

Agenda

Business Committee

Dat	e 6 October 2021	Time	12:00pm – 2:00pm
Loc	ation By teleconference		
1.	Minutes and Actions		12:00pm-12:30pm
	a) Minutes from the 14 July 2021 Bu	siness Committee Meeting	
	b) Open actions		
	c) Key themes and outcomes from r	neetings with committee members	
2.	Service Performance		12:30pm-12:45pm
	a) Cash Market Clearing and Settlem	ent - Operating Performance	
3.	CHESS Replacement		12:45pm-1:25pm
	a) Project progress update		
	b) Consultation on Tranche 3 and co	mbined operating rule amendments	
	c) Access pricing update		
	d) ITE1 readiness		
1.	Service Enhancements		1:25pm-1:35pm
	a) Electronic CHESS holding statemen	its	
5.	Regulatory Expectations		1:35pm-1:50pm
	a) Report on cash equities clearing a	nd settlement services developments	
	b) External audit of ASX's compliance	e with the regulatory expectations	
5.	Closing		1:50pm-2:00pm
	a) Forward work program		
	b) Other matters		
	c) Next meeting - 8 December 2021		

Action Items*

*For historical action items please refer to archived minutes here.

Item number#	Action	Due date	Status	Owner
2020 Dec (1)	Follow up with members who offered their help to assist ASX perform scenario planning in Q1 2021 to understand flow-on impacts from the CHESS batch processing delay on 17 November.	Apr 2021	Completed	ASX
2021 Apr (1)	ASX to further consider NSX's data reporting request and engage bilaterally with NSX.	Jul 2021	Completed	ASX
2021 Apr (2)	ASX to confirm the timeframe for publishing an educational artefact around the phases of CHESS batch settlement (as an outcome of industry engagement regarding the November 2020 settlement delay).	Jul 2021	Completed	ASX
2021 Apr (3)	ASX to further consider the need for clarity with the data migration process.	Jul 2021	Completed	ASX
2021 Apr (4)	ASX to confirm whether it would publish non-confidential submissions to the consultation on proposed changes to netting and settlement workflows.	Jul 2021	Completed	ASX
2021 Apr (5)	ASX to provide further detail at the next (July) meeting around its recent CHESS replacement governance framework review.	Jul 2021	Completed	ASX
2021 Jul (1)	Given the CHESS batch settlement delay on 4 May 2021, ASX to confirm CHESS replacement will continue to segregate mFund obligations (including payments) from the settlement of cash equities in the CHESS batch	Oct 2021		ASX
2021 Jul (2)	ASX to provide further background on the cause for a delay to ASX 24 payments on 4 May 2021, including whether there was a link to the CHESS batch settlement delay on the same day	Oct 2021		ASX
2021 Jul (3)	ASX to consider how to engage with participants regarding analysis on the increase in settlement fail rates.	Oct 2021		ASX
2021 Jul (4)	ASX to engage bilaterally with a member regarding their objection to the presentation format of company logos on the proposed electronic CHESS holding statements	Oct 2021		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	Helen Lofthouse	Group Executive, Markets			
AIRA	Ian Matheson	Chief Executive Officer			
ACSA	Rob Brown	Chief Executive Officer			
ASA	Fiona Balzer	Policy & Advocacy Manager			
AUSIEX	Mat Tilley	Head of Markets & Client Solutions			
BAML	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			
Chi-X Australia	Mike Aikins	Chief Operating Officer			
Citi	Lyall Herron	Program Manager			
CMC	Andrew Rogers	Director of Broking Business			
CBA (CommSec)	Sheridan Thompson	Head of Industry Engagement &			
		Process Improvement			
Credit Suisse	Winston Loke	Australian Equities COO			
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			
Link Market Services	Peter Jackson	Chief Operating Officer			
Macquarie Group	James Indge	Cash Equities Business Manager			
Morgan Stanley	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			
Pershing Securities	Leigh Conder	Chief Operating Officer			
SAFAA	Judith Fox	Chief Executive Officer			
Sydney Stock Exchange	Antony Tolfts	Listings Director			
UBS	Scott Hanlon	Head of Operations, Executive Director			
* Delegate					

^{*} Delegate



ASX Management

Name	Job Title	Apologies		
Tim Hogben	Group Executive, Securities and Payments			
Daniel Moran	General Counsel			
Hamish Treleaven	Chief Risk Officer			
Dan Chesterman	Group Executive, Technology and Data, and CIO			
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, Clearing and Settlement Operations			
Karen Webb	Senior Manager, Equity Post Trade, Securities and Payments			
Keith Purdie	Senior Manager, Equity Post Trade, Securities and Payments			
Con Korkofigas	Senior Legal Counsel and Senior Manager			

Observers

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



Committee	Business Committee
Agenda title	Minutes from 14 July 2021 Business Committee meeting
Item	1a
Purpose	To provide Business Committee members with the minutes and Business Committee report to the ASX Boards from the 14 July 2021 meeting
Meeting date	6 October 2021
Prepared by	Business Committee Chair, Chief Customer and Operating Officer (Val Mathews)

OVERVIEW

Draft minutes and the draft report to the Boards of ASX Clear and ASX Settlement from the 14 July 2021 Business Committee meeting were emailed to all members of the Business Committee on 4 August 2021 for comment.

The finalised Business Committee report and minutes will be provided to the ASX Clear and ASX Settlement Boards for the November meeting.

ATTACHMENTS

Attachment A Business Committee Report and Minutes from the 14 July 2021 Meeting

HIGHLY PROTECTED



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

Business Committee Meeting

At its 14 July 2021 meeting, the Business Committee was updated on:

- the operating performance of CHESS for the June quarter 2021;
- the CHESS replacement project, including updates on ASX's response to consultation on proposed changes to netting
 and settlement workflow, industry test strategy information paper, ISO 20022 Technical Committee report,
 governance, progress update on access pricing for service providers, and data migration approach;
- the Corporate Actions STP Phase 2 project;
- the electronic CHESS holding statements project; and
- an update on the upcoming external audit of ASX's compliance with regulatory expectations for cash equity clearing and settlement services.

KEY ISSUES DISCUSSED

ASX noted a number of recent membership changes to the Committee including new members, new representatives from current members, and members who have left the Business Committee respectively. The Chair-elect has extended an invitation for one-on-one meetings with Committee members (for optional participation) to seek their feedback on the operation of the Committee.

In the context of the operating performance of CHESS over June 2021, there was discussion around two operational incidents over the quarter, including use of the back-out algorithm for mFund settlement and a delay to ASX 24 payments, with interest from members in better understanding the flow-on implications of both. There was also member interest in engagement as part of ASX's analysis into settlement fail rates and how they are not trending down.

With regard to the update on Corporate Actions STP Phase 2, there was interest in better understanding the circumstances under which Word forms would continue to be available for use going forward, and in the up-take of the new online forms by issuers.

A member's objection to the presentation format of company logos and other information on the proposed electronic CHESS holding statements was also noted.

AGREED ACTIONS

Updates on the five actions raised at the last meeting were provided, with four action items closed and one action item being managed as a change request outside of the Committee.

ASX committed to the following actions at the July meeting:

- 1. Given the CHESS batch settlement delay on 4 May 2021, ASX to confirm CHESS replacement will continue to segregate mFund obligations (including payments) from the settlement of cash equities in the CHESS batch
- 2. ASX to provide further background on the cause for a delay to ASX 24 payments on 4 May 2021, including whether there was a link to the CHESS batch settlement delay on the same day
- 3. ASX to consider how to engage with participants regarding analysis on the increase in settlement fail rates.
- 4. ASX to engage bilaterally with a member regarding their objection to the presentation format of company logos on the proposed electronic CHESS holding statements

Minutes from the meeting are attached.



Agenda

Business Committee

at	e	14 July 2021	Time	12:00pm – 2:00pm
Location		By teleconference		
	Introdu	ctions and open actions		12:00pm-12:15pm
2.	Service	Performance		12:15pm-12:25pm
	a) Cash	Market Clearing and Settlement - Operating Perform	mance	
.	CHESS F	Replacement		12:25pm-1:25pm
	a) Proj	ect update		
		 ASX's response to the consultation on proposed and settlement workflow 	changes to i	netting
		b. Industry test strategy		
	b) ISO	20022 Technical Committee report		
	c) Gov	ernance		
	d) Pro	gress update on access pricing for service providers		
	e) Data	a migration approach		
١.	Service	Enhancements		1:25pm-1:40pm
	a) Corp	orate Action STP Phase 2 project		
	b) Elect	ronic CHESS holding statements		
.	Regulat	ory Expectations – External Audit		1:40pm-1:50pm
		late on the upcoming external audit of ASX's compliant allows as a compliant of ASX's compliant are set of the compliant of ASX's compliant of ASX	ance with the	2
j.	Adminis	stration		1:50pm-2:00pm
	a) Min	utes from 14 April 2021 Business Committee meetin	ıg	
	b) For	ward work program		
	c) Oth	er matters		
·.	Next M	eeting – 6 October 2021		



Business Committee Members

Company	Name	Job Title	Apologies		
ABN AMRO Clearing	Barry Parker	Chief Executive Officer			
AFMA	Damian Jeffree*		David Lynch (Chief Executive Officer)		
ASX	Val Mathews	Business Committee Chair-elect &			
ASX	Helen Lofthouse	Chief Customer and Operating Officer Group Executive, Markets			
AIRA	lan Matheson	Chief Executive Officer			
ACSA	Rob Brown	Chief Executive Officer			
ASA	Fiona Balzer	Policy & Advocacy Manager			
AUSIEX	Mat Tilley	Head of Markets & Client Solutions	Mat Tilley		
BAML	Stephen Hacker	Director, Head of Operations	Wat Tilley		
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			
Chi-X Australia	Mike Aikins	Chief Operating Officer			
Citi	Lyall Herron	Program Manager			
CMC	Andrew Rogers	Director of Broking Business			
CBA (CommSec)	Sheridan Thompson	Head of Industry Engagement & Process Improvement			
Credit Suisse	Winston Loke	Australian Equities COO			
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			
Link Market Services	Peter Jackson	Chief Operating Officer			
Macquarie Group	James Indge	Cash Equities Business Manager			
Morgan Stanley	Carrie Barrack*		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			
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	Group Executive, Securities and Payments			
Daniel Moran	General Counsel	Daniel Moran		
Hamish Treleaven Chief Risk Officer				
Dan Chesterman				
Sally Palmer	Deputy General Counsel			
Katie McDermott	General Manager, Securities and Payments			
Diane Lewis	General Manager, Head of Regulatory Affairs	Diane Lewis		
Andrew Jones	General Manager, Securities and Payments			
Karen Webb	Senior Manager, Securities and Payments			
Keith Purdie	Senior Manager, Securities and Payments			
Con Korkofigas	Senior Legal Counsel and Senior Manager			

Observers

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



AGENDA ITEM 1: INTRODUCTIONS AND OPEN ACTIONS

The Chair-elect welcomed members and delegates to the meeting, held using Microsoft Teams with videoconference technology.

The Chair-elect noted a number of recent membership changes effective for the meeting:

- New organisations represented on the committee: Mat Tilley representing AUSIEX, Martin Jones representing BoardRoom, and Peter Jackson representing Link Market Services.
- New members within organisations: Helen Lofthouse was welcomed as the new member for ASX Trade, replacing David Raper, as well as Lyall Herron from Citi replacing Miles O'Connor and Robert Tesoriero from Bell Potter Securities replacing Rodd Kingham.
- Rotation of share registry representation from Computershare and Automic to allow Link and BoardRoom the opportunity to represent the share registry cohort on the committee. The Chair-elect thanked Computershare and Automic for their contributions and commitment over the past two years.
- Deutsche Securities membership was withdrawn given their resignation as an ASX Clear and ASX Settlement participant, with Geoffery Plaisted's contributions to the committee since 2013 acknowledged.

The Chair-elect noted that two members were represented by delegates, Damian Jeffree (for AFMA) and Carrie Barracks (for Morgan Stanley). Mat Tilley (AUSIEX) was noted as an apology with no delegate. ASIC representatives (Nathan Bourne, and Dodie Green) attended the meeting as observers.

The presentation materials shared during the meeting were distributed to all members after the meeting.

With regard to the five open actions raised at the last meeting, the below updates were provided:

- ASX to further consider NSX's data reporting request and engage bilaterally with NSX. The ASX Senior Manager,
 Securities and Payments confirmed the request was being progressed as a change request, with the solution agreed
 with NSX and development in progress. Going forward, ASX would continue to engage bilaterally with NSX, and
 other AMOs given the change will require a change to a schedule in the Trade Acceptance Service legal terms.
- ASX to confirm the timeframe for publishing an educational artefact around the phases of CHESS batch settlement
 (as an outcome of industry engagement regarding the November 2020 settlement delay). The Chair-elect advised
 that a market notice was published the week prior, setting out the seven steps and processes for CHESS batch
 settlement, including timing and ASX's communication approach in the event of a delay or incident. The market
 notice also provided an update on ASX's investment to ensure the capacity and resiliency of current CHESS can now
 process up to 10 million trades per day over multiple consecutive days.
- ASX to further consider the need for clarity with the CHESS replacement data migration process. The Chair-elect advised this would be addressed via agenda item 3a.
- ASX to confirm whether it would publish non-confidential submissions to the consultation on proposed changes to
 netting and settlement workflows. The ASX Group Executive, Securities and Payments advised that ASX would not
 publish non-confidential submissions, noting that often the majority of submissions are confidential and that ASX
 had published its formal response to consultation which included a summary of all feedback submitted.
- ASX to provide further detail at the next (July) meeting around its recent CHESS replacement governance framework review. The Chair-elect advised this would be addressed via agenda item 3c.

The Chair-elect provided an overview of their role at ASX, motivations and areas of interest as the new Chair-elect (the appointment to be formalised at the next ASX Clear and Settlement board meeting). The Chair-elect emphasised their desire to also engage bilaterally with members to seek their feedback on the operation of the Committee.

AGENDA ITEM 2: SERVICE PERFORMANCE

a) Cash Market Clearing and Settlement - Operating Performance

The ASX Group Executive, Securities and Payments provided an update on the operating performance of the cash market clearing and settlement services for the June 2021 quarter:



- System availability for CHESS, Trade Acceptance Service (TAS) and Settlement Facilitation Service (SFS) were all at 100% for the quarter.
- Reflecting overall market activity, trade counts were down slightly from the previous quarter, as was cleared value and total value cleared.
- The percentage of trades novated decreased for the quarter, pointing to more off market, crossing or reported activity in the June quarter compared to the past two quarters.
- Netting efficiency remained strong from a liquidity and administrative benefits perspective, with CHESS settling around 1.4% of novated trades from a volume perspective, and around 40% of the value of novated trades.
- The average daily value settled was \$11.7 billion.
- Fail rates remained relatively low, averaging 0.253% over the quarter (noting this dropped to 0.178% for all scheduled settlements in the month of June). As referenced in the last meeting, the ASX Group Executive, Securities and Payments noted ASX was undertaking further analysis of fail rates, noting the recent average of around 0.2-0.3% was not decreasing and the importance of keeping this rate as low as possible. ASX would update the Committee on the outcome of that analysis in due course.

The ASX Group Executive, Securities and Payments provided context and detail on two recent issues:

- On the morning of 14 July 2021, a delay to Signal B dissemination for trading over ASX Trade was experienced for around 15 minutes. Although this did not impact Chi-X or NSX products or reference data dissemination, ASX acknowledged the importance of timely reconciliation for ASX Trade customers, and an investigation into the underlying cause was underway (given it had only occurred that morning).
- Enactment of CHESS's back-out algorithm on 4 May 2021, due to an erroneous figure on an mFund redemption, which caused the relevant payment provider to reject the payment given the customer had flagged it was an erroneous amount (a multiple of around 10 times what it should have been). Since mFund transactional activity is segregated from core equities CHESS batch settlement, ASX was able to back-out the mFund settlement without impact to the rest of the equities market, with minimal market disruption.

Regarding the 4 May 2021 mFund settlement incident, a member noted their understanding that the new CHESS system would co-mingle mFund and cash equities in the same batch settlement process, and asked whether this was increasing risk given the example of this incident. The ASX Group Executive, Securities and Payments advised this was not their understanding of how mFund and cash equities settlement would occur in the new system, and committed to confirming this point.

Another member asked why mFund transactions are part of the novation process, which the ASX Group Executive, Securities and Payments confirmed was not the case – mFund transactions are not novated, but that there is non-novated activity in the CHESS settlement batch which supports the novated activity settling each day (such as transactional activity associated with novated activity – stock lending, borrowing, priming for settlement etc). The member also noted that their organisation experienced a delay to their ASX 24 margin receipts on the day of the 4 May 2021 incident, suggesting a possible link between the incident and ASX 24 payments, and asking whether ASX could explain the delay to ASX 24 payments. ASX's Group Executive, Securities and Payments, and ASX's Group Executive, Markets, were not aware of any delays to ASX 24 payments on 4 May 2021, and committed to further investigation.

Regarding the analysis ASX is conducting on failed settlement metrics, a member asked whether ASX would engage with participants as part of that exercise. The ASX Group Executive, Securities and Payments noted that ASX had already engaged with some participants around stock lending and borrowing, but that it would consider further engagement, including how best to conduct it.

AGENDA ITEM 3: CHESS REPLACEMENT

a) Project update



The ASX General Manager, Securities and Payments provided an update on the program and progress since the last meeting, on the topics of business design, technical delivery, customer and operational readiness and upcoming project milestones, as noted in the paper.

The ASX General Manager, Securities and Payments also provided an update on ASX's response to consultation feedback on netting and settlement redesign, and noted the changes ASX has made in response to market feedback, including the provision of new reporting, enriching the messages to contain more detail, and by not supporting trade cancellations post trade date. ASX believes the design balances the diverse views of a large and broad stakeholder group while delivering on the objective of post-trade processing not impacting trading activity and addressing capacity as a Day 1 priority. While the consultation on netting and settlement redesign had come to a formal close, ASX remained open to working with stakeholders to help resolve any barriers in meeting the timeline as a result of the changes. The Committee did not have any further feedback or questions on this point.

An update on the recently published industry test strategy information paper was also provided and as noted in the papers. The Committee did not have any feedback or questions on the industry test strategy.

A member noted that Tim Hogben (ASX Group Executive, Securities and Payments) had recently been quoted in the media stating there were 20 to 30 issues ASX was dealing with in regards to CHESS replacement, and that they could be dealt with discretely. The member asked if there were any themes or topics to those issues. The ASX Group Executive, Securities and Payments noted this was entirely consistent with a project of this nature and complexity, and cited examples of the strong labour market as something featuring on the project's risk register, as well as considerations around governance and technology. ASX would not be publishing this information, and there were no common themes or showstoppers, rather the comment was meant in the context of normal management of a project of this complexity and scale.

The ASX Group Executive, Securities and Payments provided an update on a repo product launched by Broadridge in the United States in early June, which uses the same modelling language (DAML) and sits on the same VMware distributed ledger technology as ASX's CHESS replacement system. The ASX Group Executive, Securities and Payments also noted that Hong Kong and China's Stock Connect product is also using the same modelling language (DAML), currently in a pilot phase and was another good example of the suitability and benefits of the technology, not just for ASX and the Australian market but also globally.

b) ISO 20022 Technical Committee report

The ASX Group Executive, Securities and Payments noted the minutes from the last meeting held on 26 March 2021 had been finalised and published on ASX's website. ASX considered the ISO 20022 message work complete and there was no intention for further meetings of the ISO 20022 Technical Committee.

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

c) Governance

The ASX Chief Risk Officer provided an updated on the most recent EY review of program governance and the broader independent assurance program for the CHESS replacement project.

On the former, EY were engaged to perform their third review of the project, this time focused on program governance. The review addressed EY's previous comments on management actions (including how ASX had responded and/or addressed their comments) and new findings. EY commented favourably on improvements introduced into the program which included an uplift in the program's governance, planning and change control processes, risk management inside the program and quality management. EY's new findings had already been closed out by ASX or were due to be closed by the end of August 2021. One issue that continues to be in focus relates to staffing levels for technology experts given closed international borders and heightened domestic demand.

On the broader independent assurance program, the ASX Chief Risk Officer noted discussion with the Committee at its 28 October 2020 meeting, and provided an overview of the range of independent assurance reviews staged for the remaining 21 months on the program, focused at important decision-making times such as the opening of ITE1, ITE2 and go-live. Review topics would include matters such as: governance; performance, scalability and security of both the



application and the ledger; technology and operating controls, including their design effectiveness ahead of implementation and then post go-live, their operating effectiveness, noting this will include a PWC 3402 report that ASX publishes annually; data migration; and customer readiness. The outcomes of the reviews will be provided to the project team, executives, ASX Clear and ASX Settlement boards, along with ASIC and RBA as regulators. ASX had yet to confirm which, if any of the reviews, would be made public (with the exception of the PWC 3402 report which would be published).

Members did not raise any questions in respect of the EY program governance review nor the wider independent assurance program.

d) Progress update on access pricing for service providers

Referring to a presentation shared during the meeting, the ASX General Manager, Securities and Payments provided an update on access pricing for service providers (i.e. non clearing and/or settlement participants, such as share registries), noting that formal communication would be sent shortly to confirm the details. Pricing of the three access channels for service providers, namely messaging (over either AMQP or SWIFTNet), via distributed ledger/Ledger API, and the CHESS User Interface (UI), was explained to be \$495 per month per AMQP session, \$495 per month per Ledger API connection, or \$495 per month for CHESS UI access. Additional detail such as how pricing works with multiple connections and for share registries operating on behalf of multiple issuers was briefly explained, with additional technical detail to be provided in the formal communication.

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

e) Data migration approach

In response to the action item raised at the last Committee meeting, and referring to a presentation shared during the meeting with members, the ASX General Manager, Securities and Payments, provided an overview of what data will be migrated over the cutover weekend, broken down by what ASX will be doing versus participants and share registries. This included outlining what activities will be done in advance, the support ASX will provide and what ASX will do to derisk data migration, as well as what will happen post cutover, including what would happen if there was an exception. The ASX General Manager, Securities and Payments noted that all information outlined in the presentation had already been provided via implementation and transition working group webinars, and that a cutover and migration strategy document would be published by ASX by the end of 2021, containing further details.

A member asked ASX to share the links to the three relevant implementation and transition working group webinars where the data migration approach had been discussed, which the ASX Senior Manager, Securities and Payments agreed to provide via email after the meeting (and noting the links are published on ASX's website).

The Chair-elect noted the links to relevant implementation and transition working group webinars on the topic of data migration, and migration more generally would be shared via the meeting minutes, as below:

- 29 November 2019 Preparation activities for account migration, registration details and weekend cut-over activities – link to <u>webinar recording</u>, <u>presentation</u>
- 29 January 2020 Inflight transactions link to webinar recording, presentation
- 26 August 2020 Inflight transactions, accounts and registration details link to webinar recording, presentation
- A demonstration of the ASX Registration Details tool was also provided on 31 March 2021 link to webinar recording, presentation - link to <u>webinar recording</u>, <u>presentation</u>

AGENDA ITEM 4: SERVICE ENHANCEMENTS

a) Corporate Actions STP Phase 2 project

The ASX Senior Manager, Securities and Payments advised that the final release of the Corporate Actions STP Phase 2 project was successfully implemented on 5 June 2021, as planned. 5 June 2021 was also the effective date of the related ASX Listing Rule changes. At a high level, the project had delivered straight-through processing (STP) where possible for



the announcement and distribution of key information about issuer corporate actions and capital raising and capital change activities.

The ASX Senior Manager, Securities and Payments noted that the project had been on the Committee's forward work program for a number of years and thanked Committee members for their support and the additional industry stakeholders who participated in the industry working group and also gave their valuable feedback to the associated consultation on ASX Listing Rule changes.

The ASX Senior Manager, Securities and Payments provided a summary of the scope of the changes, to both the online forms and listing rule changes, as noted in the paper. Post implementation activities were also outlined, with use of all of the updated and new online forms by issuers noted, including successful straight through processing of a number of corporate action events, including non-renounceable, accelerated and Security Purchase Plan offers. ASX's Listings Compliance and Operations teams continued to monitor inbound announcements and assist issuers with their compliance and use of the online forms, and ASX's Customer Technical Support team was providing first line support to users of the ISO 20022 service.

The ASX Senior Manager, Securities and Payments also summarised the benefits delivered to the market, as noted in the paper. Of note was the more prescriptive guidance for issuers for the announcement of certain events, allowing issuers to make the best announcement possible when they use the online forms and the related warnings and exceptions management to allow for better pre and post announcement release support. Another benefit is a reduction in pre and post announcement queries, and fewer corrections. ASX's Operations and Issuer Compliance teams had already reported far fewer queries from issuers regarding corporate action events and timetables in particular, positive evidence that the transparent and inline form validations around timetables are beneficial.

Links were provided in the paper to further information on the project and the ISO 20022 product.

A member asked whether the old Word forms were still able to be used, and what the up-take in use of the new online forms had been to date across all issuers. In response to the first part of the question, the ASX Senior Manager, Securities and Payments confirmed that for each of the online forms, there was an equivalent Microsoft Word form which was termed an emergency form. ASX had clearly outlined to issuers the circumstances under which the emergency forms could be used, via several guidance notes, and examples included using the emergency form as part of the transition arrangements in place at the moment where the online form cannot be used for an inflight event, or in the event of technical issues with the online forms on ASX Online or other circumstances. The ASX Senior Manager, Securities and Payments added that any of the old Word forms that ASX replaced were not to be used going forward. Regarding the second part of the question, the ASX Senior Manager, Securities and Payments advised that the up-take had been positive, and ASX had been monitoring usage closely, including particular attention on any inbound enquiries and encouraging use of the online forms as much as possible from issuers. A reminder had been sent out the day prior to this meeting to issuers.

b) Electronic CHESS holding statements

The ASX General Manager, Securities and Payments noted that ASX was progressing towards going live with CHESS holding statements later this year. All software had been delivered to ASX and the key focus over recent months had been software and implementation testing. ASX has been considering feedback from numerous channels, such as from a recent implementation and transition working group webinar where a full demonstration from a customer and participant perspective was provided, as well as feedback from a number of Australian Shareholders Association members after multiple demonstrations to investors of what the electronic portal would look like, with ASX implementing changes in response to a large portion of the feedback. An invitation was extended to the committee to review the demonstration, via the implementation and transition working group webinar, or to contact ASX to request a demonstration or provide any feedback.

One theme in the feedback received to date was a potential issue with ASX's go-live date towards the end of the year, and low levels of staff working around the Christmas period. ASX's General Manager, Securities and Payments noted that for any participants not going live with the electronic solution, there would be very little for them to do on Day 1, however added that ASX was proposing that all participants give consideration to reviewing their process for managing returned mail, given known current issues for participants receiving a large box of paper mail. In light of the concern



around staffing levels and ability to adapt to a slightly new albeit more efficient system over the Christmas period, ASX was giving consideration to delaying the implementation of the conversion of the printed return mail into electronic form into next year to give participants more time. This would also mean participants who don't offer electronic statements would have very little work to do when ASX goes live with statements.

Drafting of a detailed technical document was underway, and would be released shortly. The document would address the solution design for both participants and investors, and describe the returned mail solution.

The NSX member clarified that NSX's issue with the current draft statement related to the presentation of the statements for issuers listed on NSX, as co-branded ASX and NSX statements, with the logos for both entities appearing on the statement. NSX did not consider this co-branding appropriate and ASX's General Manager, Securities and Payments acknowledged that this feedback had been received and that ASX would be in touch with NSX to work through the matter.

AGENDA ITEM 5: REGULATORY EXPECTATIONS – EXTERNAL AUDIT

a) Update on the upcoming external audit of ASX's compliance with the regulatory expectations

ASX's Chief Risk Officer noted that the annual external audit of ASX's compliance with regulatory expectations would commence on 16 August 2021, and would be conducted in the same manner as last year, led by PwC. PwC would determine a representative sample of Committee members and contact them directly to verify whether they would like to participate in the audit. The Committee was invited to contact Deanna Chesler from PwC over the next fortnight if they wished to volunteer to participate. ASX's Chief Risk Officer noted that further information on the scope of the audit and the regulatory expectation could be found in the supporting paper.

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

AGENDA ITEM 6: ADMINISTRATION

b) Minutes from 14 April 2021 Business Committee Meeting

The Chair-elect noted that ASX had not received any comments from members regarding the minutes of the 14 April 2021 meeting, and the minutes of the 14 April 2021 meeting were approved without any further changes.

c) Forward work program

The Chair-elect noted that a forward work program with meeting dates for the remainder of 2021 was contained in the agenda papers, and that the program will continue to focus on regular updates on the CHESS replacement project and the electronic CHESS holding statement project. The Chair-elect reiterated the value and importance of member input into the forward work program, and invited suggestions from Business Committee members on topics of interest and relevance that could be covered at future meetings. The Chair-elect also reiterated their earlier comment that they would reach out to engage bilaterally with members regarding the running of the committee.

No further suggestions were provided by members at the meeting.

d) Other matters

In light of additional COVID-19 restrictions announced in New South Wales that day, the Chair-elect asked whether members wanted to raise any issues or concerns on behalf of their respective organisations. No members raised any issues

The Chair-elect thanked the committee for its participation and contributions.



AGENDA ITEM 7: NEXT MEETING

The next	t meeting is o	currently so	cheduled for	6 October	2021,	which AS	X intends t	o hold in	person,	COVID	restrictions
permittii	ng.										

The meeting closed at 1.45pm.		
Signed as a correct record of the meeting.		
Chair	Date	_



Committee	Business Committee	
Agenda title	Key themes and outcomes from meetings with committee members	
Item	1c	
Purpose	To provide Business Committee members with a summary of the discussions with the Business Committee Chair regarding the operation of the committee	
Meeting date	6 October 2021	
Prepared by	Business Committee Chair, Chief Customer and Operating Officer (Val Mathews)	

OVERVIEW

Business Committee members were invited to provide feedback on the operation of the Business Committee and whether improvements could be made for future meetings, including the content and cadence of the Committee.

The invitation was optional and in response, 12 Business Committee members accepted the invitation to provide feedback.

Overall, the sentiment was positive, with key themes from the meetings outlined below. Additional detail will be provided for discussion during the meeting.

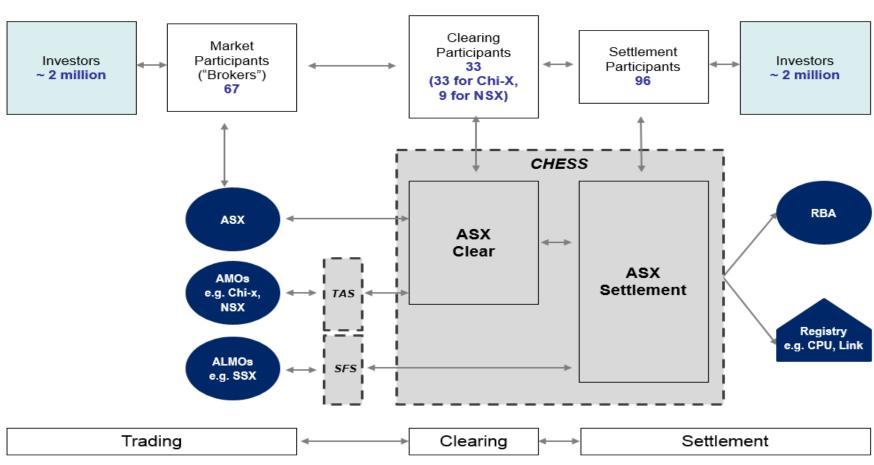
- Composition and changing aspects of the Committee
 - Members provided feedback on the size, composition, diversity of the Committee, including how it had changed over time
- Meeting agenda and duration
 - Members noted the agenda was very ASX and CHESS replacement focused, with suggestions for other strategic topics
 - General acceptance that duration (2 hours) and frequency (quarterly) was appropriate
- Meeting materials and presentations
 - Feedback around the level of technical detail in the meeting papers, discussion around whether papers can be taken as read (support from many)
- Meeting etiquette
 - Members provided positive feedback on the changing engagement, interaction and tone of the meetings
 - Interest in the materials generating more discussion, with suggestions for ways to enhance conversation.

Committee	Business Committee
Agenda title	Cash Market Clearing and Settlement - Operating Performance
Item	2a
Purpose	To report on key performance metrics for ASX's clearing and settlement services.
Meeting date	6 October 2021
Prepared by	Business Committee Chair, Chief Customer and Operating Officer (Val Mathews)
	General Manager, Clearing and Settlement Operations (Suzy Munro)
	Senior Manager, Settlement Operations (Brendan Laird)

OVERVIEW

Market Structure Overview





The clearing and settlement of equities performs a critical role in the operation of Australia's financial markets, helping to reduce counterparty and systemic risk, and provide transaction efficiency and certainty for end investors.

Core processes that provide these benefits include novation, netting and settlement.

Novation

Through a contractual process known as novation, ASX Clear becomes the seller to every buyer and the buyer to every seller, making it liable for completing all cleared transactions on the relevant market. Novation performs two important functions:

- it replaces the clearing participants' credit exposures to other clearing participants by substituting the clearing house as the central counterparty; and
- it maximises capital efficiency for clearing participants by permitting a single net exposure to be calculated and collateralised between the clearing house and each clearing participant.

Through novation, ASX Clear provides protection to non-defaulting clearing participants (and, indirectly, their clients) from the inability of a defaulting clearing participant to meet its obligations.

A key metric for monitoring novation is the percentage of on and off market trading that is novated.

Trades submitted for clearing and settlement by any market operator are verified prior to registration by ASX Clear. If the verification conditions are not satisfied then trades are rejected. Once a trade is registered it is novated. Novation is deemed to be effective from the matching of bid/offer (on market trades) or recording of the trade (reported trades) for all trade execution venues.

Netting

ASX Clear is approved as a 'netting market', and ASX Settlement is an 'approved netting arrangement', for the purposes of the Payment Systems and Netting Act. This gives legal certainty to the netting of settlement obligations. Settlement on a multilateral net basis maximises market efficiency by reducing participant transaction and funding costs.

A key metric for monitoring netting is the percentage by which novated value is netted down for settlement. This metric is termed "netting efficiency".

Settlement

ASX's model for settlement maximises efficiency, while minimising the risk of settlement failure. It does this by simultaneously transferring the legal ownership of shares and facilitating the transfer of money for those shares. This is done through a Model 3 multilateral net batch settlement mechanism with irrevocable settlement

HIGHLY PROTECTED 3/10

finality at the end of the processing cycle. The transfer of money occurs across the Exchange Settlement Accounts of payment providers in the RBA's Information and Transfer System (RITS).

A key metric for monitoring settlement is the percentage of scheduled settlement that successfully settles (i.e. the opposite of the "fail rate"). This metric is termed "settlement efficiency".

Service availability

ASX's critical processes of novation, netting and settlement are supported in ASX's core system CHESS. It is critical for market operations, that CHESS remains stable and available for processing. A key metric for monitoring systems availability is the percentage of systems uptime as measured against target availability times. The service availability target for CHESS is 99.80%.

For the September 2021 quarter¹, the average monthly system availability was 100% for CHESS. The average monthly availability of CHESS has been 99.99% between November 2011 and August 2021.

Trade Acceptance Service and Settlement Facilitation Service

ASX Clear and ASX Settlement's Trade Acceptance Service (TAS) provides a mechanism for Chi-X and NSX to submit trades into CHESS and the Settlement Facilitation Service (SFS) provides settlement arrangements for unaffiliated Approved Listing Market Operators (ALMOs) in respect of the CHESS-eligible financial products listed on their markets (SSX). The CHESS system performs the clearing and settlement functions.

The Trade Acceptance Service and Settlement Facilitation Service availability target is 99.80% (the same as CHESS).

For the September 2021 quarter¹, the average monthly system availability was 100% for the TAS and Settlement Facilitation Service. The average monthly availability of the TAS and SFS has been 99.99% between November 2011 and August 2021 (the same as CHESS).

Reporting on clearing and settlement service performance

The key metrics noted above on novation, netting efficiency and settlement efficiency for the September 2021 quarter¹ are reported in Attachment A. They are also supported by charts demonstrating a longer reporting period in Attachment B.

HIGHLY PROTECTED 4/10

¹ As of 31 August 2021

Settlement Performance

A performance metric for monitoring the CHESS settlement batch is the fail performance.

For the September 2021 quarter¹, the daily average fail performance has reduced to 0.262% and averaged 0.279% for the previous twelve months, between September 2020 and August 2021.

The daily average fail performance was 0.302% between November 2011 and August 2021.

During the quarter ASX Settlement Operations has been reviewing the daily settlement data for recurring trends in the settlement failure rate, to monitor and ensure there are no systemic issues.

Month	August	July	June	May	April	March
Average Fail Rate	0.294%	0.229%	0.178%	0.241%	0.343%	0.289%
Maximum Fail Rate	1.51%	0.668%	0.337%	0.522%	0.926%	0.506%
Minimum Fail Rate	0.091%	0.099%	0.094%	0.115%	0.191%	0.120%
# of days Fail rate > 0.50%	1	1	0	1	3	1
Batch Settlement Extensions	0	0	0	0	0	1
Fall back of Payment Provider	0	0	0	1	1	0

HIGHLY PROTECTED 5/10

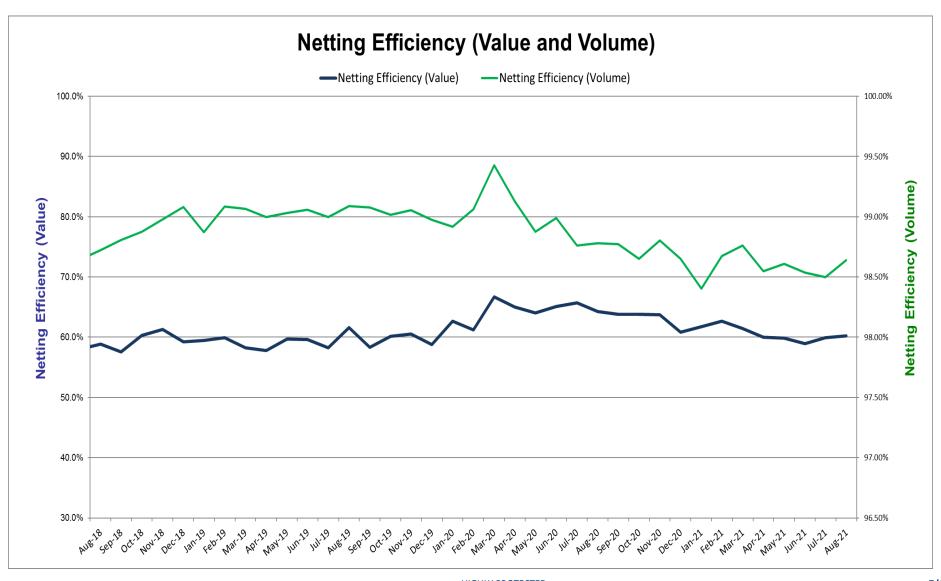
ATTACHMENT A – SUMMARY METRICS RELATING TO THE PERFORMANCE OF ASX'S CLEARING AND SETTLEMENT SERVICE

	September 2021 Quarter ¹	June 2021 Quarter	March 2021 Quarter
System Availability (CHESS)	100%	100%	100%
System Availability (TAS)	100%	100%	100%
Total Trades Accepted (ASX)	69,632,377	93,450,951	96,548,767
Total Trades Rejected (ASX)	0	0	0
Total Trades Accepted (Chi-X)	22,227,159	31,755,054	35,429,442
Total Trades Rejected (Chi-X)	0	0	0
Total Trades Accepted (NSX via TAS)	218	224	449
Total Trades Rejected (NSX via TAS)	0	0	0
Total Settlements (SSX)	0	0	2
Total Value of Settlements (SSX)	\$0	\$0	\$0
Daily Average Traded Value (On and Off Market)	\$8.69 billion	\$8.08 billion	\$8.64 billion
Daily Average Cleared Value	\$6.21 billion	\$5.76 billion	\$6.26 billion
Percentage Novated	71.5%	71.2%	72.4%
Daily Average Cleared Value Post-Netting	\$2.48 billion	\$2.33 billion	\$2.38 billion
Netting Efficiency (Value)	60.1%	59.6%	61.9%
Netting Efficiency (Volume)	98.57%	98.56%	98.61%
Daily Average Settled Value (Including Non-Novated)	\$12.0 billion	\$11.7 billion	\$11.7 billion
Settlement Efficiency (Value)	99.88%	99.89%	99.86%
Average Daily CHESS Fail Rate (% Rescheduled to the next settlement date)	0.262%	0.253%	0.266%

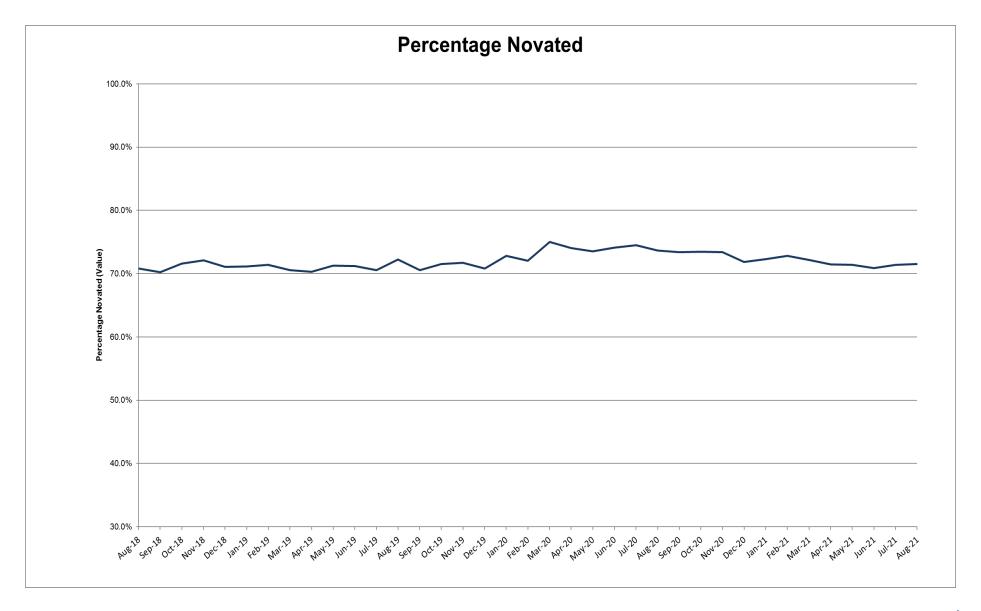
1. As of 31 August 2021

HIGHLY PROTECTED 6/10

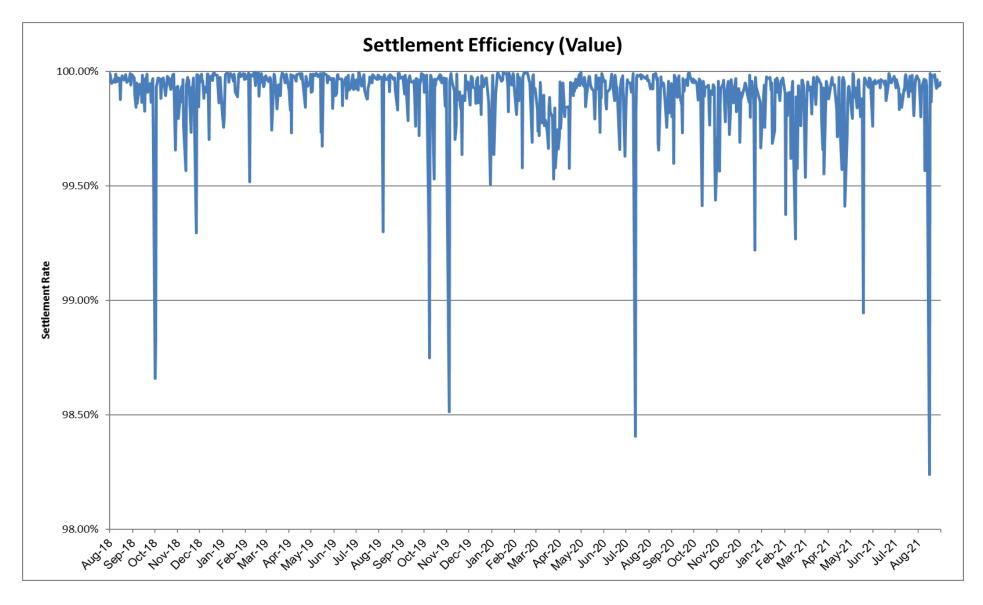
ATTACHMENT B - PERFORMANCE OF ASX'S CLEARING AND SETTLEMENT SERVICES FROM AUG 2018 TO AUG 2021



HIGHLY PROTECTED 7/10

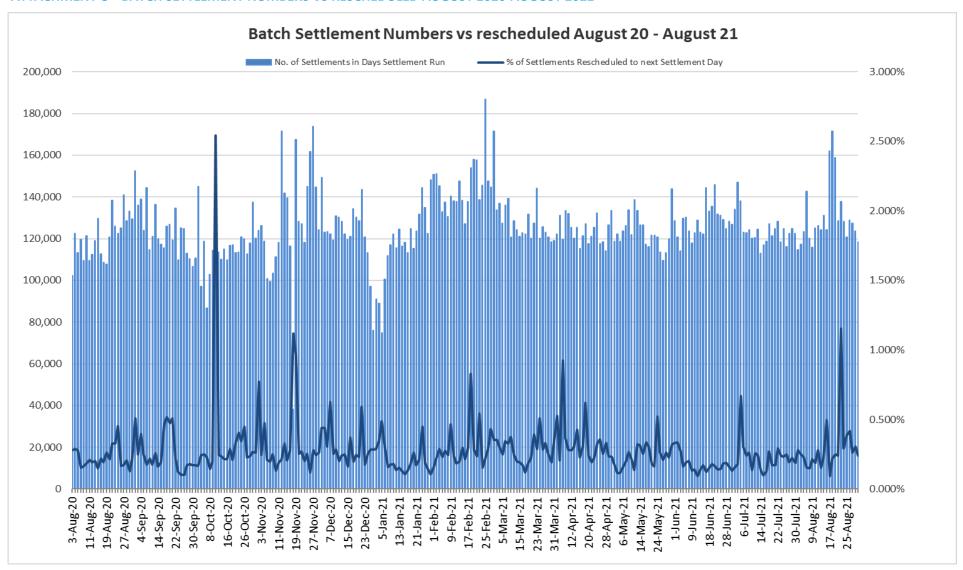


HIGHLY PROTECTED 8/10



HIGHLY PROTECTED 9/10

ATTACHMENT C – BATCH SETTLEMENT NUMBERS VS RESCHEDULED AUGUST 2020-AUGUST 2021



HIGHLY PROTECTED 10/10



Committee	Business Committee	
Agenda title	CHESS Replacement	
Item	3a, 3b, 3c and 3d	
Purpose	To provide Business Committee members with a project update	
Meeting date	6 October 2021	
Prepared by	Group Executive, Securities and Payments (Tim Hogben)	
	General Manager, Equity Post Trade, Securities and Payments (Katie McDermott)	
	Senior Manager, Equity Post Trade, Securities and Payments (Keith Purdie)	

KEY SUMMARY POINTS

- The third of three tranches of operating rule amendments, together with the combined package of rule amendments was published on 31 August 2021 with a 15 week consultation period
- The last functional code release before ITE1 opens, CDE 10, was made available on 27 September 2021, providing software providers all workflows to progress their development delivery
- Initial meeting held in September 2021 of a new working group for software provider readiness that will help ensure readiness for the mandatory technical accreditation phase commencing from late April 2022
- AMO working group convened to discuss the proposed approach to the review and consultation on Trade
 Acceptance Service (TAS) and Product Services legal terms for CHESS replacement and the industry test
 strategy
- New documentation published including Connectivity Guide (ITE1, ITE2, ITE-M), Guide to Testing Services (ITE1), and Failover and Recovery details (ITE1)
- ASX is currently completing an assessment of the IBM Review recommendations on the ASX Trade outage
 against the CHESS replacement program. Key themes from the assessment is planned for presentation at
 the December 2021 Business Committee meeting
- The project continues to remain on track for ITE1 opening in late November 2021 and go live in April 2023.

PROJECT UPDATE

Application Design, Build and Test

On 27 September 2021, the final code drop, CDE 10, was ready for use in the customer development environment (CDE) after deployments commenced on 23 September. This is the last release of code into CDE before ITE1 opens in late November 2021. This release delivered the new features for netting and settlement redesign changes and DRP/BSP elections and enquiries (originally planned for CDE 11 at the end of September 2021).

ASX's testing for the CHESS replacement application now focuses on the integrated components required for ITE1 to commence in late November 2021.

The platform required to support ITE is configured and undergoing performance validation and non-functional testing. As part of our performance and non-functional testing plan, we continue to work in collaboration with our partners to further tune and test as part of the ITE1 test cycle.

Stakeholder Engagement

Consultation on operating rule amendments

On 31 August 2021, ASX released a <u>consultation paper</u> on the third of three tranches of operating rule amendments required to facilitate the implementation of the new system that will replace CHESS, together with the combined package of rule amendments across those three tranches.

The amendments in tranche 3 relate to netting, settlement, reporting and miscellaneous amendments for 'Day 1' implementation of the new system, including as revised to reflect changes to netting and settlement workflows as consulted on in 2021. As part of the miscellaneous amendments, they also include transitional rules addressing migration aspects for the cutover to the new system.

ASX is now seeking feedback from impacted stakeholders on the proposed changes. Written submissions in response to the consultation paper are requested by Tuesday 14 December 2021.

Further details on the operating rule amendments will be provided in the meeting, as part of agenda item 3b.

Software Provider Readiness working group

On 15 September 2021, ASX convened the first software provider readiness working group. As foreshadowed to business committee members in December 2020, this new working group is for stakeholders who will be connecting to ITE1 from late November 2021 i.e. back office software vendors and those participants that are developing in-house systems to interface directly with the CHESS replacement system.

The first meeting focused on the objectives of the new working group; an update on the timing and content of CDE 10 release; and provided a spotlight on AMQP including focusing on what's new for ITE1 as well as the set-up process and connection properties for AMQP in ITE1. An AMQP checklist for ITE1 entry was also provided.

The forward schedule of topics include ITE1 test kit and test tooling, ITE1 on-boarding, security, in-flight migration testing and a deep dive on technical accreditation.

Implementation and transition working group

ASX hosted webinars on 28 July and 29 September, which included updates on operating rules amendments, project documentation and system access pricing.

The webinar hosted on 28 July 2021 provided members with an update on the connectivity guide for ITE1, migration considerations for mFund, feedback received on the industry test strategy information paper, access pricing for service providers and the replacement of the current Signal B service.

The webinar hosted on 29 September 2021 provided members with an update on the third tranche of operating rule amendments and/or the consolidated rule set, including how to navigate the content. Working group members were also provided with an update on recently published documentation.

The audio recording, presentation materials and ASX's published reply to questions asked during the 28 July 2021 sessions can be found here:

Implementation and transition working group presentation materials – 28 July 2021 and 29 September 2021

The audio recording and presentation materials from the 29 September session can also be found in the above link. The Q&A from the session is targeted to be published on the CHESS replacement webpage by 8 October 2021.

Share registries

On 9 September, ASX co-hosted a joint client session with Link Market Services targeted at company secretaries focusing on the benefits of CHESS replacement and specific issuer related changes, electronic CHESS holding statements, corporate actions STP and DLT solutions as well as providing an update on market trends and insights.

ASX has continued bilateral meetings with all share registries including ongoing discussions with some on ITE-M test scenarios.

ASX will soon circulate a questionnaire to all 9 share and unit registries to collect information on their readiness to meet various the project stage gates and to identify any issues or concerns for upcoming activities. To further assist share and unit registries, ASX is preparing a checklist of activities to help with their planning and preparations.

Payment Providers

On 27 July, ASX circulated a questionnaire to the 11 payment providers to check-in on project progress including connectivity and preparedness for ITE1. ASX received responses from all 11 payment providers and 6 indicated their intentions on the take up of the CHESS RTGS service. Next steps include engaging with each payment provider to discuss the feedback and provide an anonymised summary at the next ESPPSC session on 16 November 2021.

There has also been continued engagement with the RBA to agree RITS integration test scenarios for ASX/RBA system testing that commenced on 27 September and is scheduled to continue until early November 2021.

Approved Market Operators

ASX has continued its engagement with Chi-X, NSX, SSX and ASX Trade with a number of bilateral engagements as well as an AMO working group meeting held on 30 September. This working group included discussion on the proposed approach to the review and consultation on TAS and Product Services legal terms for CHESS replacement and industry test strategy. Working group members were also provided an overview on changes made to the documentation portal to improve the ease of navigation for all information relevant to AMO readiness, including relevant FAQs.

Project documentation

On 31 July 2021, ASX published new documentation for CHESS User Interface (UI) connectivity including outlining common CHESS UI functionality and notifications, and updated ASX procedures and guidelines documentation relating to corporate actions.

On 31 August 2021, ASX published new documentation which reflected the changes made to the design for netting and settlement, providing the market with updated operating guides (APGs), message accreditation scripts as well as other minor updates.

The publication of all message accreditation scripts is now complete.

ASX Procedure Guidelines (APG) updates are also now complete with the exception of fees and levies, general forms and appendices which will be published in advance of the operational readiness testing phase.

On 30 September 2021, ASX will be publishing new documentation to support the software provider readiness phase including a guide for ITE1 testing services, and failover and recovery details. Additionally, following the

recent CDE 10 code release on 27 September 2021, ASX was able to align all specifications and APGs to reflect post-CDE 10 functionality for netting and settlement

Newsletters

ASX last published a project update to all stakeholders via the CHESS Replacement Project Newsletter on 2 September 2021. This newsletter primarily focused on the consultation for operating rule amendments. A copy of the newsletter can be found here: CHESS Replacement Project Update - September 2021.

System Access Pricing

On 29 September 2021, ASX published an <u>information sheet</u> providing details on system access pricing for clearing and settlement participants, PISPs, and other CHESS users including payment providers, issuers and their service providers, share registries.

Further details on system access pricing will be provided in the meeting, as part of agenda item 3c.

ITE1 READINESS

What does ITE1 deliver

ITE1 will allow software providers entry into a test environment and enable technical accreditation of software commencing from the end of April 2022. This includes the provision of all functionality to which a software provider must accredit. All access channels are also fully enabled including Ledger API, AMQP, FIX, SWIFT and CHESS UI.

The significance of ITE1 for software providers

ITE1 provides software developers with a 'complete product' that provides additional workflows absent in CDE such as:

- ASX initiated account locking/unlocking
- Updates to sub register status
- Delay to settlement and cancellation of settlement
- Levy reversals

ITE1 provides additional capabilities absent in CDE such as:

- Access to our new corporate certificate management system (CSAM)
- A new, optional "Report" notify queue to receive your reports instead of the main notify queue
- Allows Ledger API users the ability to connect and transact across multiple ASX data centres/sites
- Multi-channel capabilities e.g. AMQP and/or Ledger API
- Provision of the CHESS UI to allow software providers to impersonate the role of another CHESS user as part of multi-party workflow

ITE1 provides for new types of testing such as:

- Performance testing of client interfaces
- Network failover testing
- Testing on migrated data (using the ITE-M environment)

The majority of self-service tools and auto-responders developed for CDE will be carried forward into ITE1. There will also be some new tooling such as for performance testing, as well as software providers having the option to use the CHESS UI to impersonate the role of another CHESS user as part of multi-party workflow.

ITE1 also enables the accreditation of software used by CHESS users prior to CHESS users undertaking operational readiness activities.

The significance of ITE1 for software providers and ASX

ITE1 provides ASX the opportunity to test technical and operational processes with demonstrable usage of concurrent users in an integrated environment with the CHESS replacement application and the new distributed ledger infrastructure. This includes some support tools that will be used for alerting, logging and monitoring to prevent, investigate and resolve issues. This allows ASX to provide "real-life" training to support the new application and infrastructure.

In the event new issues are experienced and complex upgrades are required, ITE1 may need to be reset to allow software providers to resume their testing. A reset will impact all software providers which is in contrast to CDE where software providers are testing in a standalone sandbox environment.

Further details on ITE readiness will be provided in the meeting, as part of agenda item 3d.

KEY THEMES FROM RECENT STAKEHOLDER ENGAGEMENT ACTIVITIES

From 1 July to 30 September 2021, ASX has held 101 bilateral engagements and 4 working group meetings. Key themes raised by stakeholders from these forums include:

- 1. Additional information on market dress rehearsal (MDR) activities has been requested including the data in scope for testing (e.g. production data versus prior date production data).
 - In response, ASX is reviewing the position on the date of production data used for each MDR. In order
 to sufficiently mitigate risk to the migration, production data must be used. However, ASX will work to
 understand challenges that may be present for organisations when preparing for MDR events.
 - As a next step, ASX is giving consideration on how best to canvass a range of views which may include focus group and/or a series of bilateral engagement meetings to ensure key feedback is incorporated in the Migration and Cutover strategy due to be published Dec 2021.
- 2. General interest to extend the scope of MDRs for day 1 processing
 - In response, ASX has provided guidance that the ASX 'to be' production environment will be made available following each MDR for a period of time to allow CHESS users to conduct post rehearsal testing.
 - As a next step, ASX will publish further information as part of the Migration and Cutover strategy in Dec 2021, summarising what this testing will comprise, including an indication of duration.
- 3. More information is being sought in testing inflight corporate action events as well as transfers and conversions, from share registries and high volume retail clients, in the ITE-M (migration) testing environment.
 - Inflight migration testing in ITE-M is initially open to software providers from February 2022.
 - CHESS users will need to have functionally tested their core functions in ITE2, prior to testing the relevant workflows for data migration in ITE-M
 - ASX is working through the requirements and will continue to engage with share registries to derive an outcome
 - Further details around inflight migration testing will be published as part of the Guide to Testing Services in November 2021. This is separate to the content that will be published in December 2021 that will focus on the migration strategy and cutover approach.

- 4. Concurrency of CHESS replacement with other ASX initiatives e.g. Signal B replacement, electronic CHESS holding statements and cash market margin changes
 - A production parallel run period for the legacy Signal B service will now be made available from April
 to June 2022, providing an additional 3 months to finalise readiness for the new FIX standard interface
 - Participation in the electronic delivery of CHESS holding statements is a choice; timing is driven by a sponsoring participants timetable
 - An improved, and proactive change timetable is currently being developed across all ASX initiatives to provide better communication, transparency and timing of change impact for customers.
- 5. Following a series of meetings through May and June on account migration readiness and to plan the remediation steps for HIN data that had exceptions identified, ASX is continuing to work with sponsoring participants on a bilateral basis to clean up any exceptions by end of this year. Revised reporting will be provided to sponsoring participants in October 2021.

UPCOMING PROJECT ACTIVITIES AND KEY MILESTONES

- Mid Oct 2021: Software providers connectivity to ITE1 to commence
- End Nov 2021: Publish Accreditation Guide
- End Nov 2021: Publish performance testing and Inflight Migration chapters for the Guide to Testing Services
- End Nov 2021: ITE1 opens and system testing commences
- End Dec 2021: Publish operational readiness scenarios
- End Dec 2021: Publish cutover and migration strategy
- Feb 2022: Software providers testing of migrated in ITE-M commences

POTENTIAL QUESTIONS FOR DISCUSSION IN THE MEETING

- 1. Are there any aspects on the third tranche of operating rule amendments and/or the consolidated rule set that you would like further guidance on?
- 2. What are you hearing from your software providers as we approach ITE1?
- 3. Are ongoing COVID lockdowns impacting your organisation's progress on the project? Or any other matters that are impacting your readiness to meet key project milestones?
- 4. Is there anything else ASX can do to help with your planning and preparedness to meet key project milestones?



Committee	Business Committee	
Agenda title	Electronic CHESS holding statements	
Item	4 a	
Purpose	To provide Business Committee members with an update on electronic CHESS holding statements	
Meeting date	6 October 2021	
Prepared by	General Manager, Issuer Services, Securities and Payments (Andrew Jones)	

The ASX project to provide an electronic delivery option for CHESS Holding Statements remains on track for a December go live. A detailed <u>Technical and Process Factsheet</u> has been sent to all participants. A number of participants have contacted ASX to discuss their go-live timetable.

Importantly, participant charges have been waived for updating existing HIN details with email addresses via an EIS 203 message. Although we encourage participants to offer their clients the ability to subscribe to electronic CHESS Holding Statements, it is not mandatory for participants to take any action once ASX provides this service.

Exact go live dates will be notified to the market when final testing of the software is complete, expected to be around 1 month prior to go-live.

HIGHLY PROTECTED



Committee	Business Committee	
Agenda title	Annual Cash Equities Clearing and Settlement Reports	
Item	5a) and 5b)	
Purpose	To provide the Business Committee with ASX's annual compliance reports pursuant to the Regulatory Expectations	
Meeting date	6 October 2021	
Prepared by	Senior Manager, Equity Post Trade Services, Securities and Payments (Karen Webb) Chief Risk Officer (Hamish Treleaven)	

COMPLIANCE REPORTS

The Regulatory Expectations for Conduct in Operating Cash Equity Clearing and Settlement Services in Australia (Regulatory Expectations) and ASX's Code of Practice, require ASX to publish annually:

- A cash equities clearing and settlement service developments report; and
- A report prepared by an external auditor on ASX's compliance with the Regulatory Expectations.

Annual Cash Equities Clearing and Settlement Service Development Report

In the Code of Practice, ASX committed to report annually on the cash equities clearing and settlement service developments and investment projects progressed during the year, and how the views of users were taken into consideration.

This is the fifth report published since the Council of Financial Regulators released the Regulatory Expectations. While the report and ASX activities are largely focused on ASX's consultation with industry as part of the CHESS Replacement Project, the report also sets out other service enhancements conducted during the 2021 financial year.

The annual cash equities clearing and settlement service developments report is provided in Attachment A.

Annual External Regulatory Expectations Audit

In the Regulatory Expectations, there is a requirement for ASX to commission an annual external audit by an independent assurance firm of its governance, pricing and access arrangements benchmarked against the Regulatory Expectations. PWC has conducted the fifth audit of ASX's compliance with the Regulatory Expectations. The assurance report concluded that:

In our opinion, ASX has complied, in all materials respects, with the Regulatory Expectations as represented in the Compliance Framework for the year ended 30 June 2021.

PWC has presented its reasonable assurance assessment to ASX's Boards, and has been provided to the regulators. The audit report is provided in Attachment B for the information of Business Committee members.

As a result of the audit, including the interviews with Business Committee members, PWC and ASX have agreed a number of actions to respond to issues raised. These are set out fully in the audit report that is attached, with a summary provided below.

HIGHLY PROTECTED

Summary of agreed actions

Feedback or expectation	ASX action			
User input to governance				
Business Committee members noted that the basis for membership rotation was not clear.	ASX will: formalise the annual review sign-off of the Business Committee composition; formalise the annual process for reviewing Business Committee membership; and communicate the process and results to Business Committee members			
Business Committee members are provided an opportunity to have input into meeting agendas but noted that there is a large amount of information provided at meetings and this along with membership numbers can sometimes deter members from asking questions that are not necessarily relevant to all those present.	Information shared with Business Committee members prior to meetings will be discussed on an exceptions basis and ASX will implement processes to encourage questions from Business Committee members during meetings.			
Transparent, non-discriminatory and fair and reasonable pricing				
Some Business Committee members noted that understanding rebates was challenging.	ASX will provide further detail to members on the calculation of revenue sharing rebates.			
Commercial, transparent and non-discriminatory access to CS services				
ASX should maintain an appropriate method for determining the prices of its CS services so as to generate expected revenue that reflects the efficient cost of providing those services, including a return on investment commensurate with the commercial risks involved	ASX acknowledges the need for greater transparency on the pricing of CS services for the new CHESS replacement system.			

ATTACHMENTS

Attachment A Annual Cash Equities Clearing and Settlement Service Development Report

Attachment B Annual External Regulatory Expectations Audit



Cash Equity Clearing & Settlement Services Developments

Annual Report

September 2021





Exec	utive Summary	3
1.	CHESS Replacement project	3
2.	Other service enhancements	5
relate 2.2. Austr 2.3. 2.4.	Enhancement 1 – Improvements to processing within CHESS and ed systems for increased transaction volumes Enhancement 2 – Commencement of National Stock Exchange of ralia Limited (NSX) use of the Trade Acceptance Service (TAS) Enhancement 3 – Enhanced BCP arrangements for the TAS Enhancement 4 - TAS and Product Services legal terms review Enhancement 5 – Other enhancements	5 5 6
3.	Future planned enhancements & other initiatives	6
	Enhancement to TAS – reporting for AMOs	



Cash Equity Clearing & Settlement Service Developments Annual Report

September 2021

Executive Summary

This annual report has been prepared to provide an overview of the service developments and investment projects ASX has undertaken during the 12 month period to 30 June 2021 (FY21) for cash equity clearing and settlement services.

The most significant investment project continues to be CHESS Replacement - the project to replace the CHESS system using distributed ledger technology (DLT). A summary of the key FY21 activities for this project are provided in Section 1 of this report.

In parallel, a number of smaller but important service enhancements to core cash equity clearing and settlement services have been delivered during the period, as summarised in Section 2. Planned future enhancements are outlined in Section 3, including the initiative to introduce an electronic delivery option for CHESS Holding Statements.

1. CHESS Replacement project

Key streams of work which commenced, concluded or were ongoing in the reporting period involving engagement with CHESS users and other stakeholders are outlined below.

1. Stakeholder engagement:

- 1.1 ASX undertook two consultations over the period:
 - On 30 June 2020, ASX released a consultation paper on <u>CHESS Replacement: Revised Implementation Timetable</u> to provide additional time for the ongoing impact of the COVID-19 pandemic on all stakeholders, accommodate functionality changes requested by users, and have a longer period for ASX and CHESS users to complete their respective development and readiness activities. The consultation paper proposed a new target go-live date of April 2022, 12 months beyond the original target go-live. Written submissions were requested from all CHESS users and the consultation period closed on 28 July 2020. On 28 October 2020, ASX released its <u>response to consultation feedback</u> on the CHESS Replacement Revised Implementation Timetable. The paper included a summary of the responses received from 100 organisations and confirmed the new go-live date as April 2023. The consultation process involved engagement with regulatory agencies, detailed discussions with ASX's technology partners and completion of a comprehensive project review.
 - On 18 February 2021, ASX released a consultation paper on <u>CHESS Replacement: Proposed changes to netting and settlement workflow</u>. The consultation paper outlined proposed changes to the design of both the netting and settlement confirmation workflows to deliver processing efficiencies and reduce subsequent messaging volumes as part of the overnight end-of-day process and daily batch settlement. The changes were proposed to allow the CHESS replacement system to support clearing and settlement of significantly greater trading volumes; largely in response to the extreme record trading activity in March 2020, which redefined the Day 1 capacity requirements of the replacement system. Clearing and settlement and settlement only participants, software providers and approved market operators (AMOs) were expected to be impacted by the proposed changes, and the consultation period closed on 18 March 2021. On 30 June 2021, ASX published its response to consultation feedback, which set out the confirmed solution design including the revisions ASX had made in response to the feedback received from 30 organisations, and ASX's reply to key themes raised from the consultation process.



- Ongoing engagement forums with CHESS users include the Implementation & Transition Working Group (which met 10 times over the period) and the Business Committee (which met 4 times over the period). The ISO 20022 Technical Committee re-convened once, and Focus Groups re-convened three times over the period, to discuss the impact of the netting and settlement workflow changes.
- 1.3 Extensive bilateral engagement continued with clearing and settlement participants, share registries, software vendors, AMOs/ALMOs, payment providers, PISPs and industry associations.
- 1.4 In May and June 2021, ASX engaged with sponsoring participants who have had exceptions identified for HIN data that requires remediation to allow them to successfully migrate to the new system. ASX will continue to engage with sponsoring participants into 2022 and up until go-live to ensure any new exceptions are remediated appropriately prior to the cutover weekend.
- 1.5 ASX completed a series of soft soundings with a broad cross-section of customers on the Day 1 pricing of clearing and settlement services.
- ASX produced a factsheet for each of participants and payment providers, an information sheet for Issuer readiness, an information paper on Data Governance under CHESS and CHESS Replacement, as well as an Industry Test Strategy information paper.
- 1.7 Comprehensive information about the project is also provided and regularly updated on the CHESS
 Replacement website, and summarised in monthly newsletters.
- 2. **Project documentation.** As at 30 June 2021, all functional and messaging specifications have been shared with the market via ASX's dedicated CHESS replacement documentation portal, notwithstanding revisions to accommodate changes to netting and settlement workflow in response to consultation feedback from the market on 31 August 2021.
- Delivery of code/functionality in the Customer Development Environment (CDE) for each of the software drops.
 As at 30 June 2021, nine of the ten planned functional releases into the CDE had occurred (CDE9). The final software drop, CDE10, was released on 27 September 2021, meaning all functional code has been released into CDE for customer testing.
- 4. **Rule amendments** required to support the new system and functionality. Various operating rule amendments are required to support the operation of the new system and reflect the solution design for new or changed functionality. Public consultation on the rule amendments is occurring in three tranches:
 - (As noted in the 2020 annual report) Tranche 1 completed, released for <u>public consultation</u> on 15 November 2019 and ASX's <u>response to consultation feedback</u> published on 22 May 2020.
 - Tranche 2 completed, released for <u>public consultation</u> on 21 February 2020 and ASX's <u>response to</u> consultation feedback published on 24 September 2020.

On 31 August 2021, ASX released a consultation paper on the third tranche of operating rule amendments required to facilitate the implementation of the new system that will replace CHESS, together with the combined package of rule amendments across the three tranches.



2. Other service enhancements

During the reporting period, ASX has progressed a number of incremental enhancements to CHESS and/or associated processes and reports, and the Trade Acceptance Service. The key enhancements related to core clearing and settlement services are summarised below.

2.1. Enhancement 1 – Improvements to processing within CHESS and related systems for increased transaction volumes

CHESS has continued to meet its service availability commitments through FY21, with average monthly system availability at 100%, and Trade Acceptance Service average monthly service availability at 100%.

Work has continued through FY21 to actively remediate and upgrade post-trade infrastructure given the rapid and very large increase in trading activity processed in March 2020. On 13 March the daily record more than doubled to 7.1 million trades and ASX systems experienced some processing delays. Progressive hardware refinement and processing efficiencies (including improvements to overnight batch processes) now allow the CHESS system to accommodate approximately 50% greater than the previous maximum observed volume, catering for 10 million trades per day, over multiple consecutive days. This provides significant headroom, noting that the average volume during FY21 has been 2.1 million trades per day.

The ASX Clearing and Settlement facilities have also assessed the business and operational controls that could be implemented to manage operational effectiveness, and also the approach the facilities could take in the event of an exceptionally large trade count day, which might impact on the capacity and integrity of CHESS processing, as experienced on 13 March 2020.

Additionally, a new contingency arrangements for Approved Market Operator transaction registrations in CHESS have been successfully tested and implemented – as outlined in Section 2.3 of this report.

As a result of constructive and insightful engagement with a cross-section of CHESS users, ASX has also provided additional information on how it will notify and provide details of service interruptions. A document to assist participants and payment providers to understand the different operational and communication processes for CHESS batch settlement has also been released. These processes are completed every business day as part of daily batch settlement to effect the irrevocable settlement of payment and securities.

More information is available in the ASX Market Notices dated 22 September 2020 and 9 July 2021.

2.2. Enhancement 2 – Commencement of National Stock Exchange of Australia Limited (NSX) use of the Trade Acceptance Service (TAS)

NSX commenced using the Trade Acceptance Service on 23 November 2020, ceasing use of the Settlement Facilitation Service (SFS) at the same time. From that date, NSX has been able to submit Valid Trade Registration Request messages to be cleared and settled in respect of NSX listed CHESS eligible Financial Products. Corresponding amendments to the ASX Clear and ASX Settlement Operating Rules and Procedures were also made, along with related changes in the ASX ReferencePoint Securities Master List identification of NSX products. NSX's commencement on the TAS was the culmination of over two years' work by ASX and NSX to progress readiness, including regulatory, clearing risk, operational and technical aspects of the service.

2.3. Enhancement 3 – Enhanced BCP arrangements for the TAS

The Operational and Technical Standards for the TAS allow for alternate modes of trade submission in the event of technical outage. During the high volatility trading period in March 2020, there were user issues



with the usual method of TAS reporting. Given the high volume of trades and exact nature of the BCP file upload process (and limited size), the process was challenging. In the second half of 2020, ASX commenced work on building another alternative mode using a secure FTP service, with improved capacity. This alternate mode was made production ready in May 2021, with one TAS user also ready, following a period of connectivity and service testing.

2.4. Enhancement 4 - TAS and Product Services legal terms review

The Trade Acceptance Service Legal Terms require that ASX undertake and publish a review of the legal terms every five years, commencing twelve months prior to the expiry of the current terms period. ASX commenced its review and consultation with AMOs in December 2020, and on 26 February 2021 published the Review of Legal Terms for the ASX Trade Acceptance Service and related Product Services (referred to collectively as the TAS).

The Review has not identified a need for significant changes to the Legal Terms. Accordingly, the TAS will continue to be made available on substantially the same terms for another five years, with effect from 31 October 2021. The proposed changes to the Legal Terms identified through the Review are explained in the Review paper. Attachments A and B to the Review paper set out in mark-up the proposed changes to the Legal Terms.

As part of go-live of the CHESS Replacement system, ASX intends to undertake a further review and introduce amendments to the Legal Terms related to the new system. These changes will include:

- extend the Legal Terms so as to apply to ASX Limited (as a market operator), reflecting that from the
 commencement of the new system all market operators will be accessing the trade acceptance service on
 the same basis using a FIX gateway;
- replace existing CHESS message references with equivalent FIX message references.

ASX will consult with each AMO acquiring the Trade Acceptance Service in relation to the replacement system. ASX will commence engagement with AMOs on the relevant revisions to the Legal Terms in September 2021, with a view to finalising the revised terms by the end of 2022.

2.5. Enhancement 5 – Other enhancements

ASX has completed the Corporate Actions STP Phase 2 initiative, which provides significant benefits to the users of ASX's clearing and settlement services. The final release of STP Phase 2 was delivered in June 2021. On 5 June, a number of Listing Rule changes came into effect following market consultation, alongside a number of enhancements to existing online forms and introduction of new online forms. Listed entities now have 10 online forms available for the announcement of certain corporate action events and capital changes. The use of the forms allows straight through processing of the information therein to ultimately allow more timely and accurate dissemination of information to the market and effect to the entity's notice. The related ISO 20022 corporate action notification service now also includes all corporate action events supported by ASX, and will be the source of truth of event information for CHESS Replacement.

3. Future planned enhancements & other initiatives

ASX publishes a quarterly Market Notice to advise of technology upgrade releases planned for the next 6 to 12 months across the various customer facing platforms, including CHESS. Scheduled enhancements planned for FY22 are focused on the electronic delivery of CHESS Holding Statements. More information on this enhancement is provided in Section 2.2

In addition, ASX will continue to undertake further enhancements to improve the capacity of the CHESS and related systems.



An enhancement to the TAS is also in progress, as outlined in Section 3.1.

3.1. Enhancement to TAS – reporting for AMOs

The TAS legal terms provide for a number of reports to be made available to each market operator using the TAS

A change request was submitted to ASX in April 2021 requesting additional reports be made available regarding clearing and settlement performance specific to each market operator's reported trades for their listed securities. The performance statistics include for example, the percentage of reported trades novated, netting efficiency, settlement efficiency and settlement fail rates. ASX currently provides a summary of CHESS performance reporting (all CHESS activity covering all markets) to the Business Committee and on the ASX website. Reports specific to each TAS user are expected to be made available in FY22, including associated changes to the TAS legal terms.

3.2. CHESS Holding Statements – Electronic delivery option

ASX maintains the CHESS sub-register as the sole source of truth for legal ownership of broker sponsored securities. Investors who hold securities on the CHESS sub-register are allocated a Holder Identification Number or HIN. Each month, ASX sends investors a CHESS Holding Statement if there has been any change to the balance of securities held under the investor's HIN. The CHESS Holding Statement serves the important purpose of notifying investors of changes in their HIN account balances, providing security and certainty in a formal statement from the ASX.

Historically, physical CHESS Holding Statements have been mailed to investors. From our targeted go live date of December 2021, ASX will provide an option for investors to elect to receive statements electronically via their broker. In addition, investors will be provided with access to a secure portal allowing them to access historical statements. Investors may elect to use the electronic option through their brokers.

A <u>Technical and Process FactSheet</u> was published on 31 August 2021 to provide detailed information on the solution.

ASX consulted on this change as part of its April 2018 CHESS Replacement consultation and has engaged with stakeholders regularly since then, including extensive bilateral consultation and feedback via industry associations and their members. ASX has also kept stakeholders informed via regular updates at the Business Committee and demonstrations at CHESS Replacement Implementation and Transition Working Group meetings. The Australian Shareholders Association has made several members available to test the customer experience with positive feedback received. Electronic delivery will result in savings to issuers (who pay for the statements) where their investors have elected to move to that option. It will also deliver a secure, fast and convenient method of delivering CHESS Holding Statements to investors along with an ability for investors to search for historical statements online. Eliminating printing and postage is also more environmentally sustainable.



The Directors ASX Limited Exchange Centre, 20 Bridge Street SYDNEY NSW 2000

Reasonable assurance report on compliance with the Regulatory Expectations as represented in ASX Settlement Pty Limited and ASX Clear Pty Limited's (ASX) Compliance Framework

Independent Assurance Report

Opinion

We have been engaged by ASX Limited on its own behalf and on behalf of its subsidiaries ASX Operations Pty Ltd, ASX Settlement Pty Ltd and ASX Clear Pty Ltd (together collectively referred as the Client Entities) to undertake a reasonable assurance engagement in relation to ASX's compliance, in all material respects, for the year ended 30 June 2021, with:

• the Regulatory Expectations for the Conduct of Cash Equity Clearing and Settlement Services in Australia issued by the Council of Financial Regulators (CFR) in October 2016 and revised in September 2017 (the Regulatory Expectations) as represented in ASX's Compliance Framework which comprises the ASX Code of Practice and related policies and procedures listed in Appendix B (together the Compliance Framework).

In our opinion, ASX has complied, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework for the year ended 30 June 2021.

Description and findings of the reasonable assurance procedures

Appendix A to this report includes description of the reasonable assurance procedures performed, detailed findings and recommendations from those procedures. Appendix B contains ASX's Compliance Framework and supporting documents.

Basis for Opinion

We conducted our engagement in accordance with Standard on Assurance Engagements ASAE 3100 *Compliance Engagements* issued by the Auditing and Assurance Standards Board.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

ASX's Responsibilities

ASX is responsible for:

- a) The compliance activity undertaken to meet the Regulatory Expectations; and
- b) Identification of risks that threaten the compliance with the Regulatory Expectations identified above being met and controls which will mitigate those risks and monitor ongoing compliance.

PricewaterhouseCoopers, ABN 52 780 433 757

One International Towers Sydney, Watermans Quay, Barangaroo, GPO BOX 2650, SYDNEY NSW 2001 T: +61 2 8266 0000, F: +61 2 8266 9999, www.pwc.com.au

Level 11, 1PSQ, 169 Macquarie Street, Parramatta NSW 2150, PO Box 1155 Parramatta NSW 2124 T: +61 2 9659 2476, F: +61 2 8266 9999, www.pwc.com.au Liability limited by a scheme approved under Professional Standards Legislation.



Our Independence and Quality Control

We have complied with the relevant ethical requirements relating to assurance engagements, which include independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

In accordance with Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, Other Assurance Engagements and Related Services Engagements*, the firm maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Assurance Practitioner's Responsibilities

Our responsibility is to express an opinion on ASX's compliance, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework for the year ended 30 June 2021. ASAE 3100 requires that we plan and perform our procedures to obtain reasonable assurance about whether ASX has complied, in all material respects, with the Regulatory Expectations as represented in the Compliance Framework, for the year ended 30 June 2021.

An assurance engagement to report on ASX's compliance with the Regulatory Expectations involves performing procedures to obtain evidence about the compliance activity and controls implemented to meet the Regulatory Expectations. The procedures selected depend on our judgement, including the identification and assessment of risks of material non-compliance with the Regulatory Expectations as represented in the Compliance Framework.

Inherent Limitations

Because of the inherent limitations of an assurance engagement, together with the inherent limitations of any internal control structure it is possible that fraud, error, or non-compliance with compliance requirements may occur and not be detected. Additionally, there is a certain level of subjectivity within the subject matter as represented in the Regulatory Expectations. A reasonable assurance engagement throughout the year ended 30 June 2021 does not provide assurance on whether compliance with the Regulatory Expectations will continue in the future.

Matters relating to the electronic presentation of ASX's Compliance Framework

This assurance report relates to the compliance of ASX with the Regulatory Expectations as represented in ASX's Compliance Framework for the year ended 30 June 2021 (compliance subject matter). The Client Entities are responsible for their website and its integrity and we do not accept responsibility for any changes that may have occurred to the compliance subject matter information or ASX's Compliance Framework since they were presented on the Client Entities' website as at the date of this report. We have not been engaged to report on the integrity of this website. The assurance report refers only to ASX's Compliance Framework applicable as at the date of this report. It does not provide an opinion on any other information which may have been hyperlinked to/from ASX's Compliance Framework or to/from the Client Entities' website.



Restricted Use

This report was prepared for use by the Directors, officers and employees of the Client Entities to assist ASX in addressing the Regulatory Expectations. We disclaim any assumption of responsibility for any reliance on this report by any other person, or for any purpose other than that for which it was prepared.

Pricewaterhouseloopero

PricewaterhouseCoopers

Deanna Chesler

Sydney Partner 27 September 2021



Description and findings of the reasonable assurance procedures

The table below includes a description of the reasonable assurance procedures performed, detailed findings and agreed actions from those procedures.

#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
1(a)	ASX should make an explicit public commitment to investing promptly and efficiently in the design, operation and development of the core CS infrastructure for the Australian cash equity market, including the Clearing House Electronic Subregister System (CHESS) and any future replacement system. This	Examined the Code of Practice published on ASX's website.	1. The Code of Practice includes an explicit public commitment: "ASX will invest in the ongoing operation and development of the core cash equities Clearing and Settlement (CS) infrastructure promptly and efficiently. Such investments will seek to meet the needs of users, recognising the diversity and differing needs of users". ASX has committed to replacing CHESS with a "modern application that offers global standard messaging, better performance, improved security and data management, and expanded connectivity options".	N/A.
	commitment should be supported by governance processes that enable users to provide input on the setting of the investment strategy. Investments should ensure that, to the extent reasonably practicable, the performance, resilience, security and functionality of the core CS infrastructure meet the needs of users, recognising the diversity and differing needs of users. At a minimum, the core CS infrastructure should accommodate internationally accepted communication procedures and standards.	2. Enquired with management about the governance process that allows Business Committee members to provide input into the strategy. Examined the minutes of ASX Clear Pty Limited and ASX Settlement Pty Limited Boards (together ASX Clearing and Settlement Boards).	2. The governance process includes the Business Committee, a number of Working Groups (Connectivity and Integration; Implementation and Transition), focus groups and ad hoc public consultations. Business Committee papers include summaries (including attendees) of Working Group meetings and the public consultations. The ASX CS Boards receive a summary of the Business Committee meetings including recommendations made by the Business Committee members.	N/A.
		3. Examined the Business Committee minutes on a sample basis for the year ended 30 June 2021 as published on ASX's website as well as the latest Business Committee Charter dated April 2019 for evidence of opportunities for members to provide input and ask questions.	3. The Business Committee Charter outlines the role of the Business Committee and the procedures for sharing agendas, supporting papers and minutes of meetings. We noted that in the minutes of the Business Committee sampled for testing, members were invited to provide input and ask questions.	N/A.
1(b)	ASX should ensure that the membership of its user governance arrangements is representative of the user base of its CS services, and that members are able to have a strong input into	1. Examined the composition of the Business Committee on ASX's website, considered the ASX's Clearing and Settlement customer base and assessed it against the Business Committee members' composition to identify how	1. The Business Committee has 30 members (excluding the ASX-appointed Chair), including 18 clearing and settlement participants, 4 market operators (including 1 ASX member), 6 independent industry associations representing clearing and settlement participants and custodians, and 2 registry providers. Participants include large institutional brokers and smaller retail	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
	the agenda and format of meetings or other user governance	ASX considers different users' needs.	brokers.	
	mechanisms and the setting of priorities.	2. Enquired about ASX's procedure to review the Business Committee composition on a periodic basis. Obtained evidence that the Business Committee composition was reviewed in the period.	2. The Business Committee composition is reviewed on an annual basis to ensure it is representative of ASX's user base. The latest changes include the removal of one member following resignation as a clearing and settlement participant, the addition of one member as a clearing and settlement participant, and the rotation of two registry providers for two new registry providers.	ASX will formalise the annual review sign-off of the Business Committee composition.
			We noted the annual review of Business Committee Membership took place during the period. The membership recommendation was made and reviewed by the Business Committee Chair. The final updates to the Business Committee composition were approved verbally by the Business Committee Chair. The membership change was also discussed in the Business Committee meeting on 14 July 2021. A sample of Business Committee members were interviewed and noted that the basis for membership rotation was not clear. We understand from ASX that the tenure of members, size of the committee and previous expressions of interest are considered when assessing membership rotation, however this process is not formalised.	ASX will formalise the annual process for reviewing Business Committee membership and communicate the process and results to Business Committee members.
		3. Obtained and examined on a sample basis the emails sent to Business Committee members with agenda, supporting papers and minutes of Business Committee meetings.	3. Business Committee meeting agendas and associated papers were sent to Business Committee members, on average, 7 days before the Business Committee meeting dates which is consistent with the Business Committee Charter. Management informed us that the Business Committee members can use this notice period to provide input into the agenda. We examined a sample email that was sent to the Business Committee Chair from a member, requesting to add an agenda item for an upcoming meeting and noted that it was actioned and reflected in the upcoming meeting. The draft minutes are circulated by email to the Business Committee members for their review and comment. The agendas we examined included a standing item for discussion of previous meeting minutes with Business Committee members. Management informed us that users are able to provide input into the priorities through the Business Committee, Working Groups, focus groups, and public consultations.	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
			We have examined a sample of 2 Business Committee papers, which included the Corporate Action STP Phase 2 Project, updates on the CHESS replacement project, and other agenda items, including the Cash Equity Clearing & Settlement Services Developments Annual Report, with the purpose of each paper being clearly communicated.	
		4. Interviewed a sample of Business Committee members and enquired about whether they had an opportunity to input into the agenda of Business Committee meetings.	4. A sample of Business Committee members were interviewed and noted they were invited to suggest additional agenda items for upcoming Business Committee meetings. From our review of the Business Committee Meeting agendas throughout the period we note there is a standing agenda item "Forward Plan of Work" at every meeting for discussion of future developments.	Information shared with Business Committee members prior to meetings will be discussed on an exceptions basis.
			A sample of Business Committee members also noted that large amounts of information are presented at Business Committee meetings and the size of the committee can sometimes deter members from asking questions that are not necessarily relevant to all those present at the meeting.	ASX will implement processes to encourage questions by Business Committee members during meetings.
1(c)	ASX should demonstrate that it has had regard to the views of members in setting the terms of reference for the external audits of its governance, pricing and access arrangements carried out in	Examined the Terms of Reference and the Business Committee minutes dated July 2021.	1. The Regulatory Expectations External Audit Terms of Reference were presented to the Business Committee for their comments during the July 2021 Business Committee meeting and were included in the Business Committee papers sent to members ahead of the meeting.	N/A.
	accordance with the Regulatory Expectations. This may take the form of members' non-objection of the proposed terms of reference. These terms of reference may change following any review of the Regulatory Expectations.	2. Interviewed a sample of Business Committee members and enquired about whether they had an opportunity to comment on the proposed terms of reference and service for the assurance engagement.	2. A sample of Business Committee members were interviewed and noted that the proposed terms of reference and service for the assurance engagement were presented to them during the year. The minutes of the July meeting indicated that there were no objections to the terms of reference.	N/A.
1(d)	ASX should maintain accountability arrangements that provide for regular public attestations as to the effectiveness of its interactions with users. For example, the following	1. Examined a sample of Business Committee member recommendations from Business Committee meeting minutes and assessed if they were addressed in subsequent Business Committee meeting minutes.	1. A recommendation is defined by the Charter as a recommendation to the Clearing and Settlement Boards that has a broad consensus of those members present at the relevant Business Committee meeting. There were no formal recommendations that met this definition during the period.	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
	arrangements would be appropriate: (i) ASX's user governance mechanisms operate on a 'comply or explain' basis; that is, the relevant Board would take actions in accordance with	2. Interviewed a sample of Business Committee members and enquired about whether they have made any recommendations to the Business Committee and if so, if they were acted on or explained.	2. A sample of Business Committee members were interviewed and noted feedback had been shared with ASX at the Business Committee meetings, and outside of the Business Committee meetings. One Business Committee member noted that ASX did not provide a response to feedback that was made in relation to an operational matter. PwC subsequently obtained evidence from ASX that indicated a response had been provided in a timely manner.	N/A.
	recommendations from the user governance mechanisms, or else explain why such actions had not been taken (ii) ASX report, on at least an annual basis, the service	3. Enquired with management on the progress of the report in relation to the service developments and investment projects and examined the October 2020 Business Committee agenda and papers.	3. The annual report on service developments and investment projects titled "Cash Equity Clearing & Settlement Services Developments" was presented to the Business Committee in October 2020. This was corroborated through inspection of the meeting minutes.	N/A.
	developments and investment projects that it has progressed and how it has taken into consideration the views of users.	4. Reviewed the complaints register regarding any complaints made in relation to user input to governance.	4. There were no formal complaints recorded in the period in relation to ASX's user input to governance for clearing and settlement services.	N/A.
1(e)	ASX should formally commit to retaining a Board structure for ASX Clear and ASX Settlement that comprises a minimum of 50 percent of non-executive directors that are also independent of ASX Limited, and where a subset of these independent directors can form a quorum.	1. Examined the Code of Practice.	1. The Code of Practice includes an explicit public commitment to retain a Board structure for ASX Clear Pty Limited and ASX Settlement Pty Limited with a minimum 50% of non-executive directors that are also not Directors of ASX Limited. The Code of Practice also provides that ASX ensures non-executive directors can form a quorum to be able to consider competitively sensitive information provided by another market operator.	N/A.
		2. Examined the composition and resumes of ASX Limited, ASX Clear Pty Limited and ASX Settlement Pty Limited Directors as published on ASX's website.	2. The ASX Clear Pty Limited and ASX Settlement Pty Limited Boards comprise at least 50% Non-Executive Directors. As at the date of the audit, the three independent non-executive directors that are not directors of ASX Limited are Stephen Knight (Chairman), Adrian Todd, and Carolyn Colley. The other three directors that are directors of ASX Limited are Ken Henry (independent non-executive director), Peter Marriott (independent non-executive director), and Dominic Stevens (Managing Director and CEO).	N/A.
		3. Examined ASX's Board Charter as published on ASX's website.	3. The ASX Clearing and Settlement Boards Charter was updated in March 2021. The Charter states that "The ASX Clear and ASX Settlement Boards shall comprise at least 50% non-executive	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
			directors who are not also directors of ASX Limited. ASX Clear and ASX Settlement shall also ensure that a quorum can be constituted by directors who are not also directors of ASX Limited, "which is in accordance with the Regulatory Expectations.	
		4. Examined a sample of ASX's Boards' meeting minutes.	4. We noted that in the minutes of the ASX Board meetings that were sampled for testing, ASX's Directors discussed each individual Director's interests and potential conflicts.	N/A.
1(f)	ASX should establish governance structures and reporting lines at the management and operational levels that promote access to its CS services on commercial, transparent and non-	Enquired about ASX's governance and reporting lines for Clearing and Settlement services.	1. Enterprise Compliance and Internal Audit are headed by General Managers, who are responsible for reporting to the Board. Enterprise Risk Management is headed by a General Manager that reports to the Chief Risk Officer, who is responsible for reporting to the Board.	N/A.
	transparent and non- discriminatory terms. These arrangements should ensure that the interests of users are upheld in accordance with Regulatory Expectation 3. This may be demonstrated, for example, through the key performance indicators set for relevant management.	2. Enquired with management and examined a sample of ASX's senior executives' balanced scorecards (KPIs).	2. We noted that employee balanced scorecards that were sampled for testing promoted access to ASX's CS services on commercial, transparent, and non-discriminatory terms.	N/A.
2(a)	ASX should ensure that all prices of individually unbundled CS services, including rebates, revenue-sharing arrangements	Examined the Clearing, Settlement and Issuer Administration Service Schedule of Fees dated May 2021.	1. ASX prices are transparent as they are published on the website. The detail of the fees for ASX services is also included in the invoices sent to customers.	N/A.
	and discounts applicable to the use of these services: (i) are transparent to all users of the services	2. Selected a sample of ASX invoices issued to various users to test whether Clearing and Settlement prices charged are in accordance with prices published on ASX's website for the year ended 30 June 2021.	2. The prices for the clearing and settlement services as included in the sample of invoices tested were consistent with the prices published on ASX's website Clearing, Settlement and Issuer Administration Service Schedule of Fees effective from 1 July 2020 to 30 June 2021. There were no changes in price during the period.	N/A.
	(ii) do not discriminate in favour of ASX-affiliated entities, except to the extent that the efficient cost of providing the same service to another party was higher	3. Interviewed a sample of Business Committee members and enquired about whether the prices of individually unbundled Clearing and Settlement services, including rebates, revenue- sharing arrangements and discounts	3. A sample of Business Committee members were interviewed and noted that pricing, including revenue-sharing agreements and discounts, have been made available to members and understandable. Some Business Committee members however noted that the	ASX will provide further detail to members on the calculation of revenue sharing rebates.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
	(iii) are made available to stakeholders in a form such that the impact of pricing changes can be readily understood.	have been made available to them and are understandable.	understandability of rebates is a challenge, and that the monthly billing does not include transactional level information that is required to pass costs on to their customers. On further investigation, the schedule of fees states that the revenue sharing rebate is calculated based on an annual growth threshold, and each individual customer's revenue contribution. We have obtained an example of an email that was sent to a participant with the details of their revenue share rebates. The amount of the rebate was provided in the email however a detailed calculation including customer revenue contribution and annual growth threshold was not reflected. We understand that the level of detail contained in ASX billing statements has changed over time to accommodate ASX's client requests. In the current CHESS environment, clients are able to raise specific requests for a reconciliation of their billing. Ongoing work is being undertaken to determine the level of detail to be provided by the CHESS replacement system.	
		4. Reviewed the complaints register regarding any complaints made in relation to ASX's pricing for clearing and settlement services.	4. There were no formal complaints recorded in the period in relation to ASX's pricing for clearing and settlement services.	N/A.
2(b)	ASX should maintain an appropriate method for determining the prices of its CS services so as to generate expected revenue that reflects the efficient costs of providing those services, including a return on investment	1. Examined the Enterprise Wide Pricing Framework dated January 2017 to ensure that it includes documentation on the method for determining the prices of its Clearing and Settlement services.	1. ASX's method to determine the prices of its clearing and settlement services is documented in its Enterprise Wide Pricing Framework (EWPF). There have been no changes to the EWPF during the period.	N/A.
	costs of providing those services, including a return on investment commensurate with the commercial risks involved. 2. Examine market clea management reports to in	2. Examined the 2020 and 2021 cash market clearing and settlement management income statement audit reports to inspect whether these are unqualified.	2. ASX cash market clearing and settlement management income statement is subject to an annual external audit under Australian Auditing Standards. PwC issued unqualified audit reports for the cash market clearing and settlement management income statement for the years ended 30 June 2020 and 30 June 2021. The notes to these audited reports include ASX methodology for the internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
		3. Examined the latest independent benchmarking report (2016) issued by Oxera on ASX Clearing and Settlement Services' costs.	3. In 2014 ASX commissioned Oxera, an independent economics consultancy firm, to benchmark ASX clearing and settlement services' costs against the costs of using the services provided by financial market infrastructure providers in other countries. The overall conclusion was that "when taking into account the scale of trading, the costs of post-trading services in Australia are in line with the costs of similar services provided in financial centres of a comparable size". An update to this report was commissioned in 2016 and the findings were consistent with the 2014 report. Pricing for the CHESS replacement system is not yet available.	ASX acknowledges the need for greater transparency on the pricing of CS services for the new CHESS replacement system.
2(c)	ASX should make an explicit public commitment that any changes in the prices of its CS services will not be implemented in a way that would materially	Examined the Code of Practice published on ASX's website.	1. The Code of Practice includes an explicit public commitment that "ASX Clear and ASX Settlement will not implement price changes with the purpose of materially shifting revenue streams between other trading, clearing and settlement services".	N/A.
	in a way that would materially shift revenue streams between aspects of its trading, clearing and settlement services.	2. Examined the listing of Clearing and Settlement prices effective from July 2020 to June 2021.	2. There were no changes to clearing and settlement prices during the year from 1 July 2020 to 30 June 2021.	N/A.
		3. Examined the 2020 and 2021 cash market clearing and settlement management income statement audit reports to inspect whether these are unqualified.	3. Refer to section 2(b)(2) above for the results of PwC's audit of the cash market clearing and settlement management income statement.	N/A.
2(d)	ASX should publish any increases in its CS fee schedules along with an attestation justifying their reasonableness. For the most	Examined the listing of clearing and settlement prices effective from July 2020 to June 2021.	1. There were no changes to clearing and settlement prices during the year from 1 July 2020 to 30 June 2021.	N/A.
	material such increases, this attestation would be expected to refer to relevant metrics and other evidence, such as the calculated return on equity, benchmarked price lists, or an independent review of how ASX's cash equity	2. Interviewed a sample of Business Committee members and enquired about pricing changes and whether they were supported by reasonable explanations in line with regulatory expectations.	2. A sample of Business Committee members were interviewed and confirmed there were no pricing changes during the year. Business Committee members noted difficulties in planning for their own future capital expenditure as pricing information for the CHESS replacement system is not yet available.	Refer to section 2(b).
	CS fees compare with those of CS facilities in other markets.	3. Enquired of management in relation to ASX's future pricing methodology for the CHESS replacement system.	3. ASX does not expect to increase fees to participants for like- for-like clearing and settlement services available through the CHESS replacement system. ASX noted the pricing of clearing and settlement services is subject to a process of review by	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
			Regulatory Agencies before it can be shared with Business Committee members and clearing and settlement users. Pricing is expected to be published for CHESS replacement 12 months before go-live.	
2(e)	appropriate model for the internal allocation of costs, including the cost of allocated capital, as well as policies to govern the transfer of prices between the relevant ASX Group entities. Compliance with the model and policies would be expected to be subject to internal audit review. The model and	Examined ASX's internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.	1. ASX's internal cost allocation and transfer pricing policy is published on ASX's website and includes ASX's internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.	N/A.
		2. Examined the 2020 and 2021 cash market clearing and settlement management income statement audit reports to inspect whether these are unqualified.	2. Refer to section 2(b)(2) above for the results of PwC's audit of the cash market clearing and settlement management income statement.	N/A.
2(f)	2(f) ASX should negotiate commercially and in good faith with unaffiliated market operators and CS facilities regarding fees and other financial contributions charged for any extensions to its monopoly CS services, and in particular those provided under the existing Trade Acceptance Service and the Settlement Facilitation Service.	1. Enquired with management about extensions to existing services entered into during the audited period.	There have been new negotiations in relation to AMO TAS access in the period.	N/A.
		2. Examined correspondence with Approved Market Operators (AMO) who requested Trade Acceptance Service (TAS) or Settlement Facilitation Service (SFS) access during the period.	2. Fees and other financial contributions charged for TAS access have been clearly communicated to AMOs.	N/A.
		3. Interviewed a sample of Business Committee members and enquired about the TAS and SFS onboarding process.	3. No concerns were raised with respect to fee negotiations for TAS access. Fee negotiations have been performed on commercial terms and in good faith.	N/A.
	ASX should have objectives for its CS services that include an explicit	1. Examined the Code of Practice as	1. The Code of Practice includes the following comment: "ASX is committed to providing access to clearing and settlement	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
3(a)	public overarching commitment to supporting access to its CS services on commercial,	published on ASX's website.	services on transparent and non-discriminatory terms, and we will respond to requests for access in a fair and timely manner".	
	transparent and non- discriminatory terms. ASX should maintain standard user terms and conditions that are consistent with these objectives, taking into account the legitimate business interests of ASX and any parties seeking access to its CS services.	2. Examined ASX's TAS and SFS terms and conditions as published on ASX's website.	2. TAS and SFS agreements contain standard user terms and conditions that provide for ASX to grant non-discriminatory access to its clearing and settlement services. From examining the TAS and SFS terms and conditions, we noted that it is: i) Of comparable quality to the services provided to ASX ii) In accordance with applicable laws, rules and procedures iii) Without discriminating in relation to clearing and settlement participants on the basis of where the trade was affected or	N/A.
		3. Examined ASX's Operating Rules as published on ASX's website as well as the internal procedure for amending Operating Rules.	reported. 3. ASX Operating Rules incorporate the standard terms and conditions applicable to all users of ASX's clearing and settlement Services. ASX's internal procedure for amending Operating Rules include a requirement to consult with Australian Securities and Investments Commission (ASIC) prior to any change.	N/A.
		4. Examined the ASX Trade Acceptance Service and related Product Services Review of Legal Term dated February 2021.	4. The objective of the review is to confirm that the legal terms for the Trade Acceptance Service remain appropriate for the service. The extension of the TAS to a second AMO since November 2020 on the basis of the legal terms and associated standards indicate that the legal terms operate appropriately and provide a basis for responding to customer needs. We noted that ASX sought feedback and input from AMOs when completing the TAS review.	N/A.
3(p)	Service level agreements should commit ASX to providing access to its CS services for unaffiliated market operators and CS facilities on operational and commercial terms and service levels that are materially equivalent to those that apply to ASX as a market operator or CS facility.	1. Examined ASX's TAS and SFS terms and conditions as published on ASX's website and listed in section 3(a).	1. Refer to section 3(a)(2).	N/A.
		2. Interviewed a sample of Business Committee members and enquired about whether the ASX had adhered to their published protocols i.e. providing access to unaffiliated market operators and CS facilities on operational and commercial terms and service levels that are materially equivalent to those that apply to ASX as a market operator or CS	2. A sample of Business Committee members were interviewed and noted that access to CS services had been provided on operational and commercial terms, that were materially equivalent to those that apply to ASX.	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
		facility.		
		3. Examined the ASX Trade Acceptance Service and related Product Services Review of Legal Term dated February 2021.	3. Refer to section 3(a)(4).	N/A.
3(c)	ASX should publish and adhere to protocols for dealing fairly and in a timely manner with requests for access. These protocols should include reasonable timeframes for	1. Examined ASX's Operating Rules, TAS and SFS terms and conditions as published on ASX's website and listed in section 3(a).	Refer to section 3(a) above for review of the standard user terms and conditions that provide for ASX to grant non-discriminatory access to its clearing and settlement services.	N/A.
	responding to enquiries and arrangements for dealing with disputes. Nothing in the protocols should affect either party's right to refer a dispute to arbitration by	2. Examined TAS and SFS agreement as published on ASX's website to assess whether the template includes a protocol for dealing with disputes.	2. Clause 43 of the Trade Acceptance Service Legal Terms and Clause 13 of the Settlement Facilitation Service Agreement sets out dispute resolution processes.	N/A.
	the ACCC once the arbitration regime is implemented.	3. Examined AMO and ALMO access request procedures as published on ASX's website.	3. Individual access request procedure documents for AMOs and ALMOs set out target timeframes for ASX to respond to access requests from AMOs and ALMOs.	N/A.
		4. Examined ASX Cash Equities Clearing and Settlement Code of Practice - Access Protocols as published on ASX's website.	4. ASX Cash Equities Clearing and Settlement Code of Practice - Access Protocols include target timeframes for dealing with access requests as well as dispute resolution arrangements.	N/A.
		5. Interviewed a sample of Business Committee members and enquired about whether the ASX had adhered to their published protocols i.e. dealing fairly and in a timely manner in relation to requests for access to cash equity clearing and settlement services, where relevant.	5. A sample of Business Committee members were interviewed. We noted that there were new requests in relation to AMOs access to cash equity clearing and settlement services during the audit period. One Business Committee member noted that TAS access was not provided in a timely manner. On further investigation and review of correspondence, access was delayed due to on-going discussions between ASX and the AMO, and wait-times with regulators ASIC and the Reserve Bank of Australia (RBA) to approve the onboarding. It was concluded that ASX had performed reasonable steps to provide timely access.	N/A.
		6. Examined the ASX Trade Acceptance Service and related Product Services Review of Legal Term dated February 2021	6. Refer to section 3(a)(4).	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
3(d)	ASX should make an explicit commitment to ensuring that any investments in the systems and technology that support its cash equity CS services do not raise barriers to access from	Examined the Code of Practice as published on ASX's website.	1. The Code of Practice includes a commitment by ASX to ensure "its investments in the systems and technology that support its cash equities clearing and settlement infrastructure are not designed in such a way as to raise barriers to access to other market operators or clearing facilities".	N/A.
	unaffiliated market operators or CS facilities. Announcements of any material investments in the systems and technology that support ASX's cash equity CS services should be accompanied by a public attestation that those investments will be designed in a way that does not raise such barriers.	2. Examined the consultation paper ASX released in February 2021 on the proposed changes to netting and settlement workflow, and the response to consultation feedback in June 2021.	2. On 18 February 2021, ASX released a consultation paper on the proposed netting and settlement workflow changes. The key objective of the proposed changes is to allow the CHESS replacement system to provide for significant additional capacity on Day 1 implementation and avoid any post-trade processing constraints on trading activity and a subsequent capacity-related change after go-live. In response to consultation feedback from stakeholders on proposed changes to netting and settlement workflow from the CHESS replacement system, which included a number of bilateral engagements to test the proposed modifications, ASX made some changes to the original solution design.	N/A.
		3. Enquired with management on the future access to clearing and settlement services for unaffiliated market operators in the CHESS replacement system, to understand if investments in the systems and technology that support its cash equity CS services raise barriers to access by unaffiliated market operators.	3. Management noted that all approved market operators will be required to connect to the new Clearing and Settlement Platform in the same way as ASX.	N/A.
3(e)	3(e) ASX should retain, and periodically review, its standards for the handling of sensitive or confidential information. Consistent with governance arrangements that promote access on commercial, transparent and non-discriminatory terms (see Regulatory Expectation 1(e)), these arrangements should ensure that conflict sensitive information pertaining to the strategic plans of	1. Reviewed the Conflict Handling Arrangements policy dated October 2020 published on ASX's website.	The Conflicts Handling Arrangements policy includes a specific paragraph on cash equity clearing and settlement services, which references Information Handling Standards in place to manage commercially sensitive information provided to ASX by other licensed listing and trading venues.	N/A.
		2. Reviewed the Information Handling Standard published on ASX's website.	ASX's Information Handling Standard provides for: i) Protection of AMO's confidential and sensitive information ii) Access to sensitive information is restricted to appropriate ASX employees.	N/A.



#	Regulatory expectation	Procedures	Detailed Findings	Agreed Action
	unaffiliated market operators or CS facilities is handled sensitively and confidentially, and cannot be used to advance the interests of ASX as a market operator or CS facility.	3. Reviewed the complaints register regarding handling of information and determined if there were any complaints made in relation to confidentiality and sensitive information, or transparent and non-discriminatory access to ASX's clearing and settlement services.	3. There were no formal complaints recorded during the period in relation to confidentiality and sensitive information, or transparent and non-discriminatory access to ASX's clearing and settlement services.	N/A.



ASX's Compliance Framework and supporting documents

The table below includes the policies, procedures and other documents which we referred to within our report that form part of the Compliance Framework.

Compliance framework supporting document	Date	Hyperlink
Regulatory Expectations	September 2017	https://www.cfr.gov.au/publications/policy-statements-and- other-reports/2016/regulatory-expectations-policy- statement/pdf/policy-statement.pdf
Code of Practice	May 2017	http://www.asx.com.au/cs/documents/asx-code-of-practice.pdf
Business Committee Meetings - agendas, papers, minutes and Business Committee reports to the ASX Boards	Various version dates as applicable as at the date of this report	https://www2.asx.com.au/about/regulation/clearing-and- settlement-of-cash-equities-in-australia/stakeholder- engagement/business-committee
Clearing and Settlement Boards Charter	March 2021	http://www.asx.com.au/documents/asx-compliance/CS-Board- Charter.pdf
Business Committee Charter	April 2019	https://www.asx.com.au/cs/documents/charter-of-the-business-committee.pdf
Business Committee Role and Membership details	As applicable as at the date of this report	https://www2.asx.com.au/about/regulation/clearing-and- settlement-of-cash-equities-in-australia/stakeholder- engagement/business-committee
ASX Boards' members details	As applicable as at the date of this report	https://www2.asx.com.au/about/our-board-and- management/asx-clearing-and-settlement-boards



Compliance framework supporting document	Date	Hyperlink
CHESS Replacement: Summary of Stakeholder Engagement	As applicable as at the date of this report	https://www2.asx.com.au/markets/clearing-and-settlement- services/chess-replacement/stakeholder-engagement
CHESS Replacement Updates	Various dates	https://www2.asx.com.au/markets/clearing-and-settlement- services/chess-replacement
2014 Oxera report: 'Global cost benchmarking of cash equity clearing and settlement services'	June 2014	http://www.asx.com.au/cs/documents/Global cost benchmarkin g of cash equity clearing settlement services Final 20Jun1 4.pdf
2016 Oxera report: 'Global cost benchmarking: review of price lists'	April 2016	Not on ASX's website
Audited 'Cash Market Clearing and Settlement management income statement' - 2021	June 2021	Not on ASX's website
ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia	As applicable as at the date of this report	http://www.asx.com.au/cs/documents/cost_allocation_policy.pdf
Audited 'Cash Market Clearing and Settlement management income statement' - 2020	June 2020	https://www.asx.com.au/cs/financial-statements.htm
Enterprise Wide Pricing Framework	January 2017	Not on ASX's website



Compliance framework supporting document	Date	Hyperlink
Clearing, Settlement and Issuer Administration Services Schedule of Fees	May 2021	https://asxonline.com/content/dam/asxonline/public/documents/schedule-of-fees/clearing-settlement-and-issuer-administration-services-schedule-of-fees.pdf
CHESS Replacement: Proposed changes to netting and settlement workflow Consultation Paper	February 2021	https://www2.asx.com.au/content/dam/asx/participants/clearing -and-settlement/chess-replacement/stakeholder- communications/asx-chess-replacement-project-consultation- paper-proposed-changes-to-netting-and-settlement-workflow.pdf
CHESS Replacement: Confirmed changes to netting and settlement workflow	June 2021	https://www2.asx.com.au/content/dam/asx/markets/clearing- and-settlement-services/chess-replacement-response-to- consultation-feedback-confirmed-changes-to-netting-and- settlement-workflow.pdf
ASX Trade Acceptance Service (TAS) – Legal Terms	August 2018	https://www2.asx.com.au/content/dam/asx/about/final-trade- acceptance-service-legal-terms-20180820.pdf
ASX Trade Acceptance Service and related Product Services Review of Legal Term	February 2021	https://www2.asx.com.au/about/regulation/public-consultations
Settlement Facilitation Service (SFS) Agreement	March 2014	http://www.asx.com.au/documents/settlement/Settlement Facili tation Service Agreement Template.pdf
ASX Cash Equities Clearing and Settlement Code of Practice - Access Protocols	October 2020	https://www2.asx.com.au/content/dam/asx/about/cop-access- protocols.pdf
Procedures for Access Requests by Approved Market Operators (AMOs)	October 2020	https://www2.asx.com.au/content/dam/asx/about/amo- procedures-for-access-requests-2020.pdf
Procedures for Access Requests by Approved Listing Market Operators (ALMOs)	October 2020	https://www2.asx.com.au/content/dam/asx/about/almo- procedures-for-access-requests.pdf



Compliance framework supporting document	Date	Hyperlink
ASX's Conflict Handling Arrangements	October 2020	https://www2.asx.com.au/content/dam/asx/about/policies/asx- conflict-handling-arrangements.pdf
Information Handling Standard - TAS	September 2020	https://www2.asx.com.au/content/dam/asx/about/tas- information-handling-standard.pdf
Information Handling Standard - SFS	September 2020	https://www2.asx.com.au/content/dam/asx/about/sfs- information-handling-procedure.pdf
Regulatory Expectations External Audit Terms of Reference	July 2021	Not on ASX's website
CHESS Replacement AMO Overview	Various dates	https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/page s/106660878/AMO+Overview
ASX Operating Rules	Various dates	https://www2.asx.com.au/about/regulation/rules-guidance- notes-and-waivers



Committee	Business Committee
Agenda title	Forward work program
Item	6a
Purpose	To update Members on the forward work program of the Business Committee for 2021
Meeting date	6 October 2021
Prepared by	Business Committee Chair, Chief Customer and Operating Officer (Val Mathews)

The Business Committee will meet four times in 2021:

- 14 April 2021
- 14 July 2021
- 6 October 2021
- 8 December 2021

Subject to any input from members who wish to suggest additional items, the forward work program of the Business Committee in 2021 will be predominately focused on CHESS replacement: documentation, test environments, implementation timetable and CHESS user readiness activities.

A second major stream of work for the first half of the year is the Corporate Action STP Phase 2 project, completed in June 2021.

Members will also be provided with updates on the Electronic CHESS Holding Statements initiative.

Members of the Business Committee are invited to suggest topics for inclusion in the forward work program at any time by contacting the Business Committee Secretariat.

ATTACHMENTS

Attachment A Business Committee Forward work program

HIGHLY PROTECTED

Attachment A: Business Committee Forward work program

14 April 2021

- · CHESS Replacement Update
- Corporate Actions STP Phase 2 Update
- Electronic CHESS Holding Statements Update
- ISO 20022 Technical Committee report

6 October 2021

- CHESS Replacement Update inc. Tranche 3 rules & consolidated draft rules consultation; access pricing, ITE1
- Electronic CHESS Holding Statements update
- Annual report on Cash Equity C&S Service developments
- Regulatory Expectations Audit

14 July 2021

- · CHESS Replacement Update
- Access pricing for non clearing & settlement participants
- · Corporate Actions STP Phase 2 Update
- Electronic CHESS Holding Statements Update
- ISO 20022 Technical Committee report
- Regulatory Expectations Audit ToR

8 December 2021

- · CHESS Replacement Update, including
 - independent assessment of the CHESS replacement project against the IBM ASX Trade recommendations
 - · Single cutover and migration strategy
- Electronic CHESS Holding Statements update

Note: the forward work program does not include the standing agenda items for each meeting.