

ASX Tokenisation Working Group



WS2 – Fixed Income Deep Dive

10 September 2026



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



Session Overview

90 minutes

1

Welcome & housekeeping

Where we landed on 26 August and what carries into Fixed Income.

5 min

2

Digital issuance

Native or digital twin? Liquidity, legal register, tax and index considerations.

15 min

3

Trade and market access

Extended hours: single pool or parallel venue? Where offshore demand actually sits.

12 min

4

Settlement

Atomic or otherwise. Australia already has RTGS DvP in central bank money - what is left to win?

18 min

5

Asset servicing and programmability

Where the recurring cost sits, and who is liable when the code pays.

12 min

6

Collateral mobility

The clearest near-term value pool, and the 2027 bond and repo CCP overlay.

18 min

7

Summary and next steps

Ranking today's priorities and upcoming sessions

10 min

Housekeeping

Competition law protocol

Working Group members are reminded to have regard to their obligations under Competition law. 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

HOW TO PARTICIPATE

Be active.
Be constructive.
Keep it relevant.

Use the chat or raise questions during the session. Customer-specific matters will be taken offline to keep the forum focused for all participants.

Participation

Cameras on where practical, microphones muted unless speaking. Questions and discussion are encouraged. Polls may be used to gather feedback and understand customer sentiment.

Non-attribution & Recording

Unless expressly advised, views may be used and reported; but they are not attributed to any member or firm outside this room. Sessions will be recorded for minute-taking purposes only.

Session Materials

Materials will be distributed at least one business day before each session. Session summaries and supporting materials will be provided only to attendees of the relevant session(s).

Actions

Any actions will be captured, assigned and tracked by ASX. Outstanding questions may be followed up after the session via email or future working group updates.

Welcome

WS2 Fixed Income Deep Dive

Today's Presenters

Speakers leading today's discussion



Andrew Jones

Chair • Group Executive, Securities & Payments, ASX

Industry SME



Barney Nelson
CEO, The ValueExchange

ASX

ASX

Frederik Van den Weghe
General Manager, Fixed Income & Resiliency

ASX

Mike Thomson
Head of Austraclear

ASX

John Jeffrey
Manager, Equities Engagement

ASX

Ricky Budd
Senior Manager, Equities, Securities & Payments

ASX

Catherine Michael
Senior Manager, Stakeholder Engagement, Markets

Additional ASX business representatives will be online to field any relevant questions.

Industry Discussion Paper

Market-led discussion paper on tokenisation adoption for Australia's financial infrastructure

01



WHAT IT IS

A shared industry perspective

- Identifies priorities, barriers and opportunities across the asset lifecycle.
- Reflects industry perspectives on potential evolution of market infrastructure.
- Technology-neutral. Tokenisation is one option, not the outcome.

02



HOW IT WILL BE USED

Direction, not commitment

- Focuses industry effort where value is greatest.
- Assesses tokenised and conventional market models.
- Informs industry and regulatory discussion, not implementation decisions.

INDUSTRY OBJECTIVE - Explore how market infrastructure can support the evolution of a tokenised market ecosystem.

Why Now

The conversation has moved from “Can tokenisation work?” to “Where can it create measurable value?”

01



GLOBAL MOMENTUM

From experimentation to implementation

Global financial market infrastructures are progressing tokenisation initiatives beyond proofs of concept.

02



VALUE FOCUS

From technical feasibility to measurable outcomes

The conversation is shifting toward market design, confidence and demonstrable value.

03



AUSTRALIAN OPPORTUNITY?

From evidence to an Industry alignment

The next step is developing a shared industry perspective on the implications for Australian market infrastructure.

What the introductory session established

Four themes emerged from the 26 August session. The objective today is to assess their relevance and applicability to fixed income.

01 IMPLEMENTATION PATH	02 LEGAL FOUNDATION	03 CRITICAL DEPENDENCY	04 MARKET REALITY
<i>Evolution, not replacement</i> The appropriate implementation path for Australia remains open: tokenised representations, digitally native issuance, or a staged combination of both.	<i>The token must be the security</i> A token must carry the same enforceable rights as the security it represents, with an authoritative record recognised at law.	<i>Settlement is the enabler</i> Four candidate settlement assets: • deposit tokens • Stablecoins • wholesale CBDC; and • tokenised ESA balances.	<i>Technology does not create liquidity</i> Tokenisation has successfully gained traction in primary issuances, but its long-term impact ... hinges on its ability to have deep, liquid secondary markets.¹

WHAT WE ARE NOT DEBATING TODAY

Whether tokenisation is desirable in the abstract, vendor or partner selection, pricing, or ASX and industry adoption commitments.

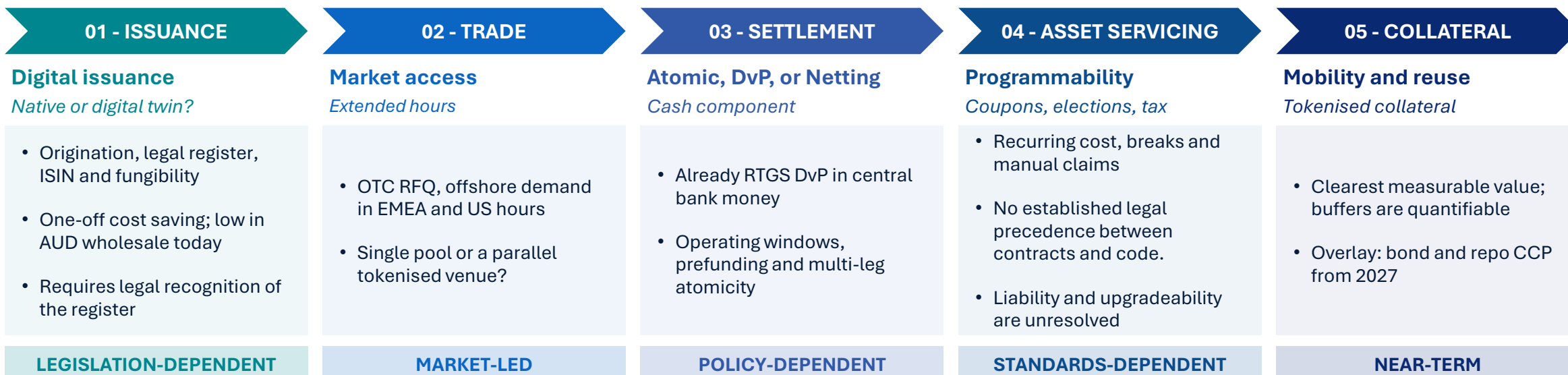
¹ Baker McKenzie, *Tokenization of Financial Markets: Mapping the Plausible Future through Scenario Analysis*, 2025.

Approach

5 Key Pillars across the Fixed Income Lifecycle

The Anchor – 5 Key Pillars across Fixed Income Lifecycle

Each pillar carries a different value proposition, different barriers and a different time horizon.



SHARED CONDITIONS UNDERPINNING ALL FIVE PILLARS

Legal certainty and an authoritative record

Interoperability and standards

Cash and settlement rails

Governance, controls and resilience

Identity, permissions and data

Adoption economics



FOR DISCUSSION

- Austraclear and HVCS operate within defined Australian operating windows, while the RITS Fast Settlement Service already provides continuous 24/7 settlement across ESAs for eligible NPP payments. Given this, where does tokenisation create meaningful value across the Fixed Income lifecycle?

How will we interrogate each pillar?

A consistent framework applied across all five pillars enabling like-for-like comparison

01 TODAY	02 THE MODELS	03 WHAT MUST BE TRUE	04 THE EVIDENCE
<i>How it runs</i>	<i>The design choices</i>	<i>The unresolved questions</i>	<i>What others have proven</i>
• The current mechanics, participants and constraints. • Where the friction, cost and manual work sits. • Where existing market infrastructure and workflows remain fit for purpose.	• The available models, including potential benefits and considerations associated with each. • Native issuance or digital twin; one pool or a parallel venue? • A dedicated settlement asset(s) or existing RTGS rails?	• Legal, tax, regulatory, prudential and operational requirements? • Australia-specific issues contrasted with global observations • Who owns each question: industry, ASX, regulators?	• What has gone live offshore, and at what size. • What was enabled by legislation versus by a sandbox. • What failed or stalled, and why.



DESIRED OUTCOMES FROM TODAY

1. Understanding of the key blockers across each pillar
2. A ranked view of the five pillars by potential value to your organisation

Digital Issuance

PILLAR - 01

Native issuance or digital twin - and what Australia would have to change to enable either?

CONSIDERATIONS

- Native: programmable and fragmentable from issuance
- Twin: one liquidity pool, multiple possible standards

Digital Issuance – Where do we start from?

Wholesale debt issuance in Australia is already efficient, low-cost and well understood - Any tokenised proposition must deliver clear improvements.

01 TODAY

How it runs

- AGS and semi-government paper issued by syndication and tender; corporate and Kangaroo paper under AMTN and EMTN programmes.
- Austraclear is the authoritative register for wholesale debt; ISIN, paying agent and registrar roles are established and priced.
- Documentation is largely templated; marginal legal cost of a tap is low; small taps are constrained by distribution and parcel size

02 WHERE IS THE VALUE?

What problem is tokenisation solving

- Issuance fees in AUD wholesale are already thin - the one-off saving is unlikely to move an issuer.
- The durable value is in the lifecycle that follows issuance: servicing, collateral and reporting.
- Global evidence: tokenised fixed income has attracted heavy FMI investment, but secondary markets remain thin and fragmented

03 WHAT COULD CHANGE?

The tokenised proposition

- Smaller and more frequent issues become economic; fractionalisation opens non-institutional distribution.
- Terms embedded at issuance - coupon, call, eligibility, transfer restrictions – automating servicing.
- Direct issuer-to-investor distribution, and reach into offshore demand without a domestic intermediation chain.

04 WHAT MUST BE TRUE?

The bridging conditions

- A DLT register must be capable of being the authoritative record of title within Australian law.
- The instrument must remain fungible, indexable and repo-eligible, or it prices at a penalty.
- Investors must be able to custody, value, report and risk-weight without a mandate change.



FOR DISCUSSION

- Which issuers in this market would move first and why? Cost, reach, servicing benefit?
- As an investor - what would you need before you would buy a digitally issued AUD bond at the same spread as its conventional equivalent?

PILLAR - 01

Digital Issuance – Native or Digital Twin?

Core design decision - shaping liquidity, legal complexity, tax outcomes and the scope for automation.

NATIVE ISSUANCE

Security issued directly onto the ledger; the ledger is the legal register

Potential Benefits

- Servicing is programmable from issuance: coupons, elections, eligibility and transfer restrictions.
- A single record, in which register, position and settlement are the same object.
- Atomic multi-leg settlement is more readily supported, as there is no underlying to lock or release.
- Supports structures that are not economic today, including small taps and fractional denominations.

Considerations

- Liquidity may fragment: a separate line and ISIN, off-index and outside existing repo and pricing chains.
- RBA repo eligibility is not established, which affects institutional demand for the instrument.
- Requires a register capable of being recognised as the authoritative record under Australian law.
- Mandates, custody arrangements and prudential treatment would need to change before scale.

DIGITAL TWIN

Conventional security remains in Austraclear, immobilised; a token represents the position

Potential Benefits

- Change is contained: the CSD retains the authoritative record
- A single liquidity pool is retained; the token unwraps into a fungible Austraclear position.
- Legal, tax, index and prudential treatment carry over, with no/low legislative dependency.
- RBA eligibility is unaffected while the underlying remains lodged and immobilised.

Considerations

- Multiple standards may emerge if minting is not standardised, without a common register.
- Reconciliation shifts to the mint-and-lock boundary, with cut-off and operational window dependence.
- Digital twins can support programmable workflows and lifecycle automation, but servicing may remain dependent on the underlying instrument and reconciliation between on-chain and traditional records.
- Double-issuance and recoverability risk arise if mint controls or the minting entity fail.



FOR DISCUSSION

Acacia participants saw native structures as the preferred target state but expected twins to dominate near term. Does that sequencing hold for AUD wholesale debt, and what would need to change to shorten it?

Digital Issuance – What have others proven?

Legal, fiscal and prudential frameworks are the key constraints to adoption and scale, not technology.

MARKET	WHAT HAS ACTUALLY BEEN DONE ¹
Germany	eWpG (2021) created a statutory crypto securities register. Siemens (€300m), KfW and DZ Bank have all issued under it; legislation first, then issuance.
Switzerland	DLT Act (2021) plus SIX Digital Exchange: native bonds with legal finality, settled in wholesale CBDC under Project Helvetia. Since June 2025 all SDX digital bonds trade on SIX Swiss Exchange, enabling one liquidity pool, DLT post-trade in parallel.
European Union	The DLT Pilot Regime provides the legal pathway. Slovenia has issued a €30m inaugural sovereign digital bond under it. EIB has issued natively four times: public chain, private chain, HSBC Orion and SEK. World Bank has issued CHF200m with the SNB. Each small and largely held to maturity; secondary trading remains thin.
Hong Kong	HKMA used government issuance to seed the market: a tokenised green bond in 2023, then a multi-currency tokenised issue, now extended through Project Ensemble.
United Kingdom	DIGIT, a digitally native gilt pilot, proceeding inside the Digital Securities Sandbox - a temporary, statutory disapplication of existing rules.
Euroclear	World Bank digital note issued on the D-FMI platform: a CSD-operated ledger, which preserves the single pool rather than creating a parallel one.
Australia	Project Acacia (RBA and DFCRC) tested tokenised settlement across a broad set of industry use cases. The post-Acacia programme includes exploration of a DFMI regulatory sandbox, a tokenised government bond initiative, the Joint Regulator–Industry Tokenisation Advisory Group, industry-led working groups, consultation on tokenised money and RITS infrastructure, and further exploration of ESA policy and wholesale CBDC.

THE EMERGING GLOBAL PATTERN

In the markets above, native issuance has generally followed either enabling legislation (Germany, Switzerland) or a sandbox or pilot regime (UK DSS, EU DLT Pilot Regime). Australia is moving from time-bound experimentation to a coordinated programme of regulatory, industry and settlement-infrastructure work.

Digital Issuance – What must be resolved?

Legal, fiscal and prudential frameworks are the key constraints to adoption and scale.

KEY BARRIERS



LEGAL & REGULATORY

- What additional legal, regulatory or market changes are required for a DLT register to be the authoritative record of title for particular categories of digitally native debt instrument? Work on domestic implementation of MLETR is one potential pathway for legally effective digital records.
- ASIC Information Sheet 225 sets out when digital assets may be financial products. How does it apply to tokenised AUD debt, and do the wholesale carve-outs still apply?
- Does a token venue or minting function require a market or CS facility licence, and how will the incoming digital asset platform reforms treat tokenised custody platforms and digital twins?



PRUDENTIAL & MARKET STRUCTURE

- Basel cryptoasset classification: does the instrument sit in Group 1a, or fall to Group 2 at a higher risk weight? The Basel Committee decided in November 2025 to expedite a targeted review of the cryptoasset standard; APRA's Australian implementation position remains unresolved.
- Would the RBA accept it in open market operations, and how would APRA treat it prudentially?
- One ISIN or two? Index inclusion, fungibility on unwrap, and registrar of last resort if the platform fails.



TAX & ACCOUNTING

- Does a tokenised issue satisfy the public offer test for the s128F withholding tax exemption?
- Is minting or unwrapping a disposal for CGT or TOFA, and is there a duty consequence on transfer?
- If a smart contract pays the coupon, who is the payer for withholding, and who is liable for error?

FOR DISCUSSION



- Reform is already underway – ASIC INFO 225, the digital asset platform reforms, MLETR implementation work and the Basel review. Which remaining barrier would still stop you issuing or buying a digital AUD bond?
- For which categories of digitally native debt instrument do the current pathways fall short, and what would close the gap – legislation, regulator guidance or market convention?

Trade & Market Access

PILLAR - 02

*Extended hours, peer-to-peer transfer and
whether a second venue helps or splits the book?*

CONSIDERATIONS

- Two thirds of CGS are held offshore*
- Single pool vs. parallel venue?

AOFM, Dec 2025; Non-resident share of the free float (excl. RBA holdings)

PILLAR - 02

Trade - Overview

AUD fixed income already trades globally. The question is whether extending transfer and settlement windows creates additional value.

01 TODAY

How it runs

- Bilateral OTC and RFQ on electronic platforms; interdealer brokers for benchmark lines; price formation is dealer-intermediated.
- Offshore investors can access and trade AUD fixed income through dealer networks across multiple time zones.
- Around two thirds of Commonwealth Government Securities are held offshore.¹

02 WHERE IS THE VALUE?

What problem is tokenisation solving

- Access to trading is already available; the question is whether additional liquidity emerges outside Australian market hours.
- Price discovery in AUD fixed income remains dealer-driven and relationship-based rather than venue-driven.
- The benefits of extended trading may depend more on settlement, funding and collateral availability than on the ability to trade itself.

03 WHAT COULD CHANGE

The tokenised proposition

- Investors can transact and transfer positions outside Australian market hours.
- New participant access models reduce reliance on traditional intermediary chains.
- Trading, transfer and settlement occur within the same operating window.

04 WHAT MUST BE TRUE

The bridging conditions

- Extended hours only matter if liquidity providers are willing and able to quote prices in those hours.
- Trading activity must be supported by corresponding settlement, funding and collateral infrastructure.
- Operational and regulatory responsibilities must extend with the hours.



FOR DISCUSSION

- Is the opportunity in fixed income trading itself, or in reducing the frictions that sit around settlement, funding and collateral?

¹ AOFM, Dec 2025; Non-resident share of the free float (excl. RBA holdings)

Trade – Extend the pool, or build a parallel one?

Equity markets are pursuing two distinct models: enhancing existing market infrastructure or developing dedicated digital venues.

EXTEND THE EXISTING POOL

Trading, liquidity and settlement remain in a single market structure

POTENTIAL BENEFITS

- One trading venue, one liquidity pool and one reference price.
- Existing eligibility, index, repo and collateral treatment carry through unchanged.
- Participants retain a single connection, reconciliation process and risk view.
- Regulatory, operational and governance arrangements remain anchored in existing infrastructure.

CONSIDERATIONS

- Adoption requires coordination across the value chain: CSD, cash rails, treasury, risk, operations and support functions.
- Operational processes, reconciliation and maintenance windows must be redesigned.
- Limited after-hours activity may not justify the cost of extended operating hours.
- Operational resilience obligations, escalation processes and default management must extend with the hours.

PARALLEL TOKENISED VENUE

A separate tokenised market operating out of hours, with mint and unwrap at the handover

POTENTIAL BENEFITS

- Change is contained, allowing new capabilities to be introduced alongside existing infrastructure.
- Participation can be optional, avoiding immediate market-wide change.
- Enables continuous settlement and conditional transactions within the digital venue.
- Existing operating hours, batch processes and maintenance windows remain unchanged.

CONSIDERATIONS

- Liquidity may fragment across conventional and tokenised venues.
- The handover between the two environments introduces new operational risks, including cut-offs, reconciliation and failed transfers.
- Two venues, operating models and participant connections, increases adoption complexity.
- Valuation, reference pricing and market governance outside current operating hours remain unresolved.



FOR DISCUSSION

- Does the Australian Fixed Income market have sufficient depth to support both tokenised and conventional trading venues without fragmenting liquidity?

PILLAR - 02

Trade – What have others proven?

Extended-hours market models are emerging in equities and digital asset markets, offering useful lessons for fixed income.

MARKET	WHAT HAS ACTUALLY BEEN DONE ¹
United States	Nasdaq and NYSE have both moved toward extended and near-continuous equity sessions, and CME and ICE have announced tokenisation initiatives - the extend-the-pool path, taken by incumbents.
Brazil	B3 has run a parallel digital market model: conventional securities trade during the standard day, with tokenised access to out-of-hours capability alongside.
Switzerland	SDX operates as a licensed exchange and CSD for digital assets, with dual listing used to keep a single economic pool across two venues.
United States	DTCC has run test trades on a shared ledger with a large participant cohort, focused on the settlement layer rather than on extending trading hours.
Europe	LSEG's digital markets initiative and Euroclear's D-FMI both keep the incumbent as the record-keeper rather than creating a competing venue.

THE EMERGING GLOBAL PATTERN

Where incumbents have led, the pool remained and the change was to hours and infrastructure. Where new venues were created, the challenge has been attracting activity away from the incumbent market.

¹ Sources available on request.

PILLAR - 02

Trade – What needs to be resolved?

If trading is already possible across time zones, what would need to change before trading of tokenized assets creates meaningful additional value?

KEY BARRIERS



MARKET INTEGRITY & LICENSING

- Does a tokenised venue or after-hours session sit within existing licences, or require a new regulatory framework?
- How would transaction reporting, supervision and rulebook obligations extend beyond current hours?
- If two trading environments exist, how is market integrity maintained across them?



LIQUIDITY & RISK

- Who provides liquidity outside Australian hours, and on what risk appetite?
- Would extended hours create additional trading activity, or simply redistribute activity already occurring today?
- Do the funding, settlement and collateral arrangements exist to support activity in those hours?



OPERATIONS & INTEROPERABILITY

- Where is the handover between conventional and tokenised environments, and what happens if it fails?
- How would valuation, reference pricing and risk management operate outside Australian market hours?
- What operational and resilience obligations must extend with the trading window?



FOR DISCUSSION

For your organisation, what constrains activity outside Australian hours: trading access, liquidity, settlement capability, or collateral availability?

Settlement

PILLAR - 03

Atomic vs DvP – what inefficiencies remain in a market that already settles RTGS in central bank money?

CONSIDERATIONS

- Australia already has DvP in central bank money
- Austraclear and HVCS operate within defined windows; the RITS Fast Settlement Service settles 24/7
- Several candidate settlement approaches, at different stages of readiness

PILLAR - 03

Settlement – Where we start from

Australia settles wholesale debt DvP in central bank money. The starting point is stronger than in many other markets that have pursued tokenised settlement.

01 TODAY	02 WHERE IS THE VALUE?	03 WHAT COULD CHANGE?	04 WHAT MUST BE TRUE?
<i>How it runs</i>	<i>What problem is tokenisation solving</i>	<i>The tokenised proposition</i>	<i>The bridging conditions</i>
- Austraclear settles wholesale debt trade-by-trade on a real-time gross basis, with the cash leg across Exchange Settlement Accounts in RITS. - Settlement is delivery-versus-payment in central bank money, with finality protection under the approved RTGS system arrangements. - Austraclear and HVCS operate within defined Australian operating windows. The RITS Fast Settlement Service already provides continuous 24/7 settlement across ESAs for eligible NPP payments.	- Austraclear does not have the T+2 exposure or deferred net settlement problem that tokenisation solves elsewhere. - Constraints sit in intraday liquidity buffers, institutional connectivity, transaction limits, operational support and cross-system integration – not in the absence of 24/7 rails. - Global evidence points the same way: the reported benefit is intraday liquidity and collateral velocity, not settlement itself.	- Atomicity across more than two legs: e.g. repo plus substitution plus fee, or a cross-currency PvP leg, settled or not at all. - Tokenised asset settlement connected to existing rails at institutional scale, or settled against a tokenised settlement asset. - Conditionality: settlement contingent on an event, a price or an eligibility test, executed without instruction.	- A settlement approach the market will accept: synchronised DvP using existing ESA infrastructure, tokenised central bank money, deposit tokens or a regulated stablecoin. - Settlement finality protection must be established for the new arrangement, not assumed by contract. PSNA protection depends on the legal structure and, where applicable, approval as an RTGS system. - The new layer must meet the RBA's Financial Stability Standards and CPS 230 expectations from day one.

FOR DISCUSSION



- Given that the Fast Settlement Service already settles 24/7 across ESAs, what frictions actually remain: Austraclear availability and connectivity, liquidity trapped in prefunding, or the inability to execute multi-leg transactions as a single atomic event?

PILLAR - 03

Settlement – Varying degrees of change for each model

Five approaches, differing in how close the settlement asset sits to central bank money and how much change each requires.

A SYNCHRONISED DvP	B TOKENISED CENTRAL BANK MONEY	C DEPOSIT TOKENS	D REGULATED STABLECOINS	E FREE-OF-PAYMENT FIRST
<i>Cash stays in existing RITS infrastructure; a synchronisation mechanism coordinates DvP against the tokenised asset platform</i>	<i>Central bank money on-ledger: tokenised ESA balances, or a possible purpose-issued wholesale CBDC – these are distinct arrangements</i>	<i>Tokenised commercial bank deposits, issued by prudentially regulated banks</i>	<i>Privately issued tokens backed by reserve assets, distinct from deposit tokens</i>	<i>A phased implementation pathway, not a complete end-state settlement model</i>
POTENTIAL BENEFIT - Preserves central bank money settlement without requiring a wCBDC. - Acacia demonstrated variants: Northern Trust with HVCS/RITS, and Westpac with NPP PayTo and the Fast Settlement Service. - Builds on infrastructure that already exists and is already trusted.	POTENTIAL BENEFIT - Tokenised ESA balances make existing central bank money available on-ledger without issuing a separate CBDC. - A wCBDC would be a purpose-issued central bank liability, enabling both legs to settle natively as one event. - Use of a central bank liability removes settlement-asset credit risk.	POTENTIAL BENEFIT - Technical and legal feasibility has been explored, including in Project Acacia use cases. - Carries the prudential foundation associated with bank deposits. - Can support programmable and out-of-hours settlement workflows.	POTENTIAL BENEFIT - Australian issuance already exists, and stablecoins were tested in Project Acacia use cases. - Can support 24/7 settlement and cross-border PvP. - Does not depend on the RBA issuing a new settlement asset.	POTENTIAL BENEFIT - A possible staged pathway for testing collateral mobility or servicing before integrating a cash leg. - Deliverable without a new settlement asset. - Preserves the existing Austraclear and RITS position.
CONSIDERATION - Introduces integration and orchestration complexity across two systems. - Residual operational considerations at the synchronisation boundary. - Dependent on access to, and the operating model of, the existing rails.	CONSIDERATION - It does not automatically confer statutory finality. PSNA protection depends on the legal structure of the arrangement and, where applicable, approval of the settlement system as an approved RTGS system. - Dependent on RBA access policy, remuneration and operating arrangements; limited to ESA holders. - Project Acacia was exploratory and is not a commitment by the RBA to issue a wCBDC.	CONSIDERATION - Legal, policy and interoperability questions remain unresolved. - Interbank settlement between issuers remains an open question. - Fragmentation across issuers unless standardised.	CONSIDERATION - The Australian regulatory and prudential framework is still evolving. - Issuer, reserve, redemption, credit and remuneration considerations apply. - Prudential and eligibility treatment for a systemically important facility is unsettled.	CONSIDERATION - Not equivalent to a complete DvP settlement model. - Needs a credible path to DvP, or it may become the default. - Limits the value case to collateral and servicing.

FOR DISCUSSION



- Which of these approaches would your organisation be prepared to use for AUD wholesale debt? Does synchronised DvP against existing rails address enough of the problem, or is a tokenised settlement asset required?

PILLAR - 03

Settlement – What have others proven?

The pillar with the most live international experimentation - and the clearest dependency on public policy.

MARKET	WHAT HAS ACTUALLY BEEN DONE ¹
Australia	Project Acacia, run by the RBA with the DFCRC, tested wholesale settlement across a broad set of industry use cases – covering wholesale CBDC, stablecoins, forms of commercial bank money, existing ESA balances, and synchronised settlement using existing payment and central bank settlement infrastructure. ASX and Austraclear contributed to use cases spanning tokenised corporate bonds and intraday repo.
Switzerland	Project Helvetia has settled digital bond transactions on SDX in wholesale CBDC in live production – evidence that a tokenised central bank settlement asset can work at institutional scale.
Euro area	The ECB's DLT settlement trials involved a large cohort of institutions and multiple central banks, and have progressed into a longer-term programme covering both a trigger solution and a native settlement platform.
United Kingdom	Project Meridian demonstrated synchronised settlement against the existing RTGS system - value without issuing a new settlement asset.
Cross-border	Bank-operated settlement utilities are moving central-bank-backed cash on-ledger for major currencies, giving a private-sector route to a near-central-bank settlement asset.

THE EMERGING GLOBAL PATTERN

Two broad pathways are visible: co-locating tokenised assets and tokenised money on a single ledger (Switzerland), or synchronising tokenised asset platforms with existing RTGS or fast-payment infrastructure (Meridian, the ECB trigger model, and Acacia's synchronisation use cases). The lessons from Acacia provide an important evidence base for this industry discussion.

¹ Sources available on request. Australian entry: Project Acacia – Exploring the role of digital money in wholesale tokenised asset markets, Final Report, RBA and DFCRC, May 2026.

PILLAR - 03

Settlement – What must be resolved?

Settlement turns on three unresolved questions - legal finality, prudential acceptance of the settlement asset, and intraday liquidity without netting.

KEY BARRIERS



LEGAL FINALITY & RECOVERY

- Would a tokenised settlement arrangement attract netting and finality protection under the PSNA? This depends on the legal structure and, where applicable, approval of the system as an approved RTGS system.
- What is final, at what moment, and does the ledger record or the legal register prevail if they diverge?
- How is settlement completed if the ledger is unavailable, and what is the recovery and wind-down plan the regulator would expect?



REGULATORY & PRUDENTIAL

- Financial Stability Standards and CPS 230: how does a new settlement layer meet resilience, headroom and critical-operation requirements from day one?
- Is a non-central-bank settlement asset acceptable for a systemically important facility, and on what conditions?
- How does this interact with the introduction of bond and repo central clearing in 2027?



LIQUIDITY & OPERATIONS

- Prefunding may offset some efficiency benefits, particularly where liquidity must be distributed across multiple non-interoperable platforms. The scale of this constraint, and the liquidity-saving mechanisms required, remain open questions.
- Who provides intraday liquidity outside Austraclear and HVCS operating windows, and against what collateral?
- Cross-currency: is PvP with an offshore counterparty in the same atomic event realistic, or a later phase?



FOR DISCUSSION

- Two broad pathways have emerged: co-locating tokenised assets and tokenised money, or synchronising with existing RTGS and fast-payment infrastructure. Acacia demonstrated both. Which is most applicable to Australia's market structure?

Source: Project Acacia Final Report, RBA and DFCRC, May 2026. Legal and finality positions are indicative only and not legal advice.

Asset Servicing & Programmability

PILLAR - 04

*Recurring servicing costs for the life of the asset;
Liability allocation where a smart contract
performs the obligation*

CONSIDERATIONS

- The strongest recurring-value case
- If code and documentation are mis-aligned, which prevails?
- Australian withholding tax treatment remains unresolved

PILLAR - 04

Asset Servicing – Where do we start from?

Issuance happens once. Servicing happens every coupon, every election, every reconciliation, for the life of the bond.

01 TODAY	02 WHERE IS THE VALUE?	03 WHAT COULD CHANGE?	04 WHAT MUST BE TRUE?
<i>How it runs</i>	<i>What problem is tokenisation solving</i>	<i>The tokenised proposition</i>	<i>The bridging conditions</i>
- Coupon calculation and payment run through registrars and paying agents against record-date positions. - Withholding tax, residency status and investor documentation are handled outside the instrument, largely manually. - Bondholder elections for tender offers, exchange offers, consent solicitations and restructurings remain instruction-driven and reconciliation-heavy.	- Recurring, compounding and measurable - unlike issuance, which saves once. - Directly attacks reconciliation, breaks, claims and interest compensation, which are quantifiable today. - Digital twins can support meaningful servicing automation, but the underlying traditional record and reconciliation boundary may constrain the extent of end-to-end automation.	- Accrual, record date and payment logic execute from the instrument itself, against a position that cannot be in dispute. - Withholding applied at source from investor attributes carried with the holding. - Eligibility, haircut and transfer restrictions update automatically, feeding collateral and reporting without a separate process.	- Legal liability must be allocated: when code pays the wrong amount, the issuer, registrar or platform is answerable - not the code. - Change control and upgradeability must exist without undermining the immutability that made the record trustworthy. - Holder data must stay confidential on a shared ledger while remaining available for tax and regulatory reporting.



FOR DISCUSSION

- Acacia demonstrated automated coupon calculation, distribution and digital bondholder voting, including on digital twins. Which fixed income lifecycle events still create the greatest operational cost, risk or manual effort today, and what has prevented automation through existing processes?

PILLAR - 04

Asset Servicing – Where should the logic live?

Three high-level models, distinguished by the legal weight of the logic. Further right, the greater the potential benefit and the greater the unresolved liability.

A) CONVENTIONAL SERVICING

Tokenised representation only; servicing continues to run conventionally off the underlying instrument

POTENTIAL BENEFITS

- Zero incremental legal risk; agent, registrar and tax arrangements untouched.
- Deliverable immediately, and compatible with a digital twin.
- Keeps the regulatory conversation on mobility, not liability.

CONSIDERATIONS

- Forgoes the largest recurring benefit in fixed income.
- Token-to-underlying reconciliation persists - a step added, not removed.

B) ORCHESTRATION LAYER

Smart contracts trigger conventional payments and instructions - contract governs, code executes

POTENTIAL BENEFITS

- The contract stays authoritative; code only executes, so liability does not move.
- Removes manual instruction, breaks and timing error without changing the legal architecture.
- Mirrors the trigger model used in central bank experimentation, including Project Acacia synchronisation use cases.
- Works with a digital twin and existing paying agents.

CONSIDERATIONS

- Benefit is capped: the underlying process still exists, just better instructed.
- Two records must still agree, so reconciliation remains.
- Needs data standards genuinely adopted, not just published.

C) INSTRUMENT-LEVEL PROGRAMMABILITY

Terms are embedded in the instrument and self-execute - the code is the mechanism of performance

POTENTIAL BENEFITS

- Full lifecycle automation of accrual, payment, elections and eligibility.
- One record: position, entitlement and payment are the same object, so breaks disappear.
- Withholding, reporting and eligibility execute from attributes carried with the holding.
- Most fully realised where the digitally native instrument is the authoritative record, although elements of instrument and lifecycle logic can also be implemented in digital-twin structures.

CONSIDERATIONS

- Liability is unresolved: a wrong coupon is a real loss, and reversal is not simple.
- Upgrade and error-correction rights conflict with the immutability that gives the record authority.
- Needs the ATO, registrar and trustee to accept code as performance.
- Privacy: shared ledgers reveal commercially sensitive information.



FOR DISCUSSION

- If a smart contract and the legal documentation produce different outcomes, which should prevail, and how would that be resolved in practice?

Asset Servicing – What have others proven?

Servicing automation works where the registrar role is legally defined and instrument data is standardised.

MARKET	WHAT HAS ACTUALLY BEEN DONE ¹
Germany	Germany's eWpG establishes the crypto securities registrar as a defined, regulated function, providing clear accountability for maintaining the securities record.
Hong Kong	HKMA's Project Evergreen demonstrated tokenised bond lifecycle servicing, including coupon payments and redemption processes, on a live sovereign issuance.
Industry standards	ICMA's Bond Data Taxonomy and ISDA's Common Domain Model provide standardised, machine-readable representations of instrument terms and lifecycle events, supporting interoperability and automation.
United States	Tokenised money market funds have demonstrated automated subscription, redemption and distribution processes and are increasingly being used as collateral, providing one of the clearest examples of programmable asset servicing at scale.
Euro area	European initiatives generally seek to support digitally issued securities within existing market infrastructure frameworks, with central securities depositories continuing to play a key role in recordkeeping and settlement.

THE EMERGING GLOBAL PATTERN

Servicing automation has been proven at scale in funds, where the registrar role was legally defined.

¹ Sources available on request.

Asset Servicing – What must be resolved?

Realising the benefits of servicing automation requires greater clarity across contractual, tax, privacy and data standard frameworks.

KEY BARRIERS



LEGAL & CONTRACTUAL

- Does the trust deed or the code prevail on divergence, and does the documentation say so explicitly today?
- Who holds the registrar obligation, and can it be performed by a platform rather than a licensed entity?
- Error correction: what is the legal mechanism to reverse an incorrect automated payment, and who bears the loss meanwhile?



TAX & REPORTING

- Withholding at source: can the ATO accept withholding executed by a contract, and who is the payer for the purposes of the obligation?
- Does automated servicing affect TOFA treatment or the character of the payment?
- Can CRS, FATCA and regulatory position reporting be produced from ledger records without a parallel reconciliation?



DATA, PRIVACY & STANDARDS

- Holdings are commercially sensitive: how is confidentiality preserved on a shared ledger without recreating a private silo?
- Which data standard governs - ISO 20022 alignment, the ICMA bond data taxonomy, or a bespoke schema per platform?
- Governance of contract change: who can amend the terms of a live instrument, and with whose consent?



FOR DISCUSSION

- Australia has no statutory digital registrar concept: if tokenisation were adopted, what does the pathway look like?

Collateral Mobility

PILLAR - 05

The pillar with the strongest evidence and where the buffer can be measured.

CONSIDERATIONS

- Mobilise the record, not the asset
- Bond and repo CCP arrives from 2027

PILLAR - 05

Collateral – Where do we start from?

What cost does the inability to move collateral outside the Australian operating day create?

01 TODAY	02 WHERE IS THE VALUE?	03 WHAT COULD CHANGE?	04 WHAT MUST BE TRUE?
<i>How it runs</i>	<i>What problem is tokenisation solving</i>	<i>The tokenised proposition</i>	<i>The bridging conditions</i>
- Domestic triparty operates through ASX Collateral over Austraclear; bilateral repo is typically documented under GMRA arrangements. - Austraclear and RITS operate within Australian market hours, while major collateral demands arise across multiple time zones. - International participants often mobilise AUD collateral through ICSDs and global custody networks.	- Collateral may be available but held in the wrong place. - Eligible collateral is increasingly concentrated in a limited pool of assets. - Time-zone mismatch creates liquidity buffers, operational workarounds and funding costs.	- Increase the availability of collateral where and when it is needed. - Reduce operational dependency on settlement windows and custody chains. - Reduce liquidity buffers maintained solely to manage timing and mobility constraints.	- Legal effectiveness of collateral transfers must be established. - Eligibility, valuation and haircut governance must operate outside standard market hours. - Operational resilience and recovery arrangements must extend to the mobility layer.



FOR DISCUSSION

- Which creates the largest cost today: collateral held in the wrong location, insufficient eligible collateral, limited operating hours, or operational complexity?

PILLAR - 05

Collateral – Four approaches to Mobilisation

Four approaches addressing different sources of collateral friction: operating hours, mobility, eligibility and location.

A) TOKENISED COLLATERAL RECORD

Ownership of an immobilised Austraclear position transfers on a ledger; the security never moves

POTENTIAL BENEFIT

- Underlying security remains in Austraclear; only the collateral interest moves.
- Preserves existing custody and settlement arrangements.
- Proven in offshore market infrastructure pilots.

CONSIDERATIONS

- Needs legal certainty that record transfer is perfected under the PPSA.
- Out-of-hours eligibility and haircut authority must be assigned.
- Needs counterparties on the same record/network

B) EXTENDED TRIPARTY

ASX Collateral operating hours and automation extended without tokenisation

POTENTIAL BENEFIT

- Conventional reform: no legal novelty, no new asset or risk category.
- Directly addresses overnight immobility, the stated pain point.
- Fastest outcome, and a fair benchmark for any tokenised proposal.

CONSIDERATIONS

- Requires extended operating hours with uncertain utilisation
- Does not address cross-custodian or cross-jurisdiction collateral movement.

C) NEW COLLATERAL TYPES

Tokenised money market funds and tokenised securities accepted directly as margin

POTENTIAL BENEFIT

- Expands the range of assets available to meet collateral and margin requirements.
- Creates additional utility for holders of tokenised assets.
- Live offshore: tokenised fund units pledged between major institutions.

CONSIDERATIONS

- Requires CCP rulebook change and APRA/RBA prudential and eligibility acceptance.
- Out-of-hours valuation and haircut methodology is unsettled.
- Concentration risk if collateral and platform share a failure point.

D) CROSS-BORDER MOBILITY

Interoperability with offshore collateral pools and CCPs across time zones

POTENTIAL BENEFIT

- Addresses cross-border and cross-time-zone collateral flows
- Reduces buffers held against time-zone differences
- Consistent with international FMI investment trends

CONSIDERATIONS

- Depends on foreign law, CSDs and recognition arrangements outside Australian control.
- Requires interoperability standards across multiple platforms and infrastructures.
- Depends on infrastructure and governance beyond Australian market control.



FOR DISCUSSION

- Which approach creates the greatest value for your organisation: improved mobility, extended operating hours, broader collateral eligibility, or cross-border access?

Collateral – What others have proven?

Collateral is the most developed institutional tokenisation use case globally, but Australian legal, eligibility and operational questions remain unresolved.

MARKET	WHAT HAS ACTUALLY BEEN DONE
Europe	A live tokenised collateral service operates between Eurex, Clearstream and a specialist provider: ownership of securities held at the CSD transfers on a ledger while the securities themselves never move.
United States	Tokenised money market fund units have been pledged as collateral between a major bank and a dealer counterparty, demonstrating acceptance of a tokenised asset as margin.
United States	Distributed repo platforms are settling very large monthly volumes of bilateral repo on-ledger, with intraday terms measured in hours rather than days.
Global	Broadridge's Distributed Ledger Repo platform processed an average of US\$368 billion in daily repo transactions in April 2026.
Euro area	Central bank work is now extending to the acceptance of tokenised securities as eligible collateral - the step that converts a pilot into a market.

EMERGING TREND

Collateral mobility, collateral eligibility and repo are the first tokenisation use cases to demonstrate institutional scale.

PILLAR - 05

Collateral – What must be resolved?

Three questions determine whether tokenised collateral is usable in Australia: legal certainty, eligibility and operational resilience.



LEGAL & DOCUMENTATION

- Is a ledger transfer of a collateral record effective as title transfer or as a perfected security interest under the PPSA?
- Do the GMRA, the collateral annexes and ASX's own documentation recognise the tokenised form, and what amendments are required?
- Does close-out netting survive across the tokenised leg, and what does a default administrator actually seize?



ELIGIBILITY & PRUDENTIAL

- Would the RBA accept tokenised collateral in open market operations?
- Will the bond and repo CCP arriving in 2027 accept tokenised margin, and on what eligibility and haircut basis?
- Who sets and can change haircuts outside Australian hours, and what is the governance of that authority?



OPERATIONS & RESILIENCE

- What happens to mobilised collateral if the tokenisation platform, or the minting entity, fails overnight?
- How is valuation performed out of hours when the underlying market is closed and prices are stale?
- Where does this sit relative to Austraclear's resilience obligations and its critical operations under CPS 230?



FOR DISCUSSION

- Of the barriers identified, which must be resolved before adoption can begin, and which can evolve alongside implementation?

Summary

Sequencing the 5 Pillars



Questions

Next Steps

Upcoming Industry Sessions

Targeted sessions to explore priority use cases and practical industry requirements.

REGISTRATION Invitations will be issued to targeted industry cohorts. To express interest in a session, contact tokenisation@asx.com.au.

23 SEP	Derivatives Clearing	ASX office / MS Teams	2.00pm – 3.30pm
14 OCT	Cash Equities Clearing & Settlement	ASX office / MS Teams	2.00pm – 4.00pm
28 OCT	Asset Issuance & Products	ASX office / MS Teams	3.00pm – 5.00pm
18 NOV	IPO Process / Capital Raising	ASX office / MS Teams	2.00pm – 4.00pm
25 NOV	Trading / Market Access	ASX office / MS Teams	2.00pm – 4.00pm

Session dates and times subject to change.



Thank you

ASX



Get in touch

For information on the tokenisation working group visit the ASX tokenisation [website](#) or email tokenisation@asx.com.au.

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