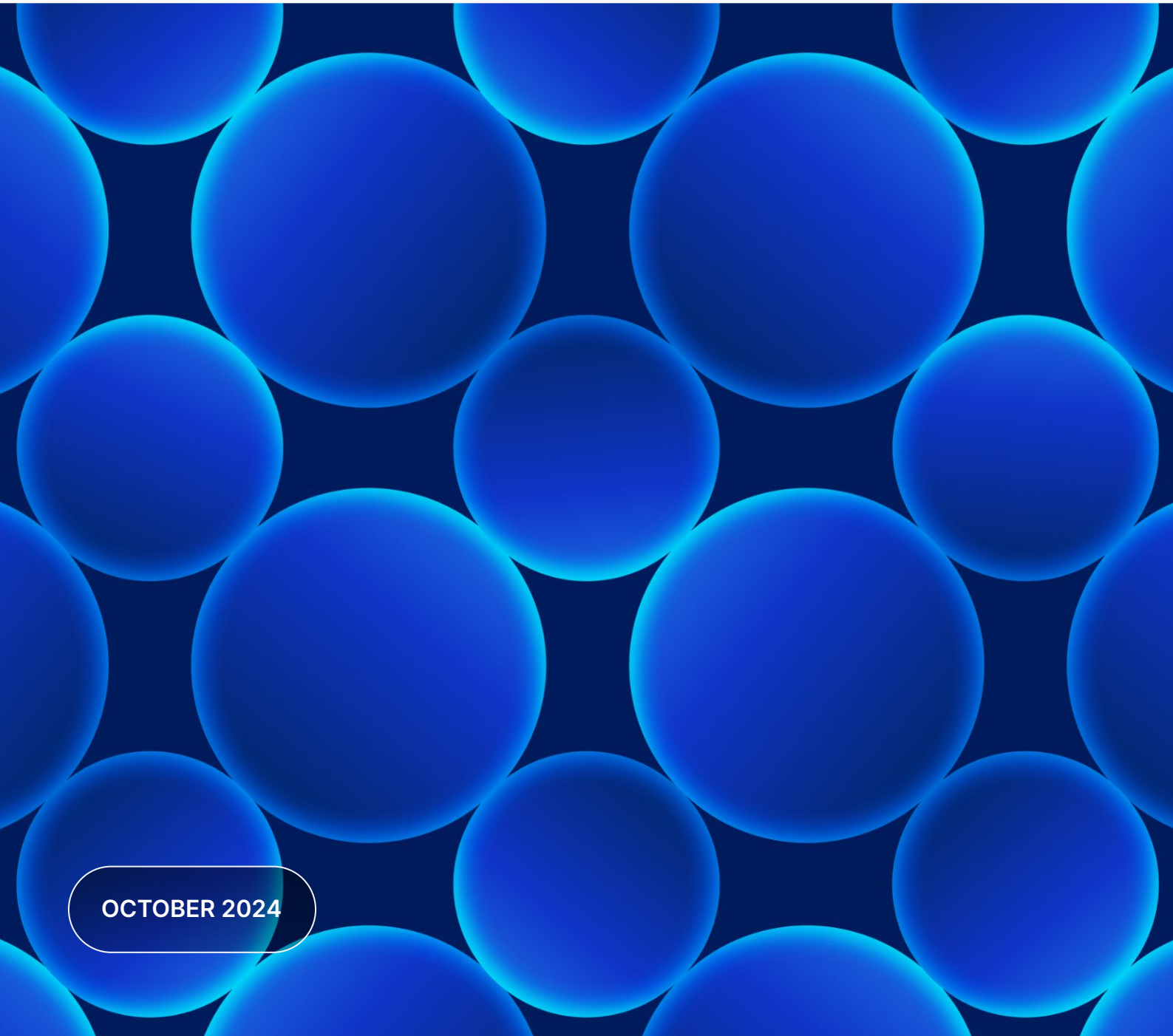
Key Policy Reforms to Support Tokenisation of Real World Assets in Australia

Digital Economy Council of Australia

DFCRC DIGITAL FINANCE CRC THE FUTURE OF FINANCE

ripple



OCTOBER 2024

Table of Contents

A POLICY PAPER BY
Digital Economy Council of Australia
Digital Finance Co-operative Research Centre
Ripple

This policy paper, jointly prepared by the Digital Economy Council of Australia (DECA), Digital Finance Co-operative Research Centre (DFCRC), and Ripple, examines the key policy reforms required to support the tokenisation of real world assets (RWA) in Australia, and thereby unlock substantial economic gains.

Tokenisation of RWAs - the process of representing physical and financial assets as digital tokens on a distributed ledger such as a blockchain - has the potential to enhance liquidity, transparency, and efficiency across various asset classes, including securities, real estate, and commodities. However, to realize these benefits, a conducive regulatory environment is crucial. This policy paper analyses the current legal and regulatory framework in Australia, highlighting gaps and impediments to the growth of the RWA tokenisation market, and proposes a series of policy recommendations designed to foster a robust and innovation-friendly environment for tokenised RWAs in Australia.

We look forward to engaging further with policymakers and regulators to develop the ecosystem for tokenised RWAs in Australia.

Amy-Rose Goodey
Managing Director
DECA

Prof. Tālis Putniņš
Chief Scientist
DFCRC

Fiona Murray
Managing Director, APAC
Ripple

The tokenisation of RWAs represents the next significant evolution in Australia's financial markets.

As a transformative application of blockchain and distributed ledger technology (DLT), tokenisation enables the digital representation of assets such as stocks, bonds, funds, real estate, and commodities. This seemingly subtle change in how the asset is represented has significant benefits for how assets are traded, settled, custodied, and verified.

The economic opportunity for Australia is in the order of $12 billion per annum in efficiencies gained in existing markets and cross border transactions[1]. Additional economic gains in creating new markets and in downstream benefits are potentially multiples of this number.

There are several reasons why this economic potential has not yet been unlocked. Among the biggest roadblocks in Australia are the regulatory impediments that are holding back progress in the sector. Furthermore, other jurisdictions are making significant advances in this area. For Australia, this means losing out on our slice of the global economic gains (estimated to be in the order of $2 trillion per annum[2]) and having parts of the financial services value chain shift overseas. The economic opportunity (or potential loss) to Australia is too large to ignore, and therefore we should not be complacent.

This report highlights three key recommendations for policy reform to support the tokenisation of RWAs in Australia:

1. A clear taxonomy for digital assets to resolve regulatory ambiguity;
2. Reform of licensing frameworks for digital asset markets; and
3. A regulatory sandbox to enable digital asset markets.

These recommendations are discussed in further detail to support the effective tokenisation of RWAs in Australia.

$12 B

per annum in efficiencies gained in existing markets and cross border transactions.

[1] As estimated in Economic Impact Assessment research by DFCRC.

[2] As estimated in the study "Unlocking Value: Economic Benefits of Real-World Asset Tokenization" (2024) by M. Baltais, J. Karlsen, T.J. Putnins, and E. Sondore (Stockholm School of Economics in Riga, University of Technology Sydney, and DFCRC).

Recommendation 1:

A Clear Taxonomy for Digital Assets

A well-structured taxonomy of digital assets with a mapping to legislative classifications is crucial for achieving regulatory clarity and advancing RWA tokenisation within a regulated environment. This taxonomy and mapping needs to recognise that there are many ways to tokenise an asset, and the different approaches could lead to different legal classifications.

For example, shares in a company can be represented as digital tokens in multiple forms:

- By changing the underlying registry to a distributed ledger so that only a single (digital) registry exists; or
- By having an intermediary hold the underlying shares and issue 1:1 backed tokens that mirror the records in the original registry (like a digital twin, allowing partial tokenisation of an asset class); or
- By having an entity hold a pool of assets against which it issues tokens intended to represent shares in the company.

In which cases, if any, are the digital tokens truly treated as equity in the company? In which cases do the tokens become Derivative Securities because of the structuring, or even Managed Investment Schemes, or some other financial product category?

These questions quickly become more complex when we consider other underlying asset classes, each with their own considerations, or other approaches to tokenisation, or nuances in the tokenisation process.

Currently, the lack of a comprehensive classification system for digital assets leads to confusion and uncertainty in many jurisdictions. While there have been ongoing efforts to regulate and classify crypto-assets, progress in RWA tokenisation has been less significant. To foster the development of a nuanced regulatory framework, a taxonomy that includes all digital asset categories - crypto-assets and tokenised RWAs - is essential, and the taxonomy needs an actual mapping to legislation. That mapping would resolve the legal ambiguity and identify gaps in legislation that may need to be addressed.

Existing approaches in digital asset taxonomies tend to solely distinguish between the nature of the underlying asset that the token is intended to represent. This approach, however, is an oversimplification of the complexity of tokenised RWAs and does not adequately reflect the legal nature or risks involved. For a future-proof taxonomy, we believe it is necessary to consider not only the underlying asset but also how its inherent rights are structurally linked to the token. The different methods of structuring a token might change its risk profile, asset category, and therefore, in some cases, its legal classification.

To provide a robust but flexible framework for determining the legal treatment of tokenised RWAs, it is crucial to jointly consider both the characteristics of the underlying asset and the structure of the token. For the purposes of this report and future taxonomy creation, we believe these two dimensions - asset nature and token structure - are sufficient to classify digital assets in depth without introducing unnecessary complexity. Every digital asset could be positioned within a two-dimensional grid, and depending on its placement, the regulatory treatment may differ from that of the underlying asset.

Asset category \ Tokenisation structure		Direct title tokenisation	Immediate tokenisation	Collateralized tokenisation	Algorithmic tokenisation
Intangible assets	1. Assets with future promises 2. Assets without future promises 3. Payment/money instruments				
Tangible assets	1. Real Estate 2. Commodities 3. Infrastructure assets 4. Cultural assets 5. Physical goods				
Services	1. Insurance products 2. Consumer services				

Figure 1 presents a high-level example of this two-dimensional approach for mapping tokenised RWAs. In future refinements, both the asset categories under Australian law and the tokenisation structure methods will be enhanced to enable a more granular mapping of digital asset tokens.

The existing legal landscape in Australia has frameworks to ensure proper compliance, ownership, custody, and contractual rights of traditional asset classes.

However, these frameworks were not developed to factor in the nuanced technology and considerations that tokenisation brings. This misalignment can lead to disputes over legal treatment.

- **Securities Law:** Tokenised RWAs that function similarly to securities may be governed by the Corporations Act 2001[3] (Corporations Act), which regulates financial products and services. If considered securities, these tokenised RWAs would be subject to the same regulatory requirements as traditional securities, such as disclosure, licensing, and adherence to market conduct rules.

- **Property & ownership rights:** For tokenised real estate or other tangible assets, existing property laws across different Australian states or territories may remain applicable, depending on the approach to tokenisation. These laws cover the transfer of ownership, registration, and property rights. Given the potential of fractional ownership for tokenised RWAs, a key legal challenge is ensuring that the token accurately reflects ownership and that the transfer of tokens aligns with the legal title transfer under property law.

- **Contract Law:** Smart contracts, often used in the tokenisation process, are self-executing contracts with the terms of the agreement directly written into code, automatically enforcing and executing the contract when predefined conditions are met. Smart contracts may be subject to general principles of contract law, including enforceability, clear terms, and informed consent from all parties involved.

- **Anti-Money Laundering (AML) and Know Your Customer (KYC) Regulations:** Issuers of tokenised RWAs must adhere to the Australian Transaction Reports and Analysis Centre's (AUSTRAC) AML and KYC regulations issued under the Anti-Money Laundering and Counter-Terrorism Financing Act 2006[4] to prevent illicit activities. These regulations require that tokenised RWAs are issued and traded in a manner that verifies participant identities and ensures that suspicious activities are reported.

While existing frameworks may provide a basis for regulating many tokenised RWAs, there are notable gaps, and an absence of clarity, particularly concerning how the tokenisation structure may affect the legal nature of these assets.

Policy Recommendation #1:

For the purposes of regulation, tokenised RWAs should be classified depending on the particular economic function they serve and the inherent legal characteristics and rights of a token, which are a function of both the underlying asset(s) and how the token is structured.

Therefore, the Australian Government should adopt a taxonomy for digital assets, along with a legislative mapping, to provide clarity as to the legal character of tokenized RWAs in Australia. Such a taxonomy could leverage the current research work on this topic in Australia, reducing the time required to implement this recommendation.

[3] See https://www.legislation.gov.au/C2004A00818/2019-07-01/text, Corporations Act 2001.

[4] See https://www.legislation.gov.au/C2006A00169/2023-10-20/2023-10-20/text/original/epub/OEBPS/document_1/document_1.html, Anti-Money Laundering and Counter-Terrorism Financing Act 2006.

Recommendation 2:

Licensing Reform

Many of the advantages of digital assets are associated with the more efficient ways in which they can be traded and transferred. For example, digital assets can be exchanged (traded) in real-time in a way that removes counterparty risk by ensuring all parts of a transaction complete (e.g., a cash leg and an asset leg). This process uses computer code to ensure the simultaneous and conditional transfer of digital tokens between accounts, referred to as 'atomic swaps'.
This capability of digital assets can substantially simplify the financial market infrastructure. For example, it can eliminate the need for a clearinghouse and the associated costs and margin requirements, and collapse down trade and settlement into a single function. These changes can substantially lower the costs of market infrastructure, making trading more efficient in existing markets and enabling new markets. It can unlock the capital tied up in the clearing process while also reducing systemic risk in markets by eliminating the build-up of counterparty risk in central entities like clearinghouses. Together, these potential savings exceed $10 billion per annum in Australia's current financial markets and cross-border currency exchange.[5]

The problem, however, is that current licensing regimes in Australia are designed for a very different approach to trading, clearing, and settlement, and thus not fit-for-purpose for trading digital assets. For example, Australia currently has a separate markets license and clearing & settlement license because these functions are traditionally separate. In contrast, 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 in Australia, which are designed to protect against systemic risk, are inconsistent with the conditional settlement of digital assets which eliminates build-up of counterparty risk.

As a result of not having a fit-for-purpose licensing regime for digital asset markets in Australia that recognises the structural differences in how traditional vs. tokenised assets are traded, many potential tokenised markets in Australia are simply unable to operate.

[5] As estimated in Economic Impact Assessment research by DFCRC.

In Australia, central counterparties and securities settlement systems, including those that operate central securities depositories, are referred to as clearing and settlement (CS) facilities. The Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (RBA) both have roles in regulating CS facilities licensed under the Corporations Act.

The RBA is responsible for setting the Financial Stability Standards (FSS)[6] to ensure that CS facility licensees manage their operations in a manner that supports the overall stability of the Australian financial system. The RBA also evaluates how well licensees are meeting their obligation under the Corporations Act to adhere to these standards and take all necessary measures to mitigate systemic risk. ASIC, on the other hand, oversees CS facility licensees' compliance with all other obligations under the Corporations Act. This includes ensuring that the facility's services are provided in a fair and efficient manner.

The RBA has two sets of standards that apply to different types of licensed CS facility:

- Financial Stability Standards for Central Counterparties[7] (CCP Standards); and

- Financial Stability Standards for Securities Settlement Facilities[8] (SSF Standards).

A central counterparty is a CS facility which interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer, and thereby ensuring the performance of open contracts. Therefore, the objectives of the CCP Standards are to ensure that CS facility licensees identify and properly control risks associated with the operation of the central counterparty in order to ensure overall stability of the Australian financial system.

Similarly, the SSF Standards aim to ensure that CS facility licensees identify and properly control risks associated with the operation of the securities settlement facility, with a securities settlement facility being defined as a CS facility that enables its participants to transfer title to or other interests in securities. A securities settlement facility may also operate a central securities depository.

[6] See https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/standards/, Clearing and Settlement Facilities Financial Stability Standards.

[7] 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.

[8] 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.

However, the CCP Standards and SSF Standards are designed considering the risks of legacy systems, and don't consider the structural differences in how DLT-based systems operate.

The advantages of DLT-based systems include:

- **Real-time Settlement:** In traditional markets, asset transfers and settlements can take days to finalize (e.g., T+2 for equities). These delays are often due to intermediaries like clearinghouses, brokers, and banks, which must reconcile and verify transactions. However, on a blockchain, settlement is typically near-instantaneous. This is because token transfers are recorded directly on the blockchain, eliminating the need for intermediaries to process or clear transactions.

- **Lower Costs:** Transaction fees in traditional systems can be high due to the involvement of multiple intermediaries, manual processes, and regulatory compliance costs, while DLT-based systems reduce costs by automating processes and reducing reliance on intermediaries. Fees are typically lower, as there are fewer parties involved, and the use of smart contracts can streamline regulatory compliance, further cutting administrative costs.

- **Enhanced Transparency and Auditability:** In traditional systems, settlement records are often siloed across various organizations, making it difficult to trace transactions. Audits can be time-consuming and prone to errors due to fragmented data. Blockchain provides a transparent, immutable ledger that records every transaction in real-time. All participants can access a shared, verifiable record of ownership and transfers, making auditing much easier, faster, and more accurate. This real-time transparency can also reduce disputes and fraud.

- **Cross-border Accessibility:** Transferring assets across borders in traditional systems often involves navigating complex and costly procedures, including currency conversions, international regulations, and settlement delays due to different time zones. Tokenisation allows assets to be transferred globally on blockchain networks without the need for traditional financial intermediaries. This can streamline cross-border transactions, reduce foreign exchange risks, and speed up settlement processes by allowing direct peer-to-peer transfers.

- **Fractionalization and Liquidity:** High-value assets, such as real estate are typically illiquid and difficult to transfer quickly due to the requirement for large capital outlays and complex legal processes. Tokenisation allows for fractional ownership, making it easier to buy and sell smaller portions of an asset. This increases flexibility and enhances liquidity. Additionally, tokenization increases the utility of such 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 tokenized 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.

- **Smart Contracts and Automation:** Settlement in traditional systems often involves manual intervention to verify, reconcile, and enforce the terms of a transaction, which can introduce delays and increase the risk of human error. Smart contracts can automate many aspects of the settlement process, such as triggering payments or transferring ownership once predefined conditions are met. This automation reduces human intervention, errors, and delays, improving efficiency.

Therefore, there is a need to reform the licenses applicable to trading and settling digital assets to factor in the significant structural differences and efficiencies of DLT-based systems. In the interim, exemptions to the CCP Standards and SSF Standards can be considered.

Policy Recommendation #2:

The structural differences in how digital RWAs are traded and settled means that current Australian licenses for financial market infrastructure are not fit-for-purpose.

Therefore, we believe the Australian Government needs to reform the licenses applicable to clearing and settlement facilities and markets to support the development tokenized RWA markets. In the interim, exemptions to the relevant licensing requirements can be considered.

Recommendation 3:

Opportunities for Regulatory Sandboxes

The digital asset industry and Australian financial market regulators are in somewhat of a stalemate with respect to licensing for digital asset markets and settlement facilities - regulators and policymakers find it difficult to formulate appropriate regulations and licensing requirements for digital asset markets without examples of operating digital asset markets in Australia. On the other hand, the industry is constrained in building the tokenised markets and digital finance use cases without the appropriate regulation and licensing, as they risk non-compliance.

A regulatory sandbox may resolve this situation by providing a framework that:

- Provides the ability for digital asset markets to launch (within certain safeguards);
- Allows regulators to observe and learn from the real-world operation of such markets;
- Use those observations to concurrently evolve the regulations and licenses; and then
- Allow the digital markets and digital asset use cases to ‘graduate’ out of the sandbox into new, fit-for-purpose regulations or licenses.

Regulatory sandboxes play a pivotal role in building the understanding and capabilities necessary for tokenising RWAs. These controlled environments enable the operation of new technologies and business models under regulatory oversight, which is essential for ensuring that innovations are both safe and compliant.

To be most effective, sandboxes should operate in production-like settings that replicate real-world conditions. Clear guidelines on entry and exit criteria are also crucial, as they help participants fully understand the expectations and outcomes of their involvement and manage the transition to full-scale, compliant market deployment.

Notable examples of regulatory sandboxes for tokenisation of RWAs that offer valuable insights in the Australian context are outlined in Figure 2 below. Australia can draw valuable lessons from these initiatives to develop its own sandbox environments, fostering experimentation and innovation in the field of RWA tokenisation in partnership with the digital assets industry. By adopting similar approaches, Australia can ensure that its regulatory frameworks evolve in a way that is supportive of innovation, protective of market integrity, and informed by actual applications of digital finance.

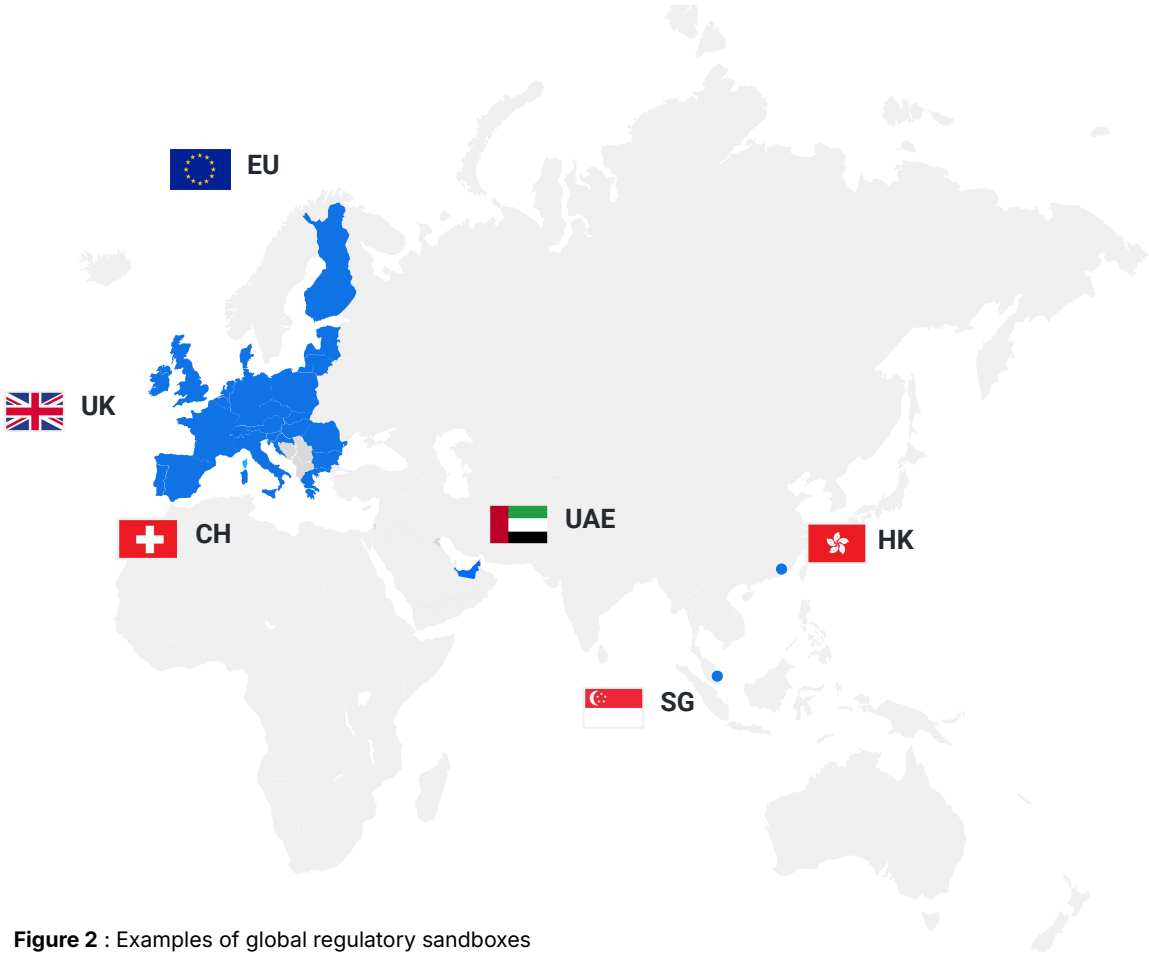


Figure 2 : Examples of global regulatory sandboxes

1 European Union

European Commission, European Blockchain Regulatory Sandbox

The EU Blockchain Regulatory Sandbox[9] aims to allow experimentation in the financial services sector through exemptions to Directive 2014/65/EU[10] on markets in financial instruments (MiFID II) and Regulation 909/2014[11] on central securities depositories (CSDR) for the use of DLT in the trading and post-trading of crypto-assets that qualify as financial instruments (i.e. tokenised securities or security tokens), where existing legislation might preclude or limit their use.

[9] See https://digital-finance-platform.ec.europa.eu/cross-border-services/ebsi, European Blockchain Regulatory Sandbox.

[10] See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0065, Directive 2014/65/EU of the European Parliament and of the Council.

[11] See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0909m, Regulation (EU) No 909/2014 of the European Parliament and of the Council.

With Regulation 2023/1114 on markets in crypto assets (MiCA)[12] subsequently being implemented, the EU Blockchain Regulatory Sandbox serves to enable participants to not only test their products and services, but to also measure their expected level of compliance with MiCA. This demonstrates how regulatory frameworks can effectively support the development of tokenised RWAs within a structured and compliant environment.

It's also important to note that the insights gained from the EU Blockchain Regulatory Sandbox directly influenced the development of MiCA, helping to create a regulatory framework that not only addresses the specific challenges of tokenised RWAs but also aligns with industry needs. The EU's approach, like that of Singapore's Project Guardian, combines practical testing with robust regulation, enabling the secure and efficient integration of tokenised RWAs into the financial system.

2 Hong Kong

Hong Kong Monetary Authority, Project Ensemble Sandbox

Project Ensemble[13], launched by the Hong Kong Monetary Authority (HKMA), is an initiative aimed at exploring innovative financial market infrastructure (FMI) to enable seamless interbank settlement of tokenised RWAs. Project Ensemble is focused on creating a system that handles these transactions efficiently and securely while ensuring interoperability across different tokenised RWAs and platforms, thereby fostering a more interconnected financial ecosystem.

In August 2024, the HKMA announced the launch of the Project Ensemble Sandbox[14], which introduced four key themes[15] for RWA tokenisation use cases and sets the stage for initial experimentation. The four main themes include:

- Fixed income and investment funds
- Liquidity management
- Green and sustainable finance
- Trade and supply chain finance

Participating banks from the Project Ensemble Architecture Community[16] - a collaborative initiative to shape the standards and provide suggestions to support the development of Hong Kong's tokenisation market - have integrated their platforms into the Project Ensemble Sandbox, enabling experiments in both payment-versus-payment and delivery-versus-payment settlements for tokenised RWAs.

[12] See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32023R1114, Regulation (EU) 2023/1114 of the European Parliament and of the Council.

[13] See https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/03/20240307-5/, HKMA unveils Project Ensemble to support the development of the Hong Kong tokenisation market.

[14] 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

[15] See https://www.hkma.gov.hk/media/eng/doc/key-information/press-release/2024/20240828e3a1.pdf, Four main themes and their corresponding use case categories to be tested on the Project Ensemble Sandbox

[16] See https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/05/20240507-4/, HKMA establishes the Project Ensemble Architecture Community.

The HKMA is also working with the Securities and Futures Commission (SFC) to develop a regulatory framework to support the growth of the tokenised RWA market, starting with the asset management industry.

3 Singapore

Monetary Authority of Singapore, Project Guardian

Project Guardian[17], initiated by the Monetary Authority of Singapore (MAS), is a leading example of how regulatory sandboxes can drive the development of tokenisation. This collaborative initiative between the MAS and the industry allows financial institutions to experiment with RWA tokenisation, thereby enhancing market liquidity and efficiency. By bringing together key players from the finance and technology sectors, Project Guardian explores the use of distributed ledger technology (DLT) in the tokenisation of financial assets, such as digital bonds and other securities.

There are currently twenty-four industry partners exploring thirty-one use cases across all asset classes.[18] Regulators from France, Germany, Japan, Switzerland, and the UK have also joined the Policymaker Group, which seeks to deepen cross-border collaboration between policymakers and advance discussions on standardization and interoperability under Project Guardian.

MAS also announced the completion of the first phase of the Global Layer 1 (GL1) initiative[19], which aims to develop a shared ledger infrastructure for tokenised RWAs to facilitate global transactions while adhering to regulatory requirements. MAS is collaborating with international policymakers and financial institutions on the business, governance, risk, legal and technology considerations of a shared ledger infrastructure. International policymakers observing the GL1 initiative include staff from the European Central Bank, Banque de France, and the International Monetary Fund.

Project Guardian operates within a regulatory framework that ensures compliance with existing regulation while addressing the unique challenges posed by tokenisation. This controlled environment enables companies to innovate with reduced risk under the supervision of regulators, who can address potential legal and operational issues as they arise. Project Guardian's success underscores the importance of regulatory sandboxes in fostering technological innovation while maintaining market integrity and protecting consumers.

[16] See https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/05/20240507-4/, HKMA establishes the Project Ensemble Architecture Community.

[17] See https://www.mas.gov.sg/schemes-and-initiatives/project-guardian, Project Guardian.

[18] See https://www.mas.gov.sg/-/media/mas-media-library/development/fintech/guardian/guardian-fis-annex-table.pdf, List of Participants in Project Guardian Industry Group.

[19] See https://www.mas.gov.sg/publications/monographs-or-information-paper/2024/gl1-whitepaper, Global Layer 1 (GL1) Whitepaper.

4 Switzerland

Swiss Financial Market Supervisory Authority, Swiss Sandbox and FinTech License

One of the key regulatory developments from the Swiss Financial Market Supervisory Authority (FINMA) in the adoption of blockchain technology is the introduction of the Swiss sandbox[20], which was designed to support new opportunities for financial service providers aiming to collaborate with fintech startups. Launched in 2018, the Swiss sandbox allows market participants to experiment with new business models using technologies such as DLT and tokenised RWAs while operating under flexible regulatory requirements. This framework is particularly beneficial for startups that do not initially meet the full regulatory requirements, enabling them to refine their business models before scaling up.

The sandbox provisions include:

- Allowing participants to accept deposits of up to CHF 1 million in funds without needing a license; and
- The obligation to inform clients that they are not under FINMA supervision and that there is no depositor protection for the funds.

In 2019, these provisions were amended to prohibit sandbox participants from engaging in interest rate differential business,[21] a restriction that reserves this activity for traditional banks. This amendment was made to reduce uncertainty for companies operating under the sandbox regime, balancing the need for innovation with the principles of financial stability and consumer protection.

Insights gained from the sandbox have enabled FINMA to better understand the associated risks and opportunities, informing its regulatory approach and leading to the refinement of regulatory guidelines. For instance, the amendments to its circular on "Public deposits with non-banks", [22] were influenced by findings from the sandbox and industry feedback, which helped to reduce regulatory uncertainty and streamline the compliance process. Targeted adjustments, such as participants being able to accept up to CHF 1 million in deposited funds, demonstrate how the sandbox has led to more flexible regulatory practices that support innovation without stifling it.

[20] See https://www.finma.ch/en/documentation/dossier/dossier-fintech/finanztechnologie-und-digitalisierung-2017/, Introduction of the Swiss sandbox.

[21] See https://www.finma.ch/en/news/2019/03/20190315-mm-fintech/, FinTech licence and sandbox: adjustments to FINMA circulars.

[22] See https://www.finma.ch/en/news/2017/12/20171214-mm-rs-publikumseinlagen/, FINMA revises "Public deposits with non-banks" circular.

The FINMA FinTech license[23] was subsequently introduced in 2019, allowing companies to accept public deposits of up to CHF 100 million or crypto assets, provided these funds are not invested and no interest is paid on them, under a simplified regulatory regime that is separate from the traditional banking license. The license was introduced as a separate measure from the Swiss sandbox but is broadly part of Switzerland's continued efforts to cultivate a supportive regulatory environment for financial innovation. It allowed for companies that had successfully developed their business models and were ready to scale operations beyond the parameters of the sandbox.

5 United Arab Emirates

Abu Dhabi Global Market, Regulatory Lab

A cornerstone of the Abu Dhabi Global Market (ADGM)'s innovation strategy is the ADGM Regulatory Lab (RegLab), [24] launched in 2016 as a specialized regulatory sandbox designed to support FinTech startups in developing and scaling their innovative solutions. The ADGM RegLab provides a unique environment where participants can test their products and services under the supervision of ADGM's regulatory authority,[25] with reduced regulatory requirements during the early stages of development.

The ADGM RegLab lays out a clear pathway from testing to scaling for successful participants,[26] which includes:

- **Initial authorization from the Financial Services Regulatory Authority (FSRA):** The FSRA will customize regulatory controls for each applicant based on the specific risks and needs of their business model, potentially modifying rules that are irrelevant to their operations. They may also limit the scope and scale of the testing to manage the associated risks.

- **Participation at the ADGM RegLab:** Once authorized, participants can operate in the RegLab for up to two years, during which they are expected to develop their innovations to a commercially viable stage.

- **Sandbox exit:** Once the participants business model has been made commercially viable, they will be ready to transition to a full financial services authorization, while those not ready may exit the RegLab. The exit strategy of a participant may vary according to its commercial needs. For example, the participant may choose to cease its business at the end of the validity period, or it may transfer its product and any clients to other authorized financial institutions.

[23] See https://www.finma.ch/en/authorisation/fintech/fintech-bewilligung/, FinTech license.

[24] See https://www.adgm.com/setting-up/fintech/overview, Leverage ADGM's best-in-class technology ecosystem and regulatory innovation.

[25] See https://www.adgm.com/documents/legal-framework/guidance-and-policy/fsra/fintech-reglab-guidance.pdf, FinTech Regulatory Laboratory Guidance.

[26] See https://www.adgm.com/documents/publications/en/fintech-regulatory-authority-brochure.pdf, How does the RegLab work?

The ADGM RegLab showcases a strong public-private collaboration as it enables in-depth engagements with the sandbox participants to understand their different business models and associated processes. It also provides the necessary regulatory and infrastructure support for companies to scale their business model in a controlled environment and eventually transition to a fully licensed framework upon successful market entry.

6 United Arab Emirates

Dubai Financial Services Authority, Innovation License and Regulatory Sandbox

The Dubai Financial Services Authority (DFSA) operates a licensed sandbox, known as the DFSA Innovation Testing Licence (ITL) Programme, [27] which enables ITL holders to test new and innovative financial products, services, and business models within the Dubai International Financial Centre (DIFC). Launched in 2017, the DFSA ITL program provides temporary regulatory flexibility, allowing firms to experiment with concepts such as digital Sukuk issuances using smart contracts, tokenised securities, debt offerings, and tokenised crowdfunding, amongst others, without being subject to the full suite of regulatory requirements.[28]

Companies accepted into the DFSA ITL program in different cohorts are required to go through a process where the DFSA reviews the business model, innovation, and risk assessment of the companies to determine the full eligibility of the ITL application. Through the program, the DFSA actively fosters financial innovation, engaging with market participants, and adapts its regulatory frameworks to accommodate new business models.

The duration of the participation in the DFSA ITL program is typically up to 12 months, which gives the participants ample time and opportunity to test their business model. Once their successful exit, they are expected to transition into a full regulatory authorization.

[27] See https://www.dfsa.ae/innovation, DFSA Crypto and Innovation.

[28] See https://dfsaen.thomsonreuters.com/rulebook/9-october-2019-dfsa-invites-applications-its-2020-regulatory-sandbox-winter-cohort, The DFSA invites applications for its 2020 regulatory sandbox “winter cohort”.

7 United Kingdom

Financial Conduct Authority and Bank of England, Digital Securities Sandbox

The Digital Securities Sandbox (DSS),[29] a joint initiative by the Financial Conduct Authority (FCA) and the Bank of England (BoE), was established to facilitate experimentation with DLT by financial market infrastructures (FMIs) in the tokenisation of securities issuance, trading, and settlement, while ensuring regulatory oversight. Under the DSS framework, financial instruments such as equities, bonds, funds, and money market instruments can be issued and traded within the controlled environment of the sandbox. This initiative represents the first sandbox specifically designed for FMIs, introduced by the UK Treasury following the conferral of powers under the Financial Services and Markets Act 2023 (FSMA 2023).[30]

The legislative framework governing the DSS was enacted by the UK Parliament and came into effect in January 2024. Its primary objective is to allow FMIs that fall outside the existing regulatory framework to test new developments and business models within a real-world environment, albeit under a modified regulatory regime, for a limited period of five years. The first cohort of participants is expected to be announced in Autumn 2024.

The UK regulators have outlined a clear progression pathway for sandbox participants, comprising five stages:

- Initial application;
- Testing;
- Go-live;
- Scaling; and
- Exit from the sandbox, and ultimately transition to a permanent regulatory regime if successful.

The DSS serves as a launchpad for accelerating tokenised RWAs within the UK, marking the first significant integration of DLT into the UK financial system. The business models tested within the sandbox are expected to provide valuable insights, contributing to enhanced regulatory clarity and fostering innovation in the tokenised RWA market.

Policy Recommendation #3:

A regulatory sandbox for tokenised RWAs in Australia would facilitate new and innovative digital asset markets and value-creating digital asset services operating in a controlled environment while being subject to regulatory oversight. A regulatory sandbox would also support regulators and market participants to observe which parts of existing regulations may not be effective, as well as areas where additional oversight or guidance may be productive.

Therefore, to incentivise innovation and inform the development of suitable regulatory frameworks for tokenized RWAs, we believe that the Australian Government should develop and encourage regulatory sandboxes for tokenised RWA markets in Australia in line with global best practices and in partnership with industry.

[29] See https://www.bankofengland.co.uk/paper/2024/cp/digital-securities-sandbox-joint-bank-of-england-and-fca-consultation-paper, Digital Securities Sandbox.

[30] See https://www.legislation.gov.uk/ukpga/2023/29/contents, Financial Services and Markets Act 2023

RWA tokenisation represents a groundbreaking evolution in financial markets, with the potential to enhance efficiency, transparency, and accessibility.

However, to fully realize these benefits, Australia must establish a regulatory framework that balances innovation with the need for market integrity and investor protection. This report has outlined key policy reforms necessary to achieve this balance, offering a roadmap for the development of a robust and adaptive regulatory environment.

The successful implementation of these reforms will require collaboration across multiple sectors - government, industry, and academia - along with a commitment to ongoing dialogue and adaptation as the technology evolves. Furthermore, international coordination will be crucial in ensuring that Australia remains competitive in the global marketplace, reducing the risks of regulatory arbitrage and fostering a thriving ecosystem for RWA tokenisation.

The future of RWA tokenisation in Australia hinges on the proactive and thoughtful development of regulatory policies that support innovation without compromising stability. By adopting the recommendations outlined in this report, Australia can position itself as a leader in the global movement towards the digital transformation of financial markets. The opportunity to shape the future of finance is within reach, and with the right regulatory framework, Australia can seize this moment to drive economic growth and innovation on a global scale.

ACKNOWLEDGEMENTS

This policy paper is authored by Ripple and the Digital Finance CRC, with the support of the Digital Economy Council of Australia. The policy recommendations presented in this report incorporate views shared in a discussion on the tokenisation of RWAs hosted at Blockchain Week 2024. The participants at that roundtable included representatives from the following institutions*:

- AUDC (Novatti Group)
- Digital Economy Council of Australia
- Digital Finance CRC
- Doxed Capital
- Fame Capital
- Hall & Wilcox
- Holley Nethercote
- Immutable
- Mastercard
- NotCentralised
- Piper Alderman
- Ripple

** Two attending institutions wish to remain anonymous.*

Ripple and the Digital Finance CRC are grateful to all participants for sharing their views on this subject.

DECA recently published a comprehensive Litepaper on Real World Asset Tokenization, which conducts an in-depth exploration of the global landscape, the types of assets that can be tokenized, and the benefits and limitations of this technology today.[31]

DECA's other policy insights are available at https://deca.org.au/submissions.

[31] See https://deca.org.au/wp-content/uploads/2024/03/BA_RWATokenisation_Litepaper.pdf Litepaper: Real-World Asset Tokenisation Transforming Australia's Capital Markets.

About Digital Economy Council of Australia
The Digital Economy Council of Australia (DECA) is the peak industry body that represents Australian businesses and business professionals participating in the digital economy through blockchain technology. DECA is committed to driving Australia's digital transformation by fostering innovation, advocating for appropriate regulatory frameworks, and supporting the growth of a robust digital economy. Through collaboration with industry, government, and academia, DECA aims to position Australia as a global leader in the digital economy, promoting transparency, efficiency, inclusivity, and security across all sectors. Learn more at https://deca.org.au.

About Digital Finance Co-operative Research Centre
The DFCRC is a 10-year, $180 million research program funded by industry partners, universities and the Australian Government, through the Cooperative Research Centres Program. The DFCRC's mission is to maximise the national economic benefits from the transformation of markets through digital tokenisation of assets. DFCRC brings together stakeholders in the finance industry, academia, and regulatory sectors to develop and harness the opportunities arising from the digitisation of assets and next transformation of financial markets. Learn more at https://dfcrc.com.au.

About Ripple
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.. Learn more at https://ripple.com.