief Risk Officer noted the company's confidence in its continuous disclosure related to the CHES replacement project.

AGENDA ITEM 4: MAINTAINING THE STABILITY OF EXISTING CHES

The ASX General Manager, Securities and Payments Technology provided an update on ongoing work to support and maintain the existing CHES system. This work included:

1. A review of internal and external resources required to support CHES (people and partners that assist with support).
2. A review of the layered components of the infrastructure stack that make up CHES (i.e. hardware, operating systems, software, databases etc) to identify what components will go out of support and necessary actions.
3. A review of capacity and performance scalability if the trade volumes were to increase exponentially.
4. An overall risk assessment and action plan to mitigate risks, including a security standards review.

Key activities on ASX's roadmap included:

- An upgrade of front-end hardware and operating system, which was well underway. There are no code changes from ASX, nor are there any code changes for CHES users. ASX's test cycle will include a User Acceptance Testing phase (targeted around March and May 2023) prior to go-live in June 2023.

- An upgrade to hardware security devices (HSM devices), which were announced by the vendor as end of life in December 2023. This will include code changes for ASX and ASX was nearing completion of its API mapping of these new devices. ASX development, coding and testing is scheduled to commence in February 2023. ASX was detailing the delivery plan and timeline with its vendor and ASX was yet to determine if there are code changes for CHES users. ASX would continue to keep relevant stakeholders informed as it worked through the plan.
- Relevant to ASX customers that have specific client connections via AnyConnect – an upgrade is required by clients. A notice was sent by ASX’s CTS team on 16 November to applicable customers with links and instructions. CTS would monitor and follow up with applicable customers until complete.

The program of work to support and maintain current CHES would be governed by a monthly steering group, weekly meetings, monthly board reporting, and risk and issue management oversight with an independent assurance review for the program being planned.

Member discussion:

A participant member asked whether ASX would disclose financial data (if not amounts, percentages) about its investment in existing and new CHES, and how it would balance the investment between the two from a budget perspective. The ASX Group Executive, Securities and Payments noted ASX published management accounts for the clearing and settlement facilities, which included data on costs to maintain the current system. ASX’s priority would always be the production system, and there was no contention from a funding perspective.

An industry association member asked whether the hardware replacement work on existing CHES would lead to further increases in the capacity of existing CHES. The ASX General Manager, Securities and Payments Technology advised the hardware upgrade was a front-end upgrade, and would not result in capacity improvement. ASX’s workplan includes planning a test on capacity. The ASX Group Executive, Securities and Payments noted that capacity needed to be managed - some customers had asked if they could increase activity volumes, and that ASX’s operating rules asked customers to notify ASX of material changes to business.

A participant member asked whether ASX had modelled headroom for the existing system, and how long it can continue in service. The ASX Group Executive, Securities and Payments confirmed ASX had modelled based on past and predicted future growth, and had tested to 10 million trades within the existing 6-hour trading window. ASX would continue to expand the scope of its testing. ASX did not consider that CHES had a ‘shelf-life’ per se, noting this needed to be viewed in terms of both supportability and the ability to make changes.

A participant member asked whether ASX had an internal assessment of the date by which it had decided to switch off existing CHES. The ASX Group Executive, Securities and Payments confirmed ASX did not and that ASX had processes and risk assessments for considering such matters.

An industry association member clarified whether the limitation to current CHES was mostly in VMS supporting hardware, and whether this could be virtualised and scaled out. The ASX General Manager, Securities and Payments Technology noted there was scope to change more than the hardware in existing CHES, but this would likely require more testing on the CHES user side, which needed to be weighed up. ASX’s first step was to test the system’s scale and then assess possibilities for change and increases to performance.

A registry member asked whether existing CHES could technically facilitate a move to T+1 settlement. The ASX Group Executive, Securities and Payments confirmed existing CHES could facilitate participants settling T+1, but that this was more a matter for industry consideration.

AGENDA ITEM 5: OTHER MATTERS

a) Forward work program

Referring to the forward work program, the Chair outlined the items planned for discussion in 2023.

The Chair welcomed feedback and suggestions for agenda items for future meetings.

Member discussion:

A participant member asked whether there was a plan for a review of the cost of clearing and settlement going forward (i.e. price reductions). The ASX Group Executive, Securities and Payments noted that the ACCC was currently performing a review of clearing and settlement pricing; the work was ongoing. The participant member asked when the review was expected to be finished, and whether it would be published. The ASX Group Executive, Securities and Payments advised that ASX would provide any update from the ACCC on whether the pricing review will be made public, and noted that the timing was currently impacted by delays to the replacement of the system.

b) Any other business

The Chair noted two actions from the previous meeting remained open (and subsequent to the meeting, one action from the previous meeting remained open), and noted three new actions from the meeting. Refer to action items above.

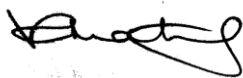
The Chair thanked the Committee for their contributions and conversation.

c) Next meeting – 22 March 2023

The next meeting is scheduled for 22 March 2023, from 12.00 to 2.00pm. ASX would distribute calendar invitations for all the meetings to be held in 2023.

The meeting closed at 5.40 pm.

Signed as a correct record of the meeting.

A handwritten signature in black ink, appearing to be 'Shirley', written over a horizontal line.

24 March 2023

Chair

Date