CHESS PROJECT
RELEASE 1 BUILD AND TEST FORUM

11 September 2025

Acknowledging Country

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

Artwork by Lee Ann Hall
My Country My People

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Housekeeping

Troubleshooting

- Please mute yourself when not speaking

- Please use the 'raise hand' feature on MS Teams if you would like to ask a question

- Please introduce yourself when talking for the benefit of all members

- Meeting is being recorded for the purposes of capturing decisions and actions

- Dial in details (audio only):

  - +61 2 7208 4607

  - Phone Conference ID: 586 689 298#

- Presentation materials were distributed before the meeting and will be published on the website.

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Important Information

Competition Law Reminder

Workshop members are reminded to have regard to their obligations under competition law. In particular, please note that the Competition and Consumer Act prohibits a corporation from engaging with one or more persons in a concerted practice that has the purpose, effect or likely effect of substantially lessening competition.

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Agenda

01 Open Actions & Feedback

02 AMO Readiness & ITE Activity Update

03 Cutover 'What-If' Scenarios

04 Monday Rollback Option

05 Forward Engagement for 2025

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01
Open Actions & Feedback

Release 1 Build and Test Forum | 11 September 2025 | Public

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Open Actions

Actions as at 5 September 2025

	Topic	Action	Raised	Due	Owner	Status
1	Cutover – Comms Approach	ASX to perform PoC on proposed MS Teams channel communications approach during cutover	12 Jun 2025	Sep 2025	ASX	In progress

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02
AMO Readiness & ITE Activity Update

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ITE Activity in August

Functional and non-functional testing throughout August resulted in most scenarios being successfully tested by AMOs or their Software Provider, enabling readiness for commencing AMO Accreditation phase.

ITE Update

- The ITE environment remained stable for Industry Testing. 2 minor scheduling delays temporarily impacted the FIX gateway becoming available on time

- AMOs and their Software Providers continue to complete outstanding scenario testing in preparation for AMO Accreditation

- 'Pending Trade – Accepted' defect resolved unblocking testing

- AMO performance testing has been completed by all organisations with one AMO performance bottleneck identified and resolved

- AFII testing commenced with successful transmission/receipt of files

- ASX initiated disconnects identified need for further AMO development to complete recovery on disconnect process

- ASX injected volume testing identified (AR) latency issue (see below)

- 8 Issues raised by AMOs

  - 2 relating to (W) Message processing – Resolved in 29/8 patch
  - 1 relating to an occurrence of an (W) message not processed
  - 2 relating to decimal precision consistency
  - 2 relating to negative test scenarios impacting Logout (5)
  - 1 relating to (AR) latency during volume/performance testing – performance tuning opportunity under investigation

- 1 Application to schedule Accreditation received.

Message/Scenario Types	Org 1	Org 2	Org 3
Log On			
Heartbeat			
Log Out			
Log On with PW reset			
MsgSeqNum higher than expected			
New Trade			
As At Trade			
BOQ Trade			
Condition Code Trade			
Multiple Condition Code Trade			
Trade Cancellation			
AR Rejection handling			
Pending Trade – Accepted			
Pending Trade – Rejected			
Market Data Snapshot			
Unexpected disconnect & timeout			
Unexpected disconnect & reconnect			
Auxiliary Endpoint Log On (incl. AE transmission)			
File Ingestion scenarios			

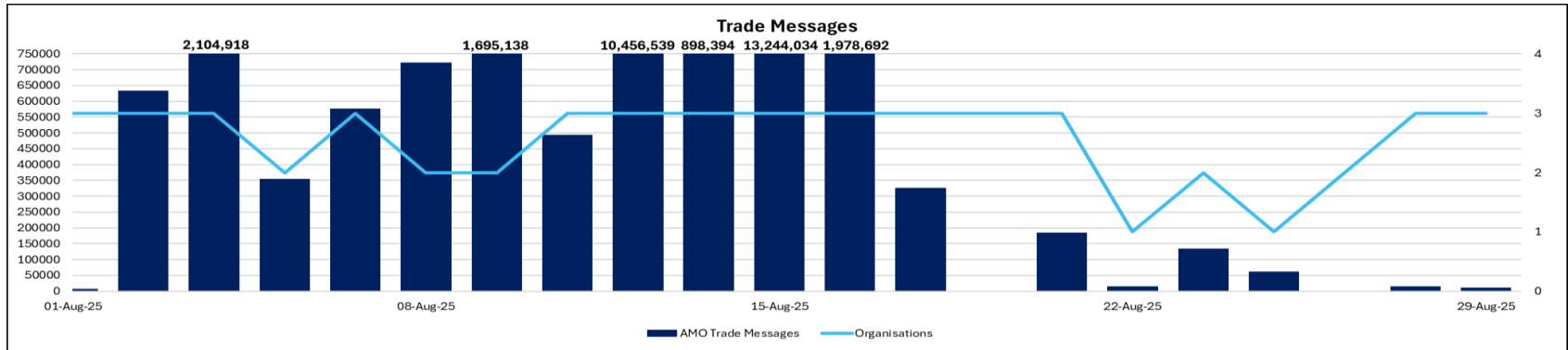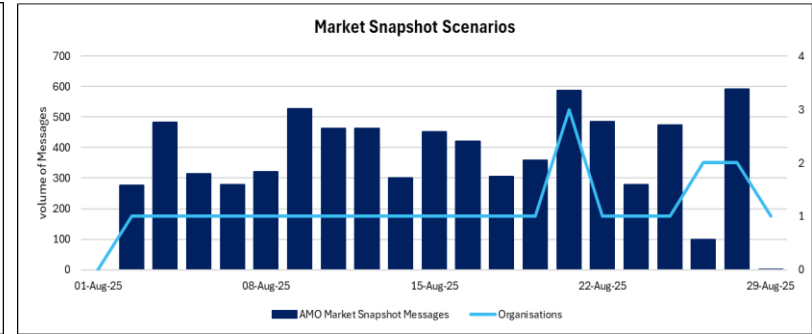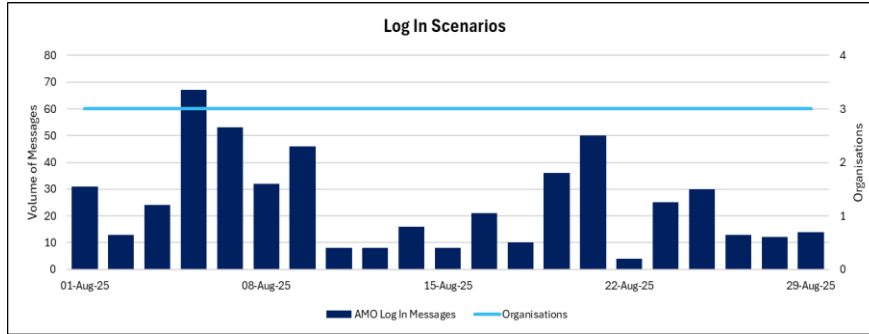Legend: Not Started | Commenced unsuccessful | Workaround – successful | Not Retested Post AMO Readiness | Successful/ Complete

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ITE Message Activity in August

Period: ITE data is from 1 August to 31 August 2025

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Industry Readiness Dashboard

Org ID	Cohort (*2)	Milestone			
		Engagement (*3)	AMO Accreditation	AMO Operational Readiness	Clearing Regression
1	AMO	🟩	🟩	🟩	⬜
2	AMO	🟩	Complete	🟩	⬜
3	AMO	🟩	🟧	🟩	⬜
4	AMO	🟩	Compete	🟩	⬜

- AMOs self assessments 'on track' with all organisations expecting to complete AMO Accreditation by end of September

- 1 AMO Software Provider finalising testing activities on 2 Accreditation Scenarios (triggering At-Risk status for Accreditation milestone) and is actively completing remaining testing to achieve Accreditation Readiness

- 2 AMOs Software Providers successfully completed AMO Accreditation – enabling AMO Operational Readiness to commence

- 2 AMOs leveraging external Software Provider finalising ITE connectivity in anticipation of AMO Operational Readiness

Open AMO Readiness measures – September

AMO Readiness Metric	Impacted Milestone	Measure	On Track (Start measuring)	At Risk (if not completed)	Requires Remediation (if not completed)
AMO or Software Provider Readiness Self Assessment	Overall timeline	AMO or Software Provider to indicate how they are tracking	*AMO or Software Provider to indicate status as part of bilaterals*		
Functional Message Workflows	Accreditation	Successful execution of message-based accreditation scenarios	1 May 25	15 Aug 25	30 Sep 25
Non-Functional and resilience testing (BCP)	Accreditation	Successful execution of resilience accreditation scenarios	7 July 25	15 Aug 25	30 Sep 25
Software Accreditation Completion	Accreditation & Operational Readiness	Successful completion of Accreditation	1 Sep 25	30 Sep 25	15 Oct 25
AMO ITE Connectivity	Operational Readiness	Applicable to AMOs with Software Vendors. Connected by specified dates.	7 July 25	30 Sep 25	15 Oct 25
Operational Readiness Completion	Operational Readiness	Successful completion of Operational Readiness	1 Sep 25	15 Oct 25	31 Oct 25
To-Be-Prod AMO connectivity	IDRs	Connected to To-Be-Prod by specified dates	1 Sep 25	24 Oct 25	7 Nov 25

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ITE Known Issues - Resolved

Ref ID	Summary	Details	AMO Impact	Work Around or Mitigation	Implementation Date
CHR-23093	TradeCapture (AE) Rejection – SecondaryTradeID (1040) incorrectly recorded as a unique reference	**Negative Test Scenario:** A resubmitted (AE) with the same SecondaryTradeID from a trade rejected after triggering a pending status should be accepted, but is currently rejected	AMO would be unable to submit an (AE) and have it accepted if they have previously used the same SecondaryTradeID in a rejected trade that triggered a pending condition	AMO software not expected to send non-conformant (AE) messages. If an AMO were to send original (AE) triggering a pending condition that was rejected, they will need to resubmit the (AE) with a different unused SecondaryTradeID for it to be accepted	8 August Patch release
CHR-23199	AFII + FIX GW: Inability to Process Accepted Pending Trades (AE) as Settlement Date is incorrectly rejecting	Reprocessed pending trades after reference data has been corrected are failing incorrectly due to the settlement being reset to an invalid value	AMOs will receive an (AR) rejection the re-processed pending trade whereas it is expected that the trade is accepted	No workaround available	8 August Patch release
CHR-23731	Rejected (W) Message when a tag value includes a substring that matches any valid W message tag number	If (W) message parser logic encounters a tag value that includes a substring matching a valid tag number, it treats this as a tag/value pair, e.g. tag/value 20021=293**269** treats substring **269** as a tag number	AMOs will not be able to successfully submit a (W) message when tag value include a tag number substring	Avoid tag values not to be populated with any value the same as a FIX W tags	29 August Patch release
CHR-23854	Unparseable (W) Messages causing queue disconnection stopping processing of subsequent (W) messages	(W) Messages that cannot be parsed are causing queue disconnects requiring a restart before (W) messages can continue processing	AMOs may not get response (AU) messages if (W) message unparseable, and will incur delays in (AU) responses for (W) messages whilst queue disconnected	ASX CHESS operations restarts of the queue will trigger outstanding/delayed (AU) responses. No workaround available to generate (AU) rejection for unpareasable message	29 August Patch release

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ITE Known Issues – Raised and Open

Ref ID	Summary	Details	AMO Impact	Work Around or Mitigation	Target Fix Date
CHR-18777	LastPrice (31) decimal precision in TradeCaptureReportAck (AR) message not consistent with that of TradeCaptureReport (AE) message	Number of decimal places in an (AR) may differ to the number of decimal places in the (AE). E.g. trailing zeros may be added or truncated	None expected – AMO software must be able to transmit and receive (AR) responses with varying lengths of decimal places up to the maximum in the LastPrice field	Nil	Clearing Regression Release (October 2025)
CHR-24591	LastQty (32) showing decimal value for resubmitted pending TradeCaptureReportAck (AR) message.	When pending trade is resubmitted, trade quantity which is included in the (AR) is updated to include decimal value with trailing zero(s)	None expected – AMO software has been successfully receiving (AR) responses with decimal places in the LastQty field	Nil	Clearing Regression Release (October 2025)
CHR-25897	(W) message not processed and no (AU) response generated	A single (W) message that was received 21/8/25 was not processed and did not generate an (AU)	AMO did not receive a FIX message response to confirm status of (W) pricing message	AMO would need to contact CHESS Support to verify the status of the (W) message transmitted	Clearing Regression Release (October 2025)

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ITE Known Issues – Raised and Open

Ref ID	Summary	Details	AMO Impact	Work Around or Mitigation	Target Fix Date
CHR-24704	Logout (5) not received when AMO sends LogOn with an incorrect SenderCompID	**Negative Test Scenario:** Logout (5) message should be generated when non conformant LogOn message is received confirming no session is established but is not being received	AMO will receive no response to their LogOn (A) message to identify if a session is established or rejected	AMO software should not transmit non conformant LogOn (A) messages. AMO to send a conformant Logon (A) message if no response to previous LogOn(A) was received to establish a FIX session	Clearing Regression Release (October 2025)
CHR-24705	Logout (5) not always received when session terminated due to AMO HeartBtInt (108) value over 60 seconds	**Negative Test Scenario:** Logout (5) message should be generated when a session is terminated, including when HeartBtInt is greater than specified interval	AMO will not be notified when their fix session is disconnected due to extended non conformant Heartbeat Intervals	AMO software should not transmit Heartbeat (0) messages with intervals greater than specified. AMO to send a conformant Logon (A) message if no Heartbeat (0) transmitted/received to reestablish a FIX session	Clearing Regression Release (October 2025)
INC0145215 / CHR-24405	Unexpected increase in (AR) Latency during periods of sustained (AE) throughput (still within expected thresholds)	Unexplained in increase in (AR) responses identified during sustained periods of volume testing. Although within thresholds further performance tuning opportunity.	Increasing time gap between submission of (AE) and receipt of (AR) during high volume days	Nil	TBC

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ITE Known Issues - Open

Ref ID	Summary	Details	AMO Impact	Work Around or Mitigation	Target Fix Date
CHR-22893	AFII + FIX GW: FIX (AU) tag (55) Symbol (part of FIX Body) is incorrectly included in the header	(AU) FIX message Header incorrectly includes tag (55)	AMO software will need to expect (AU) messages with tag (55) in the Header	AMO software will need to consume and process (AU) messages with tag (55) in the Header until it is removed	Clearing Regression Release (October 2025)
CHR-22924	AFII + FIX GW: Proposed reject text not accurately updated on all (AR) rejection types	(AR) reject text was updated under CHR-19294 for the AMO Readiness Release Patch however some typographical errors and incomplete updates have been identified	AMOs will not see exact (AR) rejection text as documented in the AMO User Technical Documentation for some rejection types	Current (AR) rejection text is still correct and can be used to identify the cause of the rejection	Clearing Regression Release (October 2025)
CHR-22126	AFII + FIX GW: (AR) & (AU) reject messages not generated when certain high-order ASCII characters are included in various fields	**Negative Test Scenario:** An (AE) or (W) received with high-order ASCII characters in various fields where these characters are otherwise invalid e.g. Symbol and CorporateAction	AMO will not receive an (AR) or (AU)	AMO software not expected to send non-conformant field values in (AE) and (W) messages. If non-conformant (AE) messages are sent with the high-order ASCII characters, AMOs need to contact CHESS Project Customer Technical Support to verify trade status	Clearing Regression Release (October 2025)

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ITE Known Issues - Open

Ref ID	Summary	Details	AMO Impact	Work Around or Mitigation	Target Fix Date
CHR-23035	AFII + FIX GW: Reject NOT generated when FIX (AE) does not contain the seller or buyer side repeating group block with (552)=1	**Negative Test Scenario:** (AR) Reject/Reject (3) expected for all scenarios when Number of Sides (552) <> 2. No (AR) Reject/Reject (3) generated when (AE) has (552) = 1 and is missing Buyer/Seller Side Repeating Group Block	AMO will not receive a response to non-conformant (AE) messages if tag (552) = 1 and is missing Buyer/Seller Side Repeating Group Block	AMO software not expected to send non-conformant (AE) messages. If non-conformant (AE) messages are sent and no response is received, AMOs need to contact CHESS Project Customer Technical Support to verify trade status	Clearing Regression Release (October 2025)
CHR-23074	AFII + FIX GW: (AE) and (W) messages incorrectly accepting mixed Header and Body tags	**Negative Test Scenario:** (AE) and (W) Messages incorrectly accepted when Body and Header tags mixed	AMO should expect (AE) and (W) to trigger a Reject (3) when Body and Header tags mixed, however accepted (AR) and (AU) messages are being generated	AMO software not expected to send non-conformant (AE) and (W) messages. If non-conformant (AE) or (W) submitted AMO will receive accepted (AR) and (AU) responses until change is made to reject	Clearing Regression Release (October 2025)

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AMO Accreditation and Operational Readiness

Window available between 1 September and first week of November 2025

Before 31 August

AMO testing for Accreditation readiness in ITE

1 September 2025

AMO Accreditation + AMO Operational Readiness window **opens**

AMOs can commence submitting Application forms to schedule and complete AMO Accreditation + AMO Operational Readiness assessments

Early October 2025

Clearing Regression window opens for Clearing Participants

October 2025

AMOs supporting Clearing Regression targeting Accreditation + Operational Readiness **completion** and enablement of their Test Environment to support CP+TP Trade Capture & Trade Cancellation Regression Testing

Early November 2025

AMO Accreditation + AMO Operational Readiness window **closes**

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AMO User Technical Documentation Draft Changes

Proposed for version 1.5 (target publish date TBC)

Section	Section/Field	V1.4 Published Content	V1.5 Draft Version
3.1.4	Data Types	• Alpha-numeric free format strings, can include any character or punctuation except the delimiter (0x01), carriage return (0x0D) and linefeed (0xA) characters • All char field are case sensitive (i.e morstatt != Morstatt)	• Apart from tag PartyID (448) when (447) = D (Proprietary / Custom code), all 'string' fields should conform to the current FIX standard and use8859-1 encoding (This excludes ASCII Character set 128-159) • Specifically for tag PartyID (448) when (447) = D (Proprietary / Custom code), this will support 'extended' ASCII encoding (This includes ASCII Character set 128-159) • All char fields are case sensitive (i.e. morstatt != Morstatt)
3.1.7	Sequence Number Gap Note	Note: Because sequence numbers are automatically reset each day, the FIX tag ResetSeqNumFlag (141) should not be specified in the initial Logon (A) message at the start of each day.	Note: At the start of each day AMOs are also expected to set the ResetSeqNumFlag (141) = 'Y' for the first logon message.
3.2.4.2	Recovery on Disconnect	In the case of disconnections, the AMO should retry connecting to the same endpoint at 10 second intervals up to 12 times. Should this fail, AMOs are asked to contact the ASX CHESS Operations team. Once successful connection is established, the AMO should send a **Logon** (A) message to re-establish the FIX Session	In the case of disconnections, the AMO should retry connecting to the same endpoint at 10 second intervals at least 12 times. Should this fail, AMOs are asked to identify the event as an incident and initiate their continuity processes which may include attempting to establish a FIX session through the optional Auxiliary endpoint if enabled, or contacting the ASX CHESS Operations team. AMO software is expected to cease attempting to retry connecting to the same endpoint whilst attempting to connect to optional Auxiliary endpoint if enabled or proceeding to transmit records through the Alternate File Ingestion Interface. Once successful connection is established, the AMO should send a **Logon** (A) message to re-establish the FIX Session

LEGEND: Red = Amended/Deleted, Blue = Amended/Added

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AMO User Technical Documentation Draft Changes

Proposed for version 1.5 (target publish date TBC)

Section	Section/Field	V1.4 Published Content	V1.5 Draft Version
3.4.2.1	LogOn (A) Note	Note: A sequence number reset is automatically applied at the start of each business day. Therefore, the first Logon (A) message of the day must not contain a ResetSeqNumFlag (141) = Y and both server and client sequence numbers should start from 1. Subsequent Logon (A) messages may have ResetSeqNumFlag (141) = Y if the AMO wishes to reset the FIX session.	A sequence number reset is automatically applied at the start of each business day. Additionally, the first Logon (A) message of the day must contain a ResetSeqNumFlag (141) = Y and both server and client sequence numbers should start from 1. Subsequent Logon (A) messages may include the ResetSeqNumFlag (141) with 'Y', 'N' or omit the tag from the message.
3.4.2.1	Field 141ResetSeqNumFlag	Req: O Description: Indicates that both sides of the FIX session should reset sequence numbers. At the commencement of every business day, sequence numbers are automatically reset rest and therefore the first Logon (A) message must not have a ResetSeqNumFlag (141) set to 'Y' Valid Values: N = No Y = Yes, reset sequence numbers If not specified, the sequence numbers are not reset.	Req: C Description: Indicates that both sides of the FIX session should reset sequence numbers. Valid Values: N = No Y = Yes (Mandatory for the first logon message)
3.4.3.1	Field 452	Field: 452 Valid Values: 1 - Executing Firm (i.e. Trading Participant) 4 - Clearing Firm (i.e. Clearing Participant) 45 - Secondary Account Number (i.e. Trading Account from Trading Participant) 21 - Clearing Organisation 119 - Central Securities Depository (CSD)	Field: 452 Valid Values: 1 - Executing Firm (i.e. Trading Participant) 4 - Clearing Firm (i.e. Clearing Participant) 45 - Secondary Account Number 21 - Clearing Organisation 119 - Central Securities Depository (CSD)

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AMO User Technical Documentation Draft Changes

Proposed for version 1.5 (target publish date TBC)

Section	Section/Field	V1.4 Published Content	V1.5 Draft Version
3.4.3.1	Field: 552	Description: Identifies the number of sides on the trade or trade cancelled i.e. the number of instances of repeating group 552 "NoSides" included within the message Two instances of repeating group 452 "NoSides" are required One instance to report the buy side details of the trade and the other instance to report the sell side details of the trade The side of the trade is identified in tag Side (54)	Description: Identifies the number of sides on the trade or trade cancelled i.e. the number of instances of repeating group 552 "NoSides" included within the message Two instances of repeating group 552 "NoSides" are required One instance to report the buy side details of the trade and the other instance to report the sell side details of the trade The side of the trade is identified in tag Side (54)
3.4.2.4	ResendRequest (2)	During a retransmission, the TAS FIX Gateway will resend the application messages such as **TradeCaptureReport** (AE), **MarketDataSnapshotFullRefresh** (W) . In addition, **Reject** (3), **Business Message Reject** (j) and **SequenceReset** (4) message will be sent. A **SequenceReset** (4) message will be used as a gap fill to replace the administration messages which include **Logon** (A)**, Logout** (5)**, Heartbeat** (0)**, TestRequest** (1)**, ResendRequest** (2). All retransmitted messages will contain *PossDupFlag* (43) = Y	During a retransmission, the TAS FIX Gateway will resend the application messages such as **TradeCaptureAck** (AR), **ConfirmationAck** (AU) . In addition, **Reject** (3), **Business Message Reject** (j) and **SequenceReset** (4) message will be sent. A **SequenceReset** (4) message will be used as a gap fill to replace the administration messages which include **Logon** (A)**, Logout** (5)**, Heartbeat** (0)**, TestRequest** (1)**, ResendRequest** (2). All retransmitted messages will contain *PossDupFlag* (43) = Y
3.4.3.2	PartyRole 45 - Secondary Account Number	Custom string from order entry data up to 10 characters alpha-numeric	Custom string from order entry data up to 10 characters alpha-numeric, e.g. Trading Account ID or Order Reference

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AMO User Technical Documentation Draft Changes

Proposed for version 1.5 (target publish date TBC)

Section	Section/Field	V1.4 Published Content	V1.5 Draft Version
4.2	AFII Operational and Procedural Guidelines	Late trades received by an AMO after the close of market trading are expected to be of low volume and may be included in files submitted to the Alternate File Ingestion Interface between 5:00pm (AET) and the end of day (7:00pm AET). Prices may also be submitted between 5:00pm (AET) and the end of day (7:00pm AET).	During the usual course of business Late Trades received by an AMO after the close of market trading are expected to be of low volume and may be included in files submitted to the Alternate File Ingestion Interface between 5:00pm (AET) and the end of day (7:00pm AET). During the usual course of business Prices may also be submitted between 5:00pm (AET) and the end of day (7:00pm AET). In the event of a technical outage end of day cut off extensions may occur in accordance with terms outlined in the Trade Acceptance Service Operational and Technical Standards
4.4.3	Response Message Files	Records in the response file will be delimited by a CR+LF byte sequence i.e. Carriage Return (ASCII 0x0D) + Line Feed (ASCII 0x0A).	Records in the response file will be delimited by a LF byte sequence, i.e. Line Feed (ASCII 0x0A).
4.4.3	Response Message Files	n/a	(ASCII 0x0D) + Line Feed (ASCII 0x0A). AMOs will receive only one TradeCaptureReportAck (AR) in the response file if a trade transmitted through AFII triggers a pending status. The TradeCaptureReportAck (AR) will contain tag 939 populated with a '4' to denote it is 'Pending New'. AMOs will be notified by ASX CHESS Operations of the outcome of all processed pending status trades that have been transmitted through the AFII.

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AMO User Technical Documentation Draft Changes

Proposed for version 1.5 (target publish date TBC)

Section	Section/Field	V1.4 Published Content	V1.5 Draft Version
4.4.3.1	Examples of AFII schema validation rejection messages (generic schema rejection)	n/a	Rejected - FIX message cannot be parsed and has not been processed (Record_1) 58=Duplicate field found in repeating group # 268, instance index = 1 (RefseqNum=13, RefMsgType=W, RefTagID=15), Received Input : 8=FIXT.1.1 9=270 49=CHIX 56=ASX-CSP 34=13 52=20250606- 04:54:46.151 75=20240820-10:11:58.000 1301=CHIA 55=WOW 20021=50000 20007=CB 268=2 269=1 270=98.18 15=AUD 269=2 270=98.125321 15=AUD 272=20190403 273=04:54:48.854 269=4 270=98.18 15=AUD 1128=9 10=115
4.4.3.1	Examples of AFII schema validation rejection messages	If a record is unable to be processed due to schema validation errors, the acknowledgement record will be returned as "Rejected - FIX message cannot be parsed and has not been processed (Record [nnn]): [text]", where: [nnn] is the record number of the input file [text] is an error string providing more context on the error that occurred. Rejected - FIX message cannot be parsed and has not been processed (Record_1): 58=Duplicate field found in repeating group # 268, instance index = 1 (RefSeqNum=13, RefMsgType=W, RefTagID=15)	If a record is unable to be processed due to schema validation errors, the acknowledgement record will be returned as "Rejected - FIX message cannot be parsed and has not been processed (Record [nnn]): [text], [Received Input]", where: [nnn] is the record number of the input file [text] is an error string providing more context on the error that occurred. [Received Input] is the FIX message input string processed for the record *(Note: Received Input added to all examples as per below)* Rejected - FIX message cannot be parsed and has not been processed (Record_1): 58=Duplicate field found in repeating group # 268, instance index = 1 (RefSeqNum=13, RefMsgType=W, RefTagID=15) Received Input: 8=FIXT.1.1 9=270 35=W 49=CHIX 56=ASX-CSP 34=13 52=20250606- 04:54:46.151 75=20241024 60=20240820-10:11:58.000 1301=CHIA 55=WOW 20021=50000 20007=CB 26=2 269=1 270=983.18 15=AUD 273=04:54:48.854 269=2 270=98.125321 15=AUD 272=20190403 273=4:54:48.854 269=4 270=98.18 15=AUD 1128=9 10=115

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AMO User Technical Documentation Draft Changes

Proposed for version 1.5 (target publish date TBC)

Section	Section/Field	V1.4 Published Content	V1.5 Draft Version
4.4.4	File Naming Standard	CHIA_trades_20240131_113509-001_ACK.Zip	CHIA_trades_20240131_113509-001_ACK.zip
5.1	Trade Condition Codes Table	n/a	Code: A1 – A3 Description: Appended to confirmation messages to identify the originating AMO A1 = Cboe, A2 = NSX, A3 = SSX

LEGEND: Red = Amended/Deleted, Blue = Amended/Added, Purple = For information only (not content in AMO UTD)

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Clearing Regression Release

ITE maintenance window

ITE is planned to be brought down COB 30 September and scheduled to be available again once health checks are complete SOD 7 October

Tuesday 30 September

Last day of ITE availability for AMO testing (Incl Accreditation + Operational Readiness) until Clearing Regression Release deployed

Wednesday 1 October 2025

ITE brought down to commence Clearing Regression Release as at Start of Day. FIX Gateway will be unavailable

Tuesday 7 October 2025

ITE available for AMO testing (Incl Accreditation + Operational Readiness) + CP Clearing Regression testing

Monday 6 October 2025

Labour Day public holiday

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AMO Parallel Test Guide

Targeting Publishing in September 2025

For noting For discussion For recommendation

Guide content

Overview

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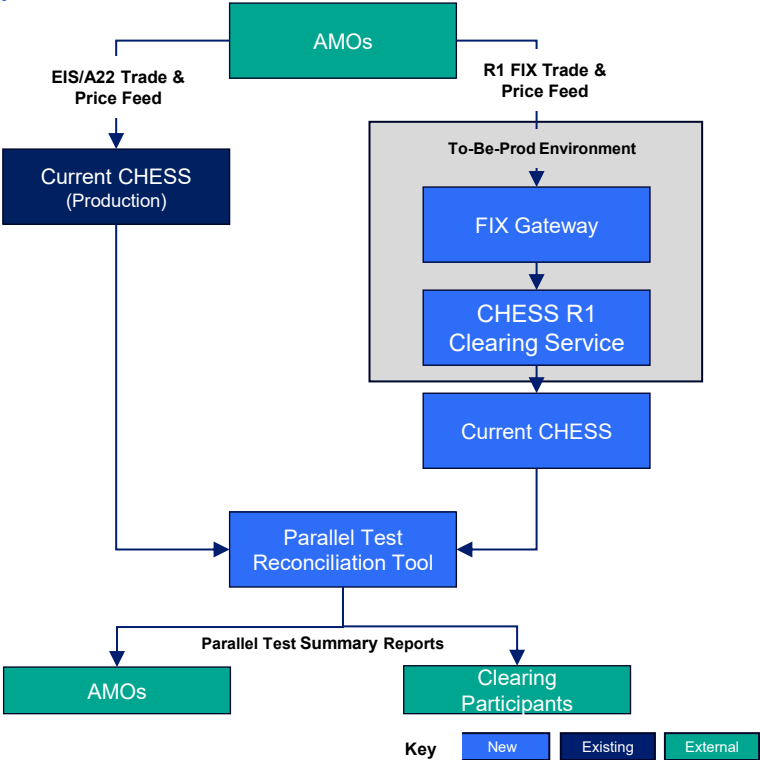
AMO Parallel Test Guide – Proposed to be Published Sept 2025

A purpose of the Parallel Test is for AMOs to gain confidence in their software and the Release 1 Clearing Service, by simulating production-like conditions and validating their system performance and operation prior to go-live.

Reconciliations

Summary report

- Aggregated counts of Trade Capture records on CHESS Production & CHESS R1 Clearing Service in the To-Be Production environment

Detailed line-level reports

- Row-by-row comparison results for each Trade Registration outcome/message type

- Unmatched reports –Trade registrations generated in one side environment (e.g. current CHESS production) with no corresponding entries in the other side environment (e.g. R1 Clearing Service in the To-Be Production environment)

- Records that exist in both environments (current CHESS production and CHESS R1 Clearing Service in the To-Be Production environment) but contain discrepancies in specific fields (highlighted using '*' in the report)

Report Distribution

- Each AMO is scheduled to be provisioned with access to a unique SFTP folder and relevant details prior to the commencement of the AMO Parallel Test phase.

Entry & Exit Criteria

Entry Criteria

- Successful completion of: AMO Accreditation, AMO Operational Readiness, and first IDR activities

- Participating AMOs are ready to commence transmission of FIX equivalent messages for production trade registration and pricing data to the CHESS R1 To-Be Production environment.

Exit Criteria

- Successful transmission by AMOs of all production trade registration and pricing messages and successful processing of all trade and pricing messages by the R1 Clearing service

- AMO satisfied that Trade Registration messages reconcile and their R1 software can process messages at production volumes

- AMO providing attestation confirming readiness for go-live.

Clearing Participant Reports

EIS Messages (as relevant to each organisation)

Summary Report and Detailed Level Reports (as per AMO reports) of backwards compatible EIS Messages distributed through SFTP:

- EIS 164
- EIS 116
- EIS 134
- EIS 138
- EIS 542
- EIS 124
- EIS 128

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To-Be-Prod connectivity preparation

For Implementation Dress Rehearsals And Parallel Testing

Release 1 Connectivity Guide

- **Updated v1.2 Published 29 August 2025**, available on the Release 1 Hub
- To-Be-Prod environment details added, including:
  - ASXOnline 'Customer Service Account Management' (CSAM) Certificate Management processes
  - FIX Gateway Networking details
  - IP Address
- Connectivity to To-Be-Prod expected to be complete from 24 October 2025 in preparation for first IDR (planned for the weekend of 14 -16 November 2025)
  - AMOs are asked to submit To-Be-Prod Applications by late September in order to complete the relevant networking and Certificate Management processes prior to 24 October 2025.

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AMO Connectivity Guide

CHESS Release 1

Version: 1.2   Updated: August 2025
ASX Limited ABN 98 008 624 691   Protected   1/37

ASX

03
Cutover 'What-If' Scenarios

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Cutover 'What-If' Scenarios

- "What-If" scenarios are structured hypothetical situations that identify potential risks, failures, or unexpected events that could occur after the final Go decision and during live cutover activities

- These scenarios help ASX, AMOs, and market participants anticipate a wide range of issues — from technical faults and data inconsistencies to external disruptions such as power outages or connectivity failures

- They are used in real time to inform decision-making at checkpoints and during incident triage, helping teams assess whether to continue, pause, escalate, or rollback specific steps

- Where an event escalates into an extreme or widespread technology incident, the ASX BAU Incident Playbook takes precedence

- The What-If scenarios and BAU Incident Playbook work together to ensure there is a seamless escalation path from operational issue management to full crisis management, ensuring market integrity and timely stakeholder communication throughout the cutover

- Alongside these scenarios there are guiding principles on how they should be utilised

- In addition to these scenarios, there is provision in the Entry criteria to not proceed with cutover if there are current severe Production issues, or unusual market events

- The scenarios have been drafted by ASX and plan to be refined via discussions with the AMOs, as well as presented in the Implementation and Transition Working group for further feedback.

Discussion required with AMOs to review any scenarios on their side which may impact cutover and should be explored

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Cutover What-if scenario guiding principles

The following points are the guiding principles which help frame how the mitigations are managed, and the decision-making process that could lead to a rollback scenario.

- The What-if scenarios guide the Master Control Centre (MCC) in escalating the decision to the Implementation Governance Group (IGG) for final rollback approval. The scenarios are mapped to the rollback stages so the MCC is aware of the steps to be performed during rollback and the implications

- Used alongside the ASX Production Incident Management Process, the What-if scenarios ensure a smooth handover to broader crisis management if an extreme event occurs, while maintaining a clear rollback path for less severe but unrecoverable issues

- In all instances, ASX Clear and ASX Settlement will prioritise meeting their respective license obligations, including particularly the requirement to operate 'fair and effective' facilities. In addition, ASX will also have regards to its obligations under the CS Services Rules to provide access to its covered service on 'commercial, transparent and non-discriminatory terms'

- Fix forward is the preferred solution, and rollback in all circumstances is a last resort. This is to minimise the impact to the industry

- Time is the main contributing decision point which leads to the Maximum Acceptable Outage (MAO) which is measured in hours. This is predominantly built off the time it would take to rollback and return the legacy solution back into Production and is also aligned to the Point of No Return (which will be depicted in the Runbook)

- If the expected time to fix the problem is likely to exceed the MAO, then the IGG would consider rollback, taking into account the nature of the incident and ensuring that rollback is the safest option to restore operations, involving the Major Incident Manager (MIM) and Crisis Management Team (CMT)

- The decision to rollback will sit with the IGG. Industry participants plan to be informed of the decision to rollback and coordinated steps that have been previously rehearsed are scheduled to be put into play

- Issues with AMO infrastructure intend to be managed through the incident management process and the Triage room, involving IGG / CMT members. If it appears the MAO is likely to be breached, then consensus on that opinion is intended to be reached in the Triage room. The IGG are then scheduled to make a final decision on the next steps.

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Cutover What-if scenario examples

Cutover Stage	Summary Category	Description of Issue	Expected Impact	Maximum allowable Outage (MAO)	Remediation / Mitigation	Approvals Required
1	Readiness preparation	Attestation delayed from an AMO or CP.	Project recommendation impacted if an AMO or CP has not confirmed that all Industry Testing is complete and go-live can proceed.	Completion of R1 Industry Testing (end Feb 26)	ASX plan to work with organisations that are at risk and determine impact to go-live.	ASX, AMOs and CPs
1	BAU issue	Current CHESS experiences Sev 1 / 2 Production incident just prior to the cutover weekend.	Delay to cutover weekend commencement, or No Go to proceed.	Until cutover commencement checkpoint (Sat 7am)	Engage IGG, ASX Major Incident Manager and CMT to understand incident remediation plan to determine if weekend activity can proceed.	MCC / IGG / CMT
2, 3	Cutover Issues for ASX	Integrity / reconciliation checks fail post-load; data integrity lost in production during migration; script fails during data transformation/load; Runsheet errors.	Delay to Runsheet activities, while the issue is identified and corrected.	Until Point of No Return	Halt cutover; restore from clean backups; investigate cause; reload data; re-validate cleansed data. Contingency window provides significant time to remediate cutover activities and repeat the exercise. Rollback is unlikely.	MCC / IGG

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Cutover What-if scenario examples (cont.)

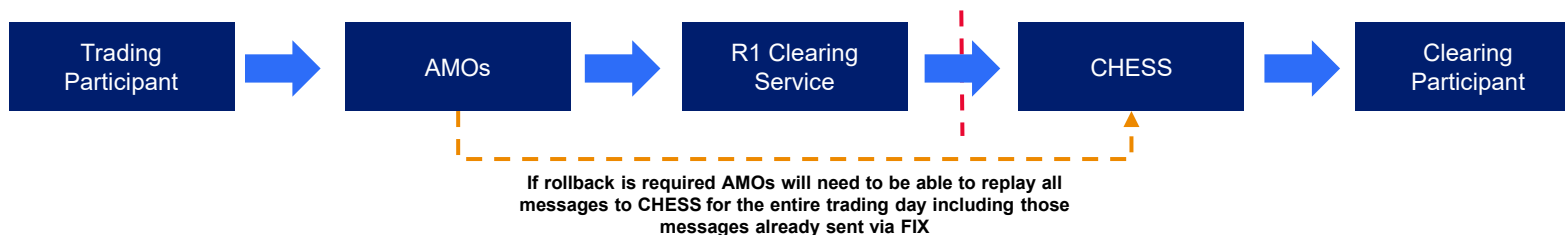| Cutover Stage	Summary Category	Description of Issue	Expected Impact	Maximum allowable Outage (MAO)	Remediation / Mitigation	Approvals Required
2, 3	External factors affecting ASX	Physical site loses power, e.g. ASX building; major physical incident impacts a key site.	Delay to cutover activities as ASX resource relocate, and alternate services are established.	Until Point of No Return	Activate generator backup and/or cutover resources to return home - expected delay of circa 1-2 hours, but cutover activities can resume within contingency window; CMT team involved if issue is likely to persist into BAU - invoke DRP/BCP; notify Reg/AMOs/CPs; execute fallback to remote ops.	MCC / IGG / CMT
2, 3	Cutover issues for ASX and AMOs	MS Teams outage impacting communication between teams including AMOs.	Comms outage will slow activities, until backup comms put in place.	Until Point of No Return	Invoke backup comms; Contingency window provides significant time to remediate cutover activities, and repeat the exercise. Rollback is unlikely.	MCC
2, 3	Cutover issues for AMOs	AMO not able to perform TVT / BVT FIX connectivity check.	Weekend Go decision delayed until all AMOs confirm go-live readiness.	Until Point of No Return	Engage network and connectivity teams to diagnose. Alternate trade interface (BCP) could be relied on if issue is isolated to one AMO.	MCC / IGG / CMT

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Cutover Question for AMOs

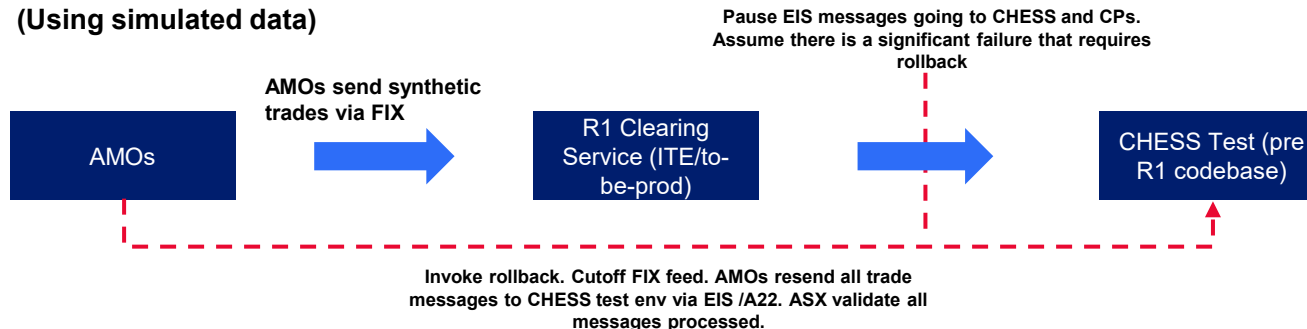> **?** How are you progressing with your cutover procedures and runsheet steps?

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04
Monday Rollback Option

ASX

Release 1 Monday rollback AMO test

Monday Production

Trading Participant → AMOs → R1 Clearing Service → CHESS → Clearing Participant

If rollback is required AMOs will need to be able to replay all messages to CHESS for the entire trading day including those messages already sent via FIX

Simulated rollback test
(Using simulated data)

Pause EIS messages going to CHESS and CPs. Assume there is a significant failure that requires rollback

AMOs

AMOs send synthetic trades via FIX

R1 Clearing Service (ITE/to-be-prod)

CHESS Test (pre R1 codebase)

Invoke rollback. Cutoff FIX feed. AMOs resend all trade messages to CHESS test env via EIS /A22. ASX validate all messages processed.

Discussion required with AMOs to determine their ability to support and perform this test

ASX

05
Forward Engagement for 2025

ASX

Indicative Forward Engagement Calendar

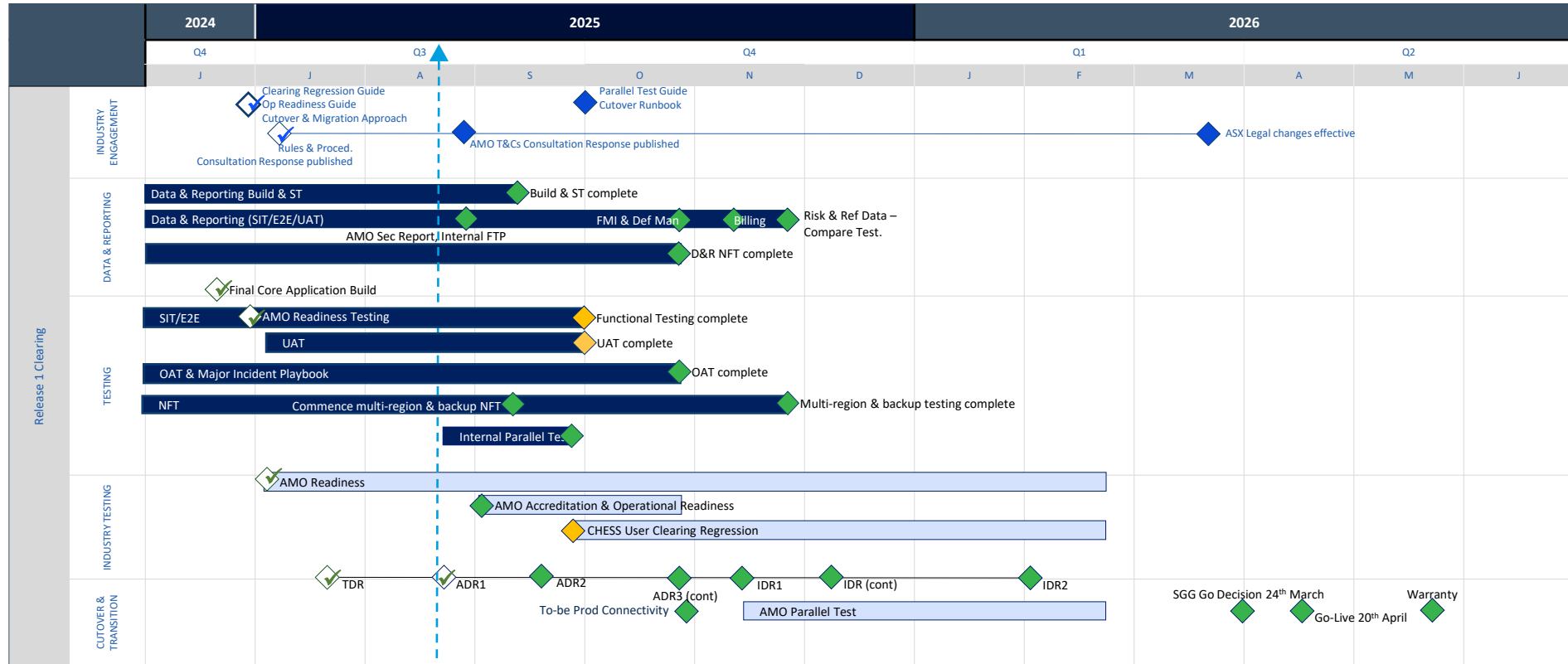|	September 2025	October 2025	November 2025
Technical Committee	**3 September** • CHESS Project and Working Group updates • CHESS Release 1 support model • CHESS Release 2 holding balance settlement reporting • CHESS Release 2 timeline checkpoint	**8 October** • CHESS Project and Working Group updates • CHESS Release 1 industry readiness • CHESS Release 2 scope finalisation • CHESS Release 2 Drop 2 ISO changes	**5 November** • CHESS Project and Working Group updates • CHESS Release 1 industry readiness • CHESS Release 2 timeline checkpoint update
Implementation & Transition Working Group	**25 September** • CHESS Release 1 updates • CHESS Release 2 Timeline Checkpoint survey questions • CHESS Release 2 Drop 1 dataset & tooling	**29 October** • CHESS Release 1 Clearing Regression update • CHESS Release 2 ITE connectivity	**25 November** • CHESS Release 2 timeline checkpoint
CHESS Release 1 Build & Test Forum	**11 September** • AMO Accreditation update • CHESS Release 1 Cutover update • AMO Parallel Testing preparation • Operational Readiness preparation	**16 October** • Clearing Regression update	**13 November** • AMO parallel testing • Implementation Dress Rehearsal #1
Business Design Working Group	**9 September** • Payment Channels Deep Dive	**29 October** • CHESS Release 2 Drop 4	**6 November** • Corporate Action Services Focus Group
ISO Design Working Group	**18 September** • Transfers, conversions & SRN enquiries	**14 October** • Drop 4 ISO messages and Schema	**11 November** • Drop 4 ISO messages and Schema

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Questions

Appendix

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CHESS Release 1 Indicative Project Timeline – Aug 2025

High level overview of the indicative timeline

A Gantt-style timeline chart spanning 2024 (Q4), 2025 (Q3, Q4), and 2026 (Q1, Q2), organised under "Release 1 Clearing" with the following swim lanes and milestones:

INDUSTRY ENGAGEMENT
- Clearing Regression Guide / Op Readiness Guide / Cutover & Migration Approach
- Rules & Proced. Consultation Response published
- Parallel Test Guide / Cutover Runbook
- AMO T&Cs Consultation Response published
- ASX Legal changes effective

DATA & REPORTING
- Data & Reporting Build & ST — Build & ST complete
- Data & Reporting (SIT/E2E/UAT) — FMI & Def Man — Billing — Risk & Ref Data – Compare Test.
- AMO Sec Report Internal FTP — D&R NFT complete

TESTING
- Final Core Application Build
- SIT/E2E — AMO Readiness Testing — Functional Testing complete
- UAT — UAT complete
- OAT & Major Incident Playbook — OAT complete
- NFT — Commence multi-region & backup NFT — Multi-region & backup testing complete
- Internal Parallel Test

INDUSTRY TESTING
- AMO Readiness
- AMO Accreditation & Operational Readiness
- CHESS User Clearing Regression

CUTOVER & TRANSITION
- TDR — ADR1 — ADR2 — ADR3 (cont) — IDR1 — IDR (cont) — IDR2
- To-be Prod Connectivity
- AMO Parallel Test
- SGG Go Decision 24th March
- Go-Live 20th April
- Warranty

Key: Industry | ASX / Vendor | Status

Upcoming Industry Test Phase Summary

All AMO Activity Required, Entry & Exit Criteria to be completed by AMOs or their Software Provider (where relevant), and dates are indicative and may be subject to change

	AMO Readiness	AMO Accreditation	AMO Operational Readiness	Clearing Regression	AMO Parallel Test
Planned Dates	**Jul 2025 - Feb 2026**	**Sept – Early Nov 2025**	**Sept – Early Nov 2025**	**Oct 2025 – Feb 2026**	**Nov 2025 – Feb 2026**
AMO Activity Required	Complete development of Drop 3 features, undertake testing, finalise software for accreditation (and ongoing testing to familiarise until Feb 2026)	Demonstrate software's ability to connect and interact with the CHESS replacement system by completing specified accreditation scenarios	Demonstrate their organisation meets both the ASX's standards and operational requirements	AMOs revise participant IDs used in Trade Capture testing + support industry testing in their ITE integrated test environment	Reconcile current CHESS production feed of trade registrations to CHESS project feed on To-Be-Production infrastructure
Environment	R1 ITE	R1 ITE	R1 ITE	R1 ITE	R1 To-Be-Production
Entry Criteria	Completed build for features delivered in Drop 1 & 2 (ITE Open code base)	Successfully tested all AMO Accreditation scenarios and are ready to have AMO software assessed for formal Accreditation	Passed AMO Accreditation and have successfully tested all Operational Readiness scenarios.	Changes implemented to enable Clearing Participant testing in ITE, and processes required to support Clearing Participant testing in AMO ITE Integrated Test Environment communicated	Successfully completed AMO Operational Readiness assessment and ready to generate the FIX equivalent for Production trade registration and pricing data
Exit Criteria	Successfully tested all AMO Accreditation and are ready to have AMO software assessed for formal Accreditation	Demonstrated all AMO Accreditation scenarios have passed the success criteria	Demonstrated all Operational Readiness scenarios have passed the success criteria	AMO testing and Clearing Participant testing effectively coexisted enabling Clearing Participant attestations	Successful comparison of trade registration and pricing messages between current CHESS and CHESS project environments
Supporting Documentation	AMO User Technical Documentation	Release 1 AMO Accreditation Guide	Release 1 Guide to Operational Readiness Phase	Release 1 Guide to Operational Readiness Phase	Release 1 Guide to AMO Parallel Test
Supporting Documentation ETA	Feb 2025	Mar 2025	Jun 2025	Jun 2025	Sep 2025

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Non-Functional Testing

Proposed schedule of AMO non–functional and assisted testing activities

July 2025

Mon	Tue	Wed	Thurs	Fri
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30	31	

August 2025

Mon	Tue	Wed	Thurs	Fri
				1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	29

September 2025

Mon	Tue	Wed	Thurs	Fri
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30			

Contingency weeks for ASX assisted activities

Legend

- AMO injected production/stressed volumes (Commencing 14 July – no ASX assistance required)
- ASX Assisted injected volume @70% peak TPS (Tue + Thur from 29/7 to 14/8: 10am–12pm)
- ASX Assisted Injected volume @100% peak TPS (Tue + Thur from 19/8 to 11/9: 10am–12pm)
- ASX Assisted FIX Gateway Disconnection (Tue from 22/7 to 9/9: 10:30am–11:30am)
- ASX Assisted F5 Firewall Disconnection (Thur from 24/7 to 11/9: 10:30am–11:30am)
- ASX Assisted Alternate File Ingest available (Mon, Wed, Fri from 30/7 to 12/9: 1–5pm)

Note: All testing requiring ASX assistance requires 24–hour (minimum) notice, sent to: CHESSreplacement@asx.com.au

Closed Actions

#	Topic	Action	Raised	Closed	Owner	Status
1	Testing Scenarios	AMOs to provide input as to the failover / DR scenarios they would like covered in the testing plan	15 Aug 2024	18 Mar 2025	AMOs	Closed
2	FIX Messaging	ASX to provide iterative updates on FIX specification document to AMOs AMOs to provide feedback on FIX messaging specifications	28 May 2024	18 Mar 2025	AMOs & ASX	Closed
3	Condition Codes & BoQ	AMOs to provide feedback on required Condition Codes & BoQ for AMO Readiness deployment	14 May 2025	12 Jun 2025	AMOs	Closed
4	Unique Trade Identifier	ASX & AMOs to bilaterally review and agree method to ensure TradeID is unique across all AMOs and all times	14 May 2025	12 Jun 2025	ASX & AMOs	Closed
5	Clearing Regression	ASX & AMOs to bilaterally discuss ASX questions related to AMOs ability to support TP/CP integrated testing during Clearing Regression	14 May 2025	12 Jun 2025	ASX & AMOs	Closed
6	Release 1 Go-Live Date	AMOs to review ability to support Release 1 Go-Live date	14 May 2025	12 Jun 2025	AMOs	Closed

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