December 11, 2024

ripple

Reserve Bank of Australia
8 Chifley Square
Sydney NSW 2000

Email: projectacacia@rba.gov.au

Dear Sir or Madam,

Ripple Labs Inc. ("Ripple") welcomes the opportunity to comment on the Reserve Bank of Australia's ("RBA") joint consultation paper with the Digital Finance Cooperative Research Centre ("DFCRC") exploring the role of digital money in wholesale tokenised asset markets (the "Consultation") published on 8 November 2024.[1]

Ripple would like to thank the RBA and DFCRC for the in-depth and comprehensive analysis that has been undertaken in drafting the Consultation, as well as for the opportunity to provide our comments. We respectfully request that you take them into consideration as you consider the policy direction and development of a regulatory framework for wholesale tokenised asset markets in Australia.

We also welcome the opportunity for ongoing engagement with the RBA and DFCRC on the regulatory regime for tokenised assets, and wish to confirm our interest in participating in the experimental research phase (as outlined in Part 2 of this response) and in joining the Industry Advisory Group (as outlined in Part 3 of this response) for Project Acacia.

In responding to this consultation paper, there are two overall themes that we wish to bring to the attention of the RBA and DFCRC:

- The need for a sustainable transition of wholesale capital markets. In the short term this can be through specifically targeted reforms that can be applied to make a sandbox initiative attractive and provide a successful path for testing regulatory modifications to enabling tokenisation in wholesale markets. In the longer term, this will require a comprehensive assessment of the compatibility between the use of distributed ledger technology ("DLT") and the existing regulatory regimes, not only for securities but also for frameworks relating to property and ownership rights, contract law, and clearing and settlement.

[1] See https://www.rba.gov.au/payments-and-infrastructure/central-bank-digital-currency/pdf/project-acacia-consultation-paper-2024-11.pdf, Project Acacia - Exploring the Role of Digital Money in Wholesale Tokenised Asset Markets

- The importance of being agnostic in relation to the types of settlement asset that will be permitted under such a framework and ensuring that the concept of tokenisation can deliver maximum benefits to the wholesale markets in Australia.

Ripple also recently published a policy paper on key policy reforms to support tokenisation of real world assets in Australia[2] ("Australia Tokenisation Paper") in partnership with the DFCRC and the Digital Economy Council of Australia ("DECA"), and we request that you read the Australia Tokenisation Paper in conjunction with this response.

With this overview, Ripple respectfully submits the following responses to the questions for consultation set forth in the Consultation in the attached Appendix.

Should the RBA wish to discuss any of the points raised as part of this feedback to the consultation paper, please do not hesitate to contact Rahul Advani (Senior Policy Director) at radvani@ripple.com and Caren Tso (Policy Manager) at ctso@ripple.com.

Sincerely,

Ripple Labs Inc.

[2] See https://ripple.com/files/Key-Policy-Reforms-to-Support-Tokenisation-of-Real-World-Assets-in-Australia.pdf, Key Policy Reforms to Support Tokenisation of Real World Assets in Australia.

APPENDIX

Part 1 – Conceptual Research and Questions for Consultation

Question 1

What are the key opportunities and challenges of asset tokenisation in wholesale domestic markets? How can the challenges be overcome?

Ripple believes that the Consultation provides a good overview of the key opportunities and challenges associated with asset tokenisation in wholesale markets. As a leading provider of digital asset infrastructure for financial institutions, Ripple strongly believes that tokenisation can redefine how assets are managed, traded, and settled, therefore fostering a more efficient and transparent financial ecosystem.

At its core, asset tokenisation involves the digital representation of physical and/or financial assets on a blockchain. Key characteristics of asset tokenisation include:

a. Real-time settlement - where transactions are executed and finalised instantly, thus seamlessly operating 24/7 to bypass delays associated with operations and processes for traditional markets.
b. Fractional ownership - fractional ownership allows assets to be divided into smaller, tradable units, making high-value investments more accessible to a broader audience.
c. Transparency and immutability - transactions recorded on the blockchain provide an unalterable record of ownership and transactions, which enables greater trust among users.
d. Smart contract automation - the use of smart contracts simplifies and enforces agreements, reducing manual intervention and the risk of human error.

Building on these characteristics, the key opportunities for asset tokenisation in wholesale domestic markets become evident. Asset tokenisation drives market efficiency by eliminating delays in settlement and reconciliation often caused by intermediaries in traditional markets, thereby increasing transaction volume. It also enhances liquidity through fractional ownership and secondary markets, therefore for democratising access and attracting a broader investor base. Additionally, asset tokenisation could increase the utility of assets for investors. As a relevant example, illiquid assets are typically not accepted as collateral, or require steep haircuts in order to be accepted, as the value is subjective and opaque. However, the ownership of tokenised units where there is an active market and liquidity exists removes this barrier, and will allow new opportunities for the value of illiquid assets to be unlocked.

Through the use of blockchain technology, this has the opportunity to simplify compliance and foster trust, while global interoperability reduces procedural complexities in cross-border transactions.

Notwithstanding these key opportunities, Ripple is aligned with key challenges addressed in the Consultation, particularly in relation to interoperability between both DLT and traditional market infrastructures as well as amongst DLT infrastructures, usually due to technological and operational complexities.

An additional challenge we believe is key in overcoming to unlock the benefits of asset tokenisation is the regulatory ambiguity surrounding tokenisation of real world assets ("RWA"), which this project is seeking to address. Ripple believes that a substantial reform of the licences applicable to clearing and settlement will be required to realise the full potential of tokenised RWA markets and to factor in the significant differences and efficiencies in DLT-based systems compared to traditional clearing and settlement.

As outlined in the Australia Tokenisation Paper, the current separate licensing regimes for market infrastructure and clearing and settlement in Australia are not fit for purpose in this regard, since for digital assets, trading and settlement are one inseparable function. Additionally, in atomic settlement, the clearing function is not present, unlike in traditional market infrastructure.

Further, the provisions, safeguards, and requirements of the current licensing frameworks, which are designed to protect against systemic risk, are inconsistent with the conditional settlement of digital assets which eliminates build-up of counterparty risk.

Therefore, in the interim, we believe that licensing exemptions could be applied to the relevant licences in order for firms looking to operate in this area to do so without appropriate regulation and the risk of non-compliance.

In the medium term, to overcome these challenges, we propose the development of a regulatory sandbox for tokenised RWA markets. We foresee such mechanisms playing a pivotal role in building the understanding and capabilities necessary for tokenising RWAs.

Any sandbox developments should also look to overseas efforts such as the European Union ("EU")'s DLT Pilot Regime and the United Kingdom ("UK")'s Digital Securities Sandbox ("DSS"), where lessons can be learned from these.

In the EU, this regulatory sandbox has had little to no engagement from industry for a number of reasons, primarily because of the low thresholds that have been set for trading, the lack of available digital money arrangements such as fiat-backed stablecoins, and the requirement to establish a central securities depository, which has effectively prohibited credit institutions and investment firms from participating. Over in the UK, the DSS has focused on fostering innovation by providing a controlled environment for testing DLT solutions within

financial market infrastructures ("FMI"). By allowing FMIs to trial new tokenised business models under a modified regulatory framework and clearly outlining the progression stages, it ensures a structured and gradual development while minimising systemic risk.

These examples, as well as others from Hong Kong, Singapore, Switzerland, and the United Arab Emirates have been outlined in the Australia Tokenisation Paper.

Question 2

What regulatory obstacles exist to an efficient settlement mechanism for wholesale tokenised asset markets, including the development of new forms of money to support this? What solutions do you suggest?

Ripple would like to highlight a few key regulatory obstacles to an efficient settlement mechanism in wholesale tokenised asset markets, such constraints of the traditional settlement structure, the regulatory framework for stablecoins, and the taxation regime for the treatment of tokenised transactions.

a. Traditional settlement structure

While licensed firms are technically able to perform securities settlement and central securities depository functions in a DLT-based system, and their roles may evolve to replicate or complement those of a traditional securities settlement facility, their current ability to obtain authorisations and operate within their own specialist domains is limited by the structure of the Financial Stability Standards for Central Counterparties ("CCP")[3] and Securities Settlement Facilities ("SSF")[4] standards under the Corporations Act[5]. As outlined in the Australia Tokenisation Paper, we believe the most significant regulatory obstacle is that the models of traditional settlement facilities are used to define new models for wholesale tokenised asset markets. For instance, the current standards mandate centralised clearing and settlement models, requiring extensive infrastructure and oversight to mitigate system risks.

The Corporations Act, which governs these standards, enforces compliance frameworks that are often incompatible with the decentralised and automated nature of blockchain technology. As such, DLT-based settlements face challenges in proving their equivalence to traditional models under these regulations. Moreover, the stringent requirements for obtaining a CCP and SSF license creates barriers for innovative models to demonstrate their capabilities in real-world settings. These constraints not only restrict the potential for specialised firms to carve out their domains, but also hinders the adoption of

[3] See https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/standards/central-counterparties/2012/, Financial Stability Standards for Central Counterparties.
[4] See https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/standards/securities-settlement-facilities/2024/, Financial Stability Standards for Securities Settlement Facilities.
[5] See https://www.legislation.gov.au/C2004A00818/2019-07-01/text, Corporations Act, 2001

emerging technologies that have the potential to revolutionise the financial market infrastructures.

Therefore, we respectfully believe that the RBA should build on existing policy initiatives to enable new DLT-based and distributed business models, especially in capital markets. This would necessitate moving away from a wholly centralised financial market infrastructure towards a model that would allow for connectivity with a distributed settlement system.

b. Regulatory framework for payment stablecoins

We note that the Australian Government Treasury ("Treasury") has proposed a regulatory framework for payment stablecoins as part of its Payments System Modernisation (Licensing: Defining Payment Functions) in June 2023[6], where Ripple has also previously commented on the consultation paper[7]. Whilst this is a positive first step, without a finalised regulatory framework in place for fiat-backed stablecoins, we do not see how this asset class would be able to hold any meaningful place in relation to a system for tokenised asset settlement as an unregulated asset.

It is also worth noting that in its proposal[8] to update Information Sheet 225[9] ("INFO 225") the Australian Securities and Investments Commission ("ASIC") is considering whether a 'stablecoin' with certain features may be a financial product (specifically, a non-cash payment facility) under the existing Australian Financial Services License (AFSL) regime. Such features are:

1. the tokens are non-interest bearing stablecoins, expected to maintain a stable price and value in AUD;
2. issued at par value (i.e. one token equals one AUD);
3. the issuer will redeem the tokens at par value in exchange for AUD on demand from any holder;
4. the AUD received by the issuer and the requirement to repay are recorded as an asset and liability on the issuer's balance sheet, respectively; and
5. the issuer holds the AUD received from token sales in a bank account or uses it to purchase low risk investments

Most, if not all, AUD-denominated payment stablecoins will meet this criteria, which further confuses the regulatory treatment for payment stablecoins in the absence of any finalised regulatory framework.

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[6] See https://treasury.gov.au/sites/default/files/2023-06/c2023-403207-cp.pdf, Australian Government Treasury consultation paper on Payments System Modernisation (Licensing: Defining Payment Functions)
[7] See https://ripple.com/files/Ripple_Australia%20Treasury_Licensing%20of%20payment%20service%20providers%20%E2%80%93%20payment%20functions_Consultation%20Paper_July%202023_final.pdf, Ripple response to the Australian Treasury Consultation Paper on Payments System Modernisation (Licensing: Defining Payment Functions)
[8] See https://download.asic.gov.au/media/ncfckqeq/cp381-published-4-december-2024.pdf, Updates to INFO 225: Digital assets: Financial products and services
[9] See https://asic.gov.au/regulatory-resources/digital-transformation/crypto-assets/, Crypto-assets.

Given that the Treasury is currently progressing legislative and regulatory reforms related to payment stablecoins, regulating 'stablecoins' as a financial product under the current AFSL regime will only add confusion, rather than clarity, on the regulatory treatment of payment stablecoins.

For market participants to be able to launch and operate their businesses with regulatory certainty and in compliance with clearly defined rules, regulatory change for payment stablecoins should come in one go, rather than piece meal.

Our primary suggestion, therefore, is for the implementation of a clear regulatory regime for fiat-backed stablecoins that will support this asset class being used in the settlement mechanism for wholesale tokenised asset markets. This would assist in removing some of the regulatory uncertainty associated with these new forms of money particularly in relation to interoperability with existing payment systems.

c. Taxation regime for the treatment of tokenised transactions

The Australian Tax Office ("ATO")'s current treatment of capital gains from certain actions, such as deposits into liquidity pools[10], as taxable events could complicate the adoption of tokenised settlement models that utilise Automated Market Makers ("AMMs") as part of the interchange mechanism. Taxing what are effectively unrealised gains during essential intermediary steps may introduce inefficiencies and potentially render these systems economically unviable. A suggested approach is to review existing taxation requirements and provide clear guidance aligned with the practical realities of tokenised financial systems, thereby ensuring their feasibility and viability in real-world applications.

Similarly, the ATO's guidance for wrapped tokens[11] indicates that the process of wrapping (or unwrapping) a token leads to a capital gains tax event, with the capital proceeds for the capital gains tax event equalling the market value of the wrapped token at the time of the exchange. Given that wrapped tokens enable interoperability and increase liquidity across ecosystems, treating the process as a taxable event will disincentivise token wrapping, thereby impacting interoperability and liquidity for tokenised assets.

Question 3

Should efforts to support tokenised markets be focused on large existing asset classes or newer ones, and why?

Ripple strongly believes that any initiatives in relation to the tokenised asset markets should be asset-agnostic and that market participants should be able to use Central Bank Digital Currencies ("CBDCs"), deposit tokens, or fiat-backed stablecoins as settlement assets without prejudice. We believe such flexibility to

[10] See https://www.ato.gov.au/individuals-and-families/investments-and-assets/crypto-asset-investments/decentralised-finance-and-wrapping-crypto, Decentralised finance and wrapping crypto
[11] Ibid.

be an essential cornerstone in the effort by the RBA to foster innovation while ensuring that the benefits of tokenisation can be extended broadly across the financial ecosystem.

We believe that market participants should have the ability to choose the type of assets they tokenise based on their business model. By supporting multiple forms of digital money to achieve settlement, the RBA can ensure that participants have the tools to transact seamlessly, regardless of the underlying asset.

Question 4

What role could central bank money play to best support the development of tokenised asset markets, and what policy and operational questions would such a role pose?

We believe that central bank money will play a key role in the development of tokenised asset markets, particularly to solve issues in relation to liquidity and interoperability.

In particular, central bank money can support tokenised asset markets through:

a. Direct cash settlement - Central bank money can help to provide risk-free settlement in specific scenarios where commercial bank money or other types of assets fall short. For example, in the context of settling obligations for commercial bank debt, institutions often require a risk-free settlement asset, such as central bank money, as it ensures finality and stability. These are the foundational blocks to ensure an efficient functioning tokenised market.
b. Interoperability - Central bank money can act as the cornerstone for ensuring interoperability among the various forms of digital assets (i.e. tokenised deposits and stablecoins). By enabling these instruments to act seamlessly across different platforms and liquidity pools, central bank money helps to preserve the efficiencies and benefits of a tokenised market while minimising any potential associated systemic risks.

In order to perform these roles, the RBA should look to establish and advance interoperability best practices and standards to prevent the fragmentation of markets. The RBA correctly notes that in the absence of a 'unified ledger' where *"everything exists in one place"*, interoperability is important, particularly between the RBA's infrastructure and tokenised asset platforms.

This has been a key area of research in other jurisdictions such as Hong Kong and Singapore where focus has been on the development of a framework for the asset and platform layers of digital asset networks and how these can interact in practice. Specifically:

a. Project Ensemble Sandbox[12] by the Hong Kong Monetary Authority ("HKMA") - A key goal of Project Ensemble is to examine the technical interoperability among tokenised assets, tokenised deposits and wCBDC, while enabling industry participants to conduct end-to-end testing of tokenised asset transactions in practical business scenarios.
b. Project Guardian[13] by the Monetary Authority of Singapore ("MAS") - The concept of interoperable, open networks is one of the foundational principles of Project Guardian where its emphasis is embedded in their design options to enable the trading of digital assets across networks and liquidity pools.

Given the reliance of the current systems for settlement on central securities depositories, as a result of market evolution and regulation, the RBA should work with other regulators and stakeholders to consider the importance of interfaces between traditional market infrastructures and new DLT-based infrastructure to prevent further fragmentation, with an end goal of removing obstacles to interoperability and eventually creating a common network. Such solutions for establishing connectivity between traditional models and distributed models could come by way of legislation, as noted by the RBA with its reference to a 'synchronisation coordinator', but also from initiatives for standardisation.

Question 5

What are the most important capabilities or attributes that central bank money would need to have, to realise the potential of tokenisation in wholesale markets? This could include, for example, that central bank money is deployed in a tokenised form directly on tokenised asset ledgers; that it is directly accessible (irrespective of its form) by a wider range of institutions than those who are currently eligible for an ESA; or that it can be transacted outside of normal business hours. Please be specific and rank the capabilities by their relative importance.

Ripple believes that certainty, interoperability, and programmability are the three key capabilities that central bank money would need to have to realise its full potential in wholesale markets.

a. Certainty (highest priority) - A paramount attribute of central bank money is its absolute certainty. This entails the finality of a settlement, where transactions are irreversible and cannot be disputed. Additionally, transparency is crucial to ensure all parties are able to verify the status of their transaction and balances.
b. Interoperability (second priority) - Central bank money must be capable of seamlessly operating across different platforms, asset types and

[12] See https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/08/20240828-3/, HKMA launches Project Ensemble Sandbox to accelerate adoption of tokenisation
[13] See https://www.mas.gov.sg/-/media/mas-media-library/development/fintech/project-guardian/project-guardian-open-interoperable-network.pdf, Project Guardian Enabling Open and Interoperable Networks

settlement systems. Its primary focus is on minimising risk in financial exchanges, particularly ensuring that one leg of a transaction cannot be completed unless the corresponding leg is also completed. This eliminates any settlement mismatches. Interoperability also allows for seamless integration between traditional and tokenised systems, reducing friction in cross-platform transactions. The last important aspect of interoperability is its ability to transact outside of normal business hours, enabling 24/7 operations to meet the global, real-time demands of tokenised markets.

c. Programmability (third priority) - Central bank money should support programmability to enable automated processes, such as conditional payments or real-time compliance checks, through smart contract automation. This would seek to enhance the operational efficiency and reduce manual intervention.

Question 6

Are there any settlement models that are not encompassed in the 'design space' diagram (Figure 1) above and should be considered in relation to wholesale tokenised asset markets? If so, please outline the models and explain why they are relevant.

One point of consideration is the broader scope of decentralised exchanges ("DEXs") included in the interchange mechanism of the 'design space', as not all DEXs operate exclusively as AMMs. This focus could potentially overlook other decentralised exchange mechanisms gaining traction in wholesale tokenised asset markets, such as decentralised Central Limit Order Book ("CLOB") exchanges.

CLOBs[14] enable dynamic order matching based on a central limit order book, aligning more closely with traditional market structures. This design facilitates efficient price discovery, supports diverse trading strategies, and accommodates high-volume, high-frequency trading - attributes that are particularly relevant in wholesale markets. Decentralised CLOBs typically leverage blockchain technology for order matching, execution, and settlement. Asset transfers are automated through smart contracts and transparently recorded on the blockchain.

A notable example is the XRP Ledger[15] ("XRPL"), which features a built-in decentralised CLOB that supports direct trading of tokenised assets[16]. It operates entirely on-chain and integrates seamlessly with the XRPL's payment and settlement system, providing a robust framework for tokenised asset exchange.

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[14] See https://www.nasdaq.com/articles/demystifying-the-central-limit-order-book-clob-everything-you-need-to-know, Demystifying the Central Limit Order Book (CLOB): Everything You Need to Know

[15] See https://xrpl.org/about, How the XRP Ledger works

[16] See https://learn.xrpl.org/course/deep-dive-into-xrpl-defi/lesson/order-books-and-the-xrpl/, Understanding Order Books on the XRPL

Question 7

Do you see a role for privately issued forms of digital money in enabling tokenisation in wholesale markets? If so, what types of privately-issued digital money – for example, deposit tokens, RBDCs or fiat-backed stablecoins – are best suited to play this role, and why? What are the market characteristics that will enable privately issued forms of digital money to be utilised and the design features of such forms to be effective and efficient?

Yes, as per our answer in Question 3, we believe that any framework enabling tokenisation should be asset-agnostic in relation to the types of settlement asset used. We believe that to realise the full benefits of tokenisation, there needs to be a role for privately issued forms of digital money, such as fiat-backed stablecoins or deposit tokens, which can offer additional flexibility, programmability, and address market needs, particularly in relation to cross-border settlements.

In relation to market characteristics, institutional demand and regulatory clarity will be key in ensuring the adoption of privately issued forms of digital money for settlement. Regulatory frameworks will support in ensuring financial stability while reducing risks associated with counterparty exposure.

Additionally, we believe that adhering to common standards will be important in ensuring privately issued forms of digital money are interoperable and operate efficiently. Standards such as ISO 20022[17] can enhance compatibility between traditional financial institutions and DLT-based firms and provide a solid starting point for cross-platform integration.

Question 8

While cross-border settlements are not the focus of the current phase of Project Acacia, the RBA and DFCRC are interested in stakeholders' views on which settlement models may be particularly suited for cross-border settlements. Are any of the models better-suited than others to facilitate innovation in cross-border transactions?

We believe that fiat-backed stablecoins as a settlement asset are particularly better suited for cross-border settlements than assets such as CBDCs, where there is currently little interoperability between jurisdictions and where such settlement would rely on bilateral or multilateral agreements and collaborations between central banks.

In relation to settlement models, given the lack of widespread adoption and regulatory harmonisation across jurisdictions, a single DLT platform may not be as suitable or realistic. A more suitable model would involve a hybrid of public and private integrations.

[17] See https://www.iso20022.org/, ISO 20022

Question 9

Are there any additional considerations that you believe are relevant to the evaluation of options for settlement in wholesale tokenised asset markets? Which (if any) of the considerations should be prioritised (weighted more heavily)?

We believe an additional consideration is the practical effectiveness of settlement options in wholesale tokenised asset markets. To support a long-term and sustainable transition of wholesale capital markets, it is essential to test settlement models under production-like conditions. This ensures their practicality and feasibility for effective implementation in real-world capital markets.

We believe this consideration should be prioritised when the future regulatory sandbox arrangements mentioned in the Consultation are conceptualised. These sandboxes should enable the experimentation of different settlement options in environments that closely replicate real-world conditions, ensuring that any proposed solutions are both robust and scalable.

Question 10

Are there particular trade-offs associated with different tokenised settlement models that you wish to highlight?

Ripple has no comments on this question.

Question 11

Could asset tokenisation in wholesale markets be effectively supported by a settlement model that uses a 'synchronisation coordinator' to coordinate delivery versus payment across tokenised asset platforms and existing RTGS infrastructure? Do you support the further exploration of a synchronisation coordination function for a potential tokenised economy? If so, what should be the focus of that exploration in the short term? For example, the role, functions and governance of the synchronisation coordinator, the technical channels for interaction between the synchronisation coordinator and the RBA's infrastructure, or the viability of this model for tokenised asset platforms.

Ripple would support an initiative to further explore the function of a 'synchronisation coordinator' for a potential tokenised economy, although we view such a solution as a short- to medium-term fix. The RBA correctly notes that this would be *"the most quickly realisable model"*, although to fully maximise the benefits of tokenisation the eventual aim should be to operate without this additional layer through the use of a common network.

We believe the examples listed in the question sufficiently cover the areas that require further exploration.

Question 12

If tokenised money – public and/or private – was issued directly onto the same platform as tokenised assets, what types of benefits would you expect to arise from settlement on a common platform, compared with settlement using conventional forms of commercial bank money and ESA balances via a synchronisation coordinator? How significant might those benefits be, and to what stakeholder groups would they accrue (e.g. issuers, investors, platform operators)? If your response relates to a specific asset class or use case, please specify.

As noted in the Consultation, tokenisation of wholesale markets can improve efficiency and resilience of payments and settlements systems and lead to significant cost savings. As already stated above, to fully maximise these benefits, the eventual aim should be the issuance of tokenised money onto the same platform as tokenised assets.

Such a system would potentially allow for a range of benefits from cost savings as a result of streamlined processes that would not occur when using different platforms and a synchronisation coordinator, near-instantaneous settlement finality, which in turn would minimise the counterparty risks that are associated from one party defaulting after the other has performed its obligation.

Whilst the use of interfaces to connect platforms also has certain benefits, particularly when it comes to cross-border transactions in the absence of a global settlement system, they also introduce additional points of failure, increased potential for mismatches or delays, and higher operational/integration costs as the interface requires maintenance and investment.

Question 13

Do you have experience or insights in addressing the challenges of interoperability between asset ledgers that may be relevant to the objectives of Project Acacia?

Ripple has extensive experience in tackling interoperability challenges through industry-wide collaborations, such as its contributions to the Interledger Protocol[18] (adopted by the W3C Web Payments Working Group), innovative technical solutions like the development of an XRPL-Axelar bridge[19] to enable secure and efficient transfer of assets across over 55 connected blockchains, and tailored customer engagement initiatives. These efforts demonstrate Ripple's commitment to advancing seamless integration across diverse financial systems and technologies.

A current example of customer engagement initiatives is a key use case in the partnership we have with National Bank of Georgia ("NBG") on their Digital Lari

[18] See https://interledger.org/developers/get-started/, Interledger Protocol
[19] See https://www.axelar.network/blog/ripple-and-axelar-foundation, Ripple and Axelar Foundation Partner to Enhance XRP Ledger's Interoperability Across Blockchains

("DGEL") program.[20] The use case implements the acquisition of real estate using automated settlement with DGEL, under a joint program between NBG and the National Agency of Public Registry ("NAPR"). This process involves the interoperability of the DGEL ledger (leveraging XRPL technology) and the NAPR property register (using a legacy system), using the cryptographic escrow functionality native to the XRPL to eliminate settlement risk.

The following provides some brief observations that are relevant to Project Acacia:

- Cryptographic escrow enables interoperability by mitigating settlement risk for transactions across distinct DLT and traditional ledgers.
- Designing for ledger interoperability should focus on delivering an intuitive user experience for all transaction participants while minimising risks across all settlement legs. This approach ensures seamless interaction between systems and robust risk management, fostering trust and efficiency in the transaction process.
- Effective interoperability achieves efficiency, reusability, and scalability by decoupling business logic between systems. For instance in the example above, the DGEL ledger and the property register were designed to operate independently, with neither requiring knowledge of the other's rules or processes.

Question 14

Are there any additional research questions which should be prioritised in Phase 2 of Project Acacia, over and above those described in Table 2 below? If so, please describe them.

Ripple has no comments on this question.

[20] See https://nbg.gov.ge/en/media/news/ripple-the-flagship-international-company-becomes-the-technology-partner-for-the-digital, Ripple - the Flagship International Company Becomes the Technology Partner for the Digital GEL Pilot Project.

Part 2 – Expression of interest in participating in Phase 2 of Project Acacia

Required information	
Name of organisation:	Ripple Labs Inc.
Place of incorporation and address of main office in Australia:	Delaware Ripple Asia Pacific Pty Ltd. ℅ Stone & Chalk 11 York St, Level 5, Suite 4.14 Sydney, NSW 2000, Australia
Description of organisation:	Ripple is the leading provider of digital asset infrastructure for financial institutions - delivering simple, compliant, reliable software that unlocks efficiencies, reduces friction, and enhances innovation in global finance. Ripple's solutions leverage the XRP Ledger and its native digital asset, XRP, which was purpose-built to enable fast, low-cost, highly scalable transactions across developer and financial use cases. With a proven track record working with regulators and policymakers around the world, Ripple's payments, custody and stablecoin solutions are pioneering the digital asset economy—building credibility and trust in enterprise blockchain. Together with customers, partners and the developer community, we are transforming the way the world creates, stores, manages and moves value.
Contact person name, role title, email and phone details:	Ross Edwards Senior Director, Global Financial Institutions ross@ripple.com +61 414 296625
Brief outline of use case, including asset class:	We propose a selection or combination of use case capabilities we have existing experience with: 1. Atomic interchange of different forms of digital money in tokenised asset markets: ○ Interoperability/interchange ability between different AUD wCDBC, tokenised deposits and stablecoins. 2. Aggregated Central Limit Orderbook (CLOB) and Automated Market Maker (AMM) tokenised

	asset markets using decentralized exchanges 3. FX embedded in atomic tokenised asset market transactions ○ Although Project Acacia has excluded cross-border payments, exploring how tokenised asset markets can be extended to cross-border contexts while preserving the efficiencies and advantages of tokenisation represents a critical avenue for further investigation and analysis 4. Facilitating settlement across separate money and asset platforms (DLT and Traditional) ○ Facilitating DvP settlement for business transactions that span DLT and Traditional platforms.
Are all actors in the use case (issuer, investors, transaction parties etc) wholesale entities (e.g. financial institutions, institutional investors, corporates)?	These use cases are flexible and can potentially involve business transactions from a broad range of actors - however all can be adequately implemented and demonstrated exclusively with wholesale entities.
Please outline briefly the nature of your organisation's connection with the market to which this use case relates – for example, is your organisation an issuer, investor, intermediary or other participant in the market, or a supplier of services that facilitate participation in the market by others (such as technology, financial or consulting services)?	Ripple engages the global market across a number of primary initiatives: ● Cross-border payments; ● Digital asset custody technology; and ● RWA tokenisation and stablecoins partner support. These initiatives can involve technology and financial services products and partnerships. Ripple entities hold money transfer licenses in 44 U.S. states, and equivalent licenses in six additional countries; however, they are not licensed in Australia. For the purpose of Project Acacia, we aim to provide services that enable market participation by other entities. We plan to collaborate with suitable licensed financial services companies and other partners to design and implement the pilot effectively.

In this use case, are asset tokens issued and traded on a private permissioned DLT platform or public DLT platform?	Ripple builds on the public XRP Ledger platform and would propose this as the primary platform for implementation.
Please describe the settlement model(s) and form(s) of digital money you wish to explore as part of your proposed use case. As part of this, please nominate the settlement cycle in your use case (e.g. real-time gross settlement, deferred net settlement on T+n).	Asset token transactions settled on a real-time gross basis using a combination of: ● wCBDC; ● Tokenised deposits; and ● Private stablecoins
What specific research questions do you wish to address through participation in Phase 2?	We wish to address the following research questions covered in Table 2 of the consultation paper: ● Can tokenised forms of privately issued money – supported by an appropriate interchange mechanism using existing central bank settlement infrastructure – facilitate a similar level of risk reduction and business process efficiency in wholesale financial markets (through atomic settlement, programmability and composability) as a wholesale CBDC? ● What are the opportunities, risks and limitations of a deployment model in which the RBA issues a wholesale CBDC directly onto one or more third-party tokenised asset platforms? What are the technology, operational, legal and other risks associated with this deployment model, and how may those risks be controlled adequately? What are the trade-offs of this model relative to a model in which wholesale CBDC is issued on a standalone platform? ● In the absence of a single 'unified ledger', interoperability between asset ledgers will be needed in a tokenised economy. What are the options for effecting settlement of tokenised asset transactions involving multiple assets on different ledgers?What are the benefits, risks and trade-offs associated with those options? ● In a settlement model with central bank money and assets represented on different ledgers, what governance arrangements should apply to the entity that is responsible for orchestrating the DvP settlement process across

	those ledgers (the 'synchronisation coordinator')? Regarding access by synchronisation coordinators to the central bank's settlement infrastructure, is there a case for introducing a flexible and generic (standardised) access model, encompassing all relevant tokenised asset classes, that could remove the need for unique facilities to submit transactions to RITS for each asset class? In addition, we wish to address the following additional research questions: ● Can tokenised asset markets be implemented on open, public DLT platforms and what are the regulatory obstacles that exist to achieving this? ● Can tokenised asset markets be extended to foreign currency / cross-border engagements whilst maintaining the efficiencies and effectiveness of the tokenised market?
Do you wish to develop and test this use case in Phase 2 (as either a pilot or proof of concept), or do you wish to contribute through desk-level research into this use case?	We are open to developing and testing these use cases in Phase 2, or contributing through desk-level research in these use cases based on follow-up engagement with RBA, DFCRC and the Project Acacia steering committee.
If you wish to develop and test this use case in Phase 2 and are selected to do so: · **Do you anticipate collaborating with other organisations?** · **To the extent the settlement model you wish to explore involves settlements in central bank money (e.g. ESA balances or wCBDC), is it important to the objectives of your proposal that this should be a real claim on the RBA?**	Ripple does anticipate collaborating with other organisations, in particular licensed financial services potentially across one or more of the following areas: ● Prudentially regulated bank ● Non-cash Payment Facilities ● Financial Markets ● Others Whilst we have existing relationships with financial institutions in Australia, we would assess the appropriate partnering options based on follow-on engagement with Project Acacia across these use cases.
Do you anticipate that you may need any licence(s), or regulatory relief from the requirement to hold a licence, to execute the proposed use case? If so, please describe briefly.	Ripple does not propose acquiring licenses or regulatory relief for these use cases - we propose partnering with licensed financial institutions in the market aligned to the final details agreed with Project Acacia.
Do you anticipate you may need regulatory relief in relation to any other issues (e.g. client money rules, disclosure obligations) to execute	As per above.

the proposed use case? If so, please describe briefly.	
Are there any other considerations that you would like to highlight?	None.

Part 3 – Expression of interest in joining Industry Advisory Group for Project Acacia

Required information	
Name:	Ross Edwards
Contact (email and phone) details:	ross@ripple.com, +61 414 296 625
Please list your current professional activities (including paid employment, consultancies, directorships, professional memberships currently held).	I have been an employee of Ripple since July 2015, when we established our first non-US office based in Sydney. My current role is Senior Director, Global Financial Institutions. I am a member of the Digital Economy Council of Australia (DECA) Digital Asset Working Group and the DEC Institute.
Are you associated with any organisation that – to your knowledge – has submitted or plans to submit an expression of interest in participating in Phase 2 of Project Acacia? If so, please identify the organisation and describe the nature of the association.	Yes - I am an employee of Ripple Labs Inc. and a director of their local subsidiary Ripple Asia Pacific Pty Ltd.
Please briefly outline the skills and expertise you would bring if you were appointed to the Industry Advisory Group and how this would support the aims of Project Acacia.	I have specialised in developing blockchain solutions for enterprise applications, with a focus on financial institutions, since July 2015. Over this time, I have led initiatives with central banks, regulators, financial institutions, fintechs, and startups, delivering proof-of-concepts, pilots, and production solutions leveraging blockchain and digital assets. I have been responsible for both the functional and technical design of solutions across multiple key business areas, including: ● Payments ● Central Bank Digital Currencies ● Stablecoins ● Real-World Asset Tokenisation My work has consistently bridged innovative blockchain technologies with practical business needs, driving impactful results across the financial sector.

	Before joining Ripple, I worked as a Financial Services Consultant at Accenture, partnering with clients in Australia and internationally. My role encompassed key areas relevant to the aims of Project Acacia, including lending, custody banking, fund administration, trade processing, and payments, providing strategic insights and solutions to drive operational excellence and innovation. My experience in developing innovative business models and technical solutions, evaluating their impacts on regulatory frameworks, and successfully delivering value-driven solutions for market participants aligns closely with the objectives of Project Acacia. I bring a proven ability to bridge innovation with practical implementation, ensuring impactful outcomes for stakeholders.
Do you have any brief comments on the scope and plans for Project Acacia that may be useful to the RBA and DFCRC as they consider proposed use cases and how Phase 2 should proceed?	The scope and objectives of Project Acacia represent an exciting leap forward in driving innovation within Australia's financial services sector, with a particular focus on transforming wholesale markets and settlement systems. Balancing two potentially conflicting priorities will be crucial for the success of the project: 1. Practical Effectiveness – Conducting industry testing of settlement models within real-world capital markets to develop solutions that deliver unique value beyond existing technologies and tools. These solutions must also demonstrate scalability to support ongoing business growth. 2. Primitive Interoperable Capabilities – Designing foundational solution components that extend beyond individual business applications, enabling scalability across multiple asset markets and participants.

	Neglecting the first priority risks creating theoretical models that lack applicability or scalability in industry contexts. On the other hand, failing to prioritize interoperability could lead to bespoke market solutions that increase complexity and fragmentation, introducing new barriers to effectiveness and growth.