DFCRC Response to

ASIC Consultation Paper 381

Updates to INFO 225: Digital assets: Financial products and services

28 February 2025

DFCRC
THE FUTURE OF FINANCE
DIGITAL FINANCE CRC

Digital Assets Team
Australian Securities and Investments Commission
GPO Box 9827
Melbourne VIC 3001

By Email: digital.assets@asic.gov.au

Dear Digital Assets Team

RE: Consultation Paper 381, Updates to INFO 225

The Digital Finance Co-operative Research Centre (DFCRC) welcomes the opportunity to respond to the *Consultation Paper 381: Updates to INFO 225: Digital assets: Financial products and services*. In this submission we make five main recommendations, and provide views on several issues raised in the Consultation Paper.

The DFCRC is committed to supporting the transition to the next generation of digital financial markets for the benefit of the Australian economy. We strongly advocate for further collaboration to foster digital asset innovation and modernise financial market infrastructure.

The DFCRC looks forward to continued engagement with ASIC on its approach to digital assets. As always, DFCRC remains at your disposal for any questions or clarifications, and we would welcome a meeting with you to discuss these issues in more detail and explore how we can work together to achieve these goals.

Yours sincerely

Dr Tālis J. Putniņš

Chief Scientist and Co-CEO

Executive Summary

The Digital Finance Co-operative Research Centre (DFCRC) welcomes the opportunity to respond to the *Consultation Paper 381: Updates to INFO 225: Digital assets: Financial products and services*. In this submission we make five main recommendations, and provide views on several issues raised in the Consultation Paper.

Getting to a fit-for-purpose regulatory regime for digital assets and their markets is critical for the Australian economy. DFCRC estimates the economic opportunity for Australia is in the order of $12 billion per annum in the efficiencies that could be gained in existing markets and cross border transactions. Additional downstream benefits and facilitation of new markets could add a multiple to this impact.

The task is urgent as countries compete for market share in the new, global digital financial system. Australia's competitiveness and sovereignty is at stake if digital asset issuance, markets, and services move offshore due to faster development of regulatory regimes.

Broadening INFO 225 from 'crypto-assets' to 'digital assets' – which includes real-world asset (RWA) tokenisation, such as tokenised financial securities and physical assets – is a positive step. However, key regulatory challenges in RWA tokenisation, such as licensing misalignment and transformation of regulatory classifications, remain unaddressed in INFO 225. Since these challenges are complex and cannot be fully addressed in a single revision of INFO 225, **Recommendation 1 proposes establishing a dedicated workstream to iteratively resolve regulatory issues in RWA tokenisation**.

Some of these challenges are discussed in this submission, including how tokenisation structures can lead to prohibitive regulatory transformations of the assets and fundamental misalignment of licensing requirements for trading RWA tokens.

Mapping new crypto-assets into existing legislation is a challenge, complicated by their novel properties, such as decentralisation and the absence of an issuer. These assets often do not fit neatly into existing asset categories, creating issues in consumer protection. In contrast, the regulatory issues involved in modernising ***existing*** assets through digital token representations of ownership or rights to drive efficient transaction mechanisms are fundamentally different. This applies notwithstanding the crossover in technology used.

Our other key recommendations in response to the Consultation Paper – and a potential agenda for a workstream RWA tokenisation – fall into two categories: regulatory issues related to ***assets*** and those concerning ***transactional flows*** (market infrastructure). While INFO 225 primarily focuses on asset classification, it also offers guidance on when trading these assets may require a Financial Market Infrastructure (FMI) licence, such as an Australian Markets Licence (AML) or a Clearing and Settlement Facility Licence (CSFL).

Additionally, our recommendations can be grouped into those that fall within ASIC's regulatory scope and those requiring broader legislative or multi-agency involvement, with ASIC playing a central role. These recommendations are summarised in the table below.

	Existing ASIC powers	Broader involvement
Assets	**<u>Recommendation 2</u>: Comprehensive mapping of tokenised RWAs from different tokenisation models to existing legislation.** A comprehensive mapping should cover most foreseeable permutations of underlying asset types and tokenisation structures. This approach is preferable to the limited set of examples in INFO 225, which leaves gaps and unanswered questions. This mapping could be formalised as an additional regulatory guide. Its purpose is to provide clarity and identify barriers, such as unintended or misaligned regulatory transformations of tokenised assets.	**<u>Recommendation 3</u>: Regulatory reforms to address barriers to RWA tokens and unintended classifications identified in Recommendation 2.** For example, if a token intended to represent an equity security is classified as a derivative or interest in a managed investment scheme, it can trigger unintended regulatory consequences and obligations for issuers and investors. Further, there are barriers to some RWA token types, such as tokenised bearer securities. Resolving these issues may in some cases require involvement of lawmakers.
Transactions	**<u>Recommendation 4</u>: Targeted regulatory relief to bridge the misalignment between existing FMI licences and the unique structure of digital FMI.** Digital asset trading differs structurally from traditional FMI. For example, it compresses trading and settlement into one inseparable function, eliminating clearing, novation, and counterparty risk. In fact, this simplification and derisking of the trade process is a core driver of the shift toward tokenising RWA. While the ultimate solution may require a new or modified FMI licence, a key interim step is targeted regulatory relief based on the unique risks and functions of digital FMI. This could include conditional exemptions for low-risk digital asset markets or a digital FMI sandbox, allowing regulators to observe and assess these marketplaces to inform future licensing frameworks.	**<u>Recommendation 5</u>: Develop a fit-for-purpose licensing regime for digital FMI (dFMI).** Existing FMI licences, despite their flexibility and principles-based approach, are structurally misaligned with digital FMI and fail to address its distinct risk profile. This underscores the need for a tailored dFMI licence. While legislative changes may ultimately be required, a practical, data-driven approach would be most effective. A dFMI sandbox, for instance, could allow digital markets to operate in a controlled environment, generating real-world insights to inform the development of an appropriate licensing framework.

1 Key issues in RWA tokenisation

Digital tokenisation of real-world assets (RWAs) has seen remarkable growth in R&D activity and adoption in recent years. It has the potential to transform many financial services, particularly the way these assets are traded and settled. RWAs include financial assets such as stocks, bonds, futures, receivables, money, and physical assets such as commodities and real estate. RWA tokenisation is the core topic of the Digital Finance Co-operative Research Centre (DFCRC).

Tokenisation of RWAs starts with a change in how the rights or ownership of an asset are represented – from legacy representations to secure digital tokens as the representations, often recorded on distributed ledgers.

This change in the representation of the asset may seem subtle, however, it has immense downstream implications for what can be done with those assets. For example, digital RWAs can be exchanged in ways that are fundamentally more secure and efficient than what can achieved with traditional representations of assets. Transaction counterparty risk can be eliminated by programming the simultaneous, conditional, and real-time exchange of digital tokens. This enables RWA tokens to be exchanged without needing many of the traditional market infrastructure components that exist to manage this risk, such as clearinghouses, margin, novation. Ultimately, removing these redundant components, facilitating faster settlement, and eliminating settlement failures creates substantial efficiencies and leads to the next generation of asset markets.

While trading RWA tokens is one of the prime examples of where the change in asset representation makes a substantial difference, there are many other capabilities enabled by digital token representations of assets. For a start, the asset representations become bundles of digital information, making them programmable. Programmability of the assets enables automation and more rigorous assurances of certain properties and behaviours of the assets. Many elements of compliance and AML can be both automated and more formally assured by programming the rules into the assets or asset services. Tokenising RWAs also enables advantages in using the assets as collateral, automating financial services, deepening markets through pooled liquidity provision, and the ease of asset fractionalisation.

The development of cryptocurrencies such as bitcoin and related tokens on public blockchains shares technological similarities with RWA tokenisation but presents vastly different challenges and regulatory considerations. These emerged as a new asset class, with properties not previously seen in (digital) financial products - they were created *without* an issuer, and in many cases without representing any kind of contractual claim on any other asset or service. The asset class itself is the innovation.

In contrast, in RWA tokenisation the underlying assets are all well established and the innovation is in enabling new transactional flows and more efficient processes due to the change in representation of the asset.

The main challenge in the tokenisation of RWAs is therefore not to determine the regulatory treatment of a new asset class. Rather to establish legal structures that

provide a solid foundation for innovation, recognising the structural differences that arise from the change in asset representation.

The economic gains from tokenising RWAs are substantial. By improving efficiency, reducing transaction costs, and increasing liquidity, RWA tokenisation could realise approximately $2.4 trillion in economic gains per year globally.[1] In Australia, DFCRC estimates the potential economic gains are in the order of $12 billion per annum in the form of efficiencies in existing markets and cross border transactions. Additional downstream benefits and facilitation of new markets could add a multiple to this impact.

To realise these potential economic gains, several critical challenges must be addressed. We are aware that this cannot be achieved with INFO 225 alone. However, the guidance in INFO 225 can serve as a step towards subsequent work on RWA tokenisation. Further workstreams can then build on this and work towards:

1. Removing regulatory barriers in existing legislation that impede the tokenisation of RWAs.
2. Clarifying the legal classification of different types of tokenised RWAs and providing guidance or regulatory reforms to prevent unintended changes in the classification of assets upon representing them as digital tokens.
3. Establishing an appropriate regulatory approach for digital Financial Market Infrastructure (dFMI) that accounts for the structural differences compared to traditional FMI. In the interim, provide targeted regulatory relief based on the unique risks and functions of digital FMI, such as conditional exemptions for low-risk digital asset markets or a digital FMI sandbox.

Recommendation 1: Establish a dedicated workstream to iteratively resolve regulatory issues in RWA tokenisation, including removing regulatory barriers that unduly impede the tokenisation of RWAs, clarify the legal classification of different types of tokenised RWAs, establish an appropriate regulatory approach for digital Financial Market Infrastructure (dFMI), and provide targeted interim regulatory relief for dFMI.

1.1 Different ways to tokenise an RWA

Effective regulation of digital assets must be based on a solid understanding of the different methods to structure the link between an RWA and its digital representation.

Many of the ambiguities in the Consultation Paper and proposed INFO 225, as well as inconsistencies between global standard-setting bodies, are due to failure to take into account the different tokenisation structures and how they can be applied across various

[1] See Baltais, M., Sondore, E., Putniņš, T. J., & Karlsen, J. R. (2024). *Economic impact potential of real-world asset tokenisation*. Digital Finance CRC, University of Technology Sydney, and Stockholm School of Economics Report, 2024-06.

underlying asset classes. As a result, ambiguous digital asset classifications and legal interpretations arise, driving confusion for market participants.

In fact, the different tokenisation structures can significantly impact a token's legal classification as the relationship between token and underlying asset is not always straightforward. Approaches to tokenising an RWA can differ in the nature of the record, pegging and backing mechanisms, custody arrangements, rights granted, and claims against the token issuer (See Appendix A).

For the tokenisation structures, we outline the following categorisation approach, which focuses on the financial structures and omits some of the implementation choices that can lead to further sub-categorisation. We elaborate on these in a separate research paper[2]:

i. Direct title tokenisation

In direct title tokenisation, the token is the primary record of ownership. Holding the token grants full legal rights inherent to the underlying asset. These assets are sometimes referred to as 'digitally native' because rather than the token being linked to a record in a traditional registry, the token is the primary record. When a token is exchanged or purchased, full control and ownership of the asset is transferred. This model requires legal recognition that the (distributed) ledger serves as the official registry of ownership and that the token itself confers the inherent rights of the underlying asset.

ii. Intermediated tokenisation

In intermediated tokenisation, a custodian holds the underlying asset and issues (mints) a 'digital twin' that represents the underlying asset on a one-to-one basis. The token should contain all the inherent rights of the underlying asset and also convey these rights upon transfer. The original asset continues to be recorded in a central registry. Therefore, this tokenisation model combines two infrastructures: the infrastructure of the underlying asset and the (distributed) ledger. The holder may have the right to exchange the token for the underlying asset (redemption) or to exchange it for the cash value of the asset.

iii. Collateralised tokenisation

In collateralised tokenisation, tokens are backed by a variety of assets to maintain their value relative to the underlying (target) asset. In contrast to the intermediated model, the underlying asset may not necessarily be involved in the backing structure. Typically, because the value of the collateral may not perfectly match the asset the token represents, the tokens are often over-collateralised. This means more collateral is held under custody than the token's value, protecting against drops in the collateral's value. Similar to the intermediated issuance model, the tokens typically represent claims against the issuing entity. Issuance and redemption of tokens usually happens with reference to the target asset, not

[2] Gmeiner, F., & Putniņš, T.J., (2025). *Toward a comprehensive and unifying digital asset taxonomy*. Digital Finance CRC and University of Technology Sydney.

the value of the collateral pool, to ensure the tokens maintain value tied to the target asset.

iv. Algorithmic tokenisation

In algorithmic tokenisation, the tokens are not backed by a specific asset or basket of assets but by algorithms that regulate the token's supply and value. This often involves automatic issuance or redemption of the token to stabilise its value in relation to the price of the reference asset. Two main models exist: rebasing models, which periodically adjust the supply across all holders to align the token's price, and seigniorage models, which use multiple tokens to absorb volatility. Hybrid models combine collateralisation with algorithmic adjustments, aiming for stability with minimal collateral.

Most real-world assets (e.g., money, shares, commodities) can be tokenised using all of these methods.

The methods vary in complexity and risk. For example, intermediaries can introduce counterparty risks.[3] Furthermore, the nature of the risks in the various tokenisation structures can depend on the underlying asset category.

Therefore, we propose developing a comprehensive two-dimensional taxonomy of digital assets that accounts for differences in the underlying asset and in the tokenisation structure. Such taxonomy would facilitate the systematic mapping of all digital assets that already exist, and also those that could emerge in the future. Further, it can serve as a framework for international harmonisation or equivalence in the categories of digital assets. An initial version of such a taxonomy has been developed in a research paper by the DFCRC and used to compare the main regulatory frameworks for digital assets that have been developed in different jurisdictions.[4]

Looking at isolated examples of a particular tokenisation approach applied to a specific asset, as is the approach in INFO 225, does not provide comprehensive evaluation of the design space of RWA tokens, leaving substantial gaps and areas in which guidance is missing.

To illustrate, consider Figure 1 below, which maps the coverage of the examples provided in INFO 225 to the different categories of digital assets, each category being a combination of an underlying asset and a tokenisation structure.[5] The coverage is sparse.

[3] See Carapella, F., Swem, N., & Gerszten, J. (2023). Tokenization: overview and financial stability implications. *Finance and Economics Discussion Series, issue*. The authors highlight the implications on financial stability risks that arise when issuers do not provide a transparent representation of the mechanism that links the reference asset to its tokenised counterpart.

[4] Gmeiner, F., & Putniņš, T.J., (2025). *Toward a comprehensive and unifying digital asset taxonomy*. Digital Finance CRC and University of Technology Sydney.

[5] Drawing on Gmeiner, F., & Putniņš, T.J., (2025). *Toward a comprehensive and unifying digital asset taxonomy*. Digital Finance CRC and University of Technology Sydney. Example 13 is not shown, as it was not described in sufficient detail to undertake an accurate assessment.

Figure 1: Mapping the examples in INFO 225 to a two-dimensional taxonomy of digital assets

	Tokenisation Structure / Underlying Asset	Direct title tokenisation	Intermediated tokenisation	Collateralised tokenisation	Algorithmic tokenisation
Financial assets	Money			4. Yield bearing-stablecoin	*Algorithmic stablecoin -> (see Attachment p.15)*
	Equity				
	Debt instruments	11. Tokenised security			
	Derivatives	12. Contract for difference			
	Investment fund unit				
	Carbon credit				
	Loans				
	Receivables				
?	Crypto assets	1. Exchange token 2. Native token staking service 3. In game NFT 8. H1 fundraising 8. H2 fundraising 9. Meme coin	*"wrapped token" -> (see Attachment p.15)*		
Physical assets	Real estate				
	Commodities			5. Gold asset referenced token	
	Physical goods				
IP	Intellectual property				
Services	Insurance services				
	Consumer services	6. Membership NFT 7. Claim for pre-paid services 10. Tokenised concert ticket			

Regulatory classification according to Attachment to CP 381	
Facility for making a financial investment	Managed investment scheme
Security	Derivatives
Non-cash payment facility	No financial instrument

Mapping international frameworks for digital assets to the proposed taxonomy reveals that regulations and taxonomies in different countries provide regulatory clarity only for specific subsets of digital assets, leaving gaps in coverage. This means there still remains an opportunity for Australia to play a role in shaping a taxonomy that influences global approaches.

We therefore strongly encourage ASIC to develop or endorse a taxonomy of digital assets to provide more comprehensive regulatory guidance than what can be achieved through examples. A further reason for this recommendation is that the process of developing such a taxonomy forces the identification of regulatory gaps, and barriers, some of which we will point out later in this submission.

In responding to the Consultation Paper questions, we will point out specific examples where the use of the taxonomy would facilitate more helpful regulatory guidance.

Recommendation 2: Comprehensive mapping of tokenised RWAs from different tokenisation models to existing legislation.

A comprehensive mapping should cover most foreseeable permutations of underlying asset types and tokenisation structures. This approach is preferable to the limited set of examples in INFO 225, which leaves gaps and unanswered questions. This mapping could be formalised as an additional regulatory guide. Its purpose is to provide clarity and identify barriers, such as unintended or misaligned regulatory transformations of tokenised assets.

1.2 Regulatory barriers to RWA tokenisation

The biggest challenge in navigating the tokenisation of RWAs is not so much about providing clarity on how existing laws apply to digital assets, but more so to address the structural barriers in existing regulation or legislation to RWA tokenisation.

These barriers take two main forms, (i) situations in which an approach to structuring a RWA token is prohibited by existing regulation/legislation without adequately accounting for the way tokenisation changes risks, and (ii) situations in which a digital token obtains a different legal classification as its underlying asset in a way that is unexpected or inconsistent with the intention of the regulation.

A potential example of the first category can be found in the Corporations Act 2001. Sections 254F(a) and 601BP prohibit companies from issuing bearer shares. Bearer shares are a type of security where legal ownership is determined by possession. The person who holds the physical share certificate is considered the legal owner, as there is no centralised registry to track changes in ownership. The lack of a centralised authority makes bearer shares highly controversial, particularly due to concerns about money laundering, transparency, fraud, and compliance. Over the past two decades, bearer securities have been phased out across most jurisdictions.

So, how does this relate to RWA tokenisation? Direct title tokenisation of shares holds similarities to bearer instruments since ownership in a company could be determined by possession/control of the token. In a distributed ledger technology (DLT) infrastructure, the transfer of a token could equate to the transfer of ownership.

But current legislation, such as the Sections noted above, may prohibit this approach to tokenising securities.[6]

Why this is problematic is that the current legislation was written at a time when the technology available to implement bearer securities was paper. Now, we have technology that allows implementations of bearer securities as digital tokens that have substantially different properties to paper-based bearer securities – programmability enables the tokens to hard-code compliance with AML/KYC, distributed ledgers that record those tokens provide substantial transparency in contrast to the complete opaqueness of paper, a digital token cannot be forged unlike paper, and so forth.

Put simply, the technology that underpins digital tokens enables the elimination, or at least substantial mitigation, of the risks that led to the prohibitions on bearer securities. This appears to contradict the regulatory principle of "same activity, same risk, same regulatory outcome" and suggests that regulatory revision is needed.

While this barrier to tokenisation of shares is one example, other legislative blockers for other asset classes could be identified by mapping a comprehensive digital asset taxonomy, of the type described in the previous section, to Australian legislation and regulation. Once identified, an important step would be to provide clear guidance on how tokenised RWAs can be compatible with existing laws, or initiate changes to the law. This issue, together with the issues raised in the next subsection, are the basis for Recommendation 3.

1.3 Unintended legal classification of RWA tokens

The different ways to tokenise an RWA can result in a different legal status for the digital token compared to the underlying asset that the token is representing.

The potential problem is that changes in the legal classification of an asset when it is tokenised can have significant downstream implications for market participants, as they might operate outside permitted legal structures, investment mandates, or disclosure obligations. For example, in tokenising equity, managed funds might not be able to hold the equity tokens if they qualify as interests in a managed investment scheme or derivatives due to regulatory constraints on the types of assets they are permitted to invest in. Investments in managed investment schemes and derivatives usually fall under stricter risk management and capital adequacy rules than equity, limiting its eligibility for funds that are not structured to trade in complex financial instruments.

INFO 225 provides some examples of this difference in legal status between the token and underlying asset arising in the course of tokenisation. However, beyond examples, it

[6] More broadly, while distributed ledgers can provide traceability through recording ownership transfers immutably and transparently, there is no clear regulatory consensus on whether this would satisfy legal requirements for tracking share ownership. In most jurisdictions, centralised registries play a critical role in confirming ownership and ensuring compliance with laws. The absence of a legally recognised, centralised system of record for tokenised equity shares raises concerns about whether tokenisation of shares, as currently conceived, conflicts with existing legislation.

does not address the broader need for clarity about when do such differences arise in tokenisation, and when are the difference in legal status appropriate.

For example, if the underlying asset is a share in a company (equity) or an ounce of gold (commodity), for which of the tokenisation methods is the asset token still regarded as an equity or a commodity, as opposed to taking some other form such as a derivative or interest in a managed investment scheme?

Example 5 in the Attachment to the Consultation Paper implies that using the collateralised tokenisation method to create digital gold tokens changes the original asset, gold (a commodity), to interests in a managed investment scheme (financial product). Does this apply to all underlying asset types, when tokenised through a collateralised tokenisation method? What would have been the legal status of the token under the other tokenisation methods?

Therefore, the first thing that is required is greater clarity about when tokens will fall into a different legal category than the assets they are designed to represent. Some of the examples in INFO 225, such as the gold example discussed above, show how that transformation can occur in specific cases. But such examples leave open the question of whether the transformation illustrated in an example applies to all asset classes? And what transformations would apply if a different tokenisation structure had been chosen? A token mapping could address these issues and clarify to what extent the examples in INFO 225 can be generalised.

As another example, INFO 225 Example 11 shows that tokens representing a bond directly issued on a blockchain may be classified as a debenture (security). Does a similar preservation of the legal status apply to other securities that are issued directly on a blockchain?

INFO 225 provides even less guidance about the legal status of tokens created through the 'intermediated tokenisation' method described previously. This gap should be addressed, as the current version lacks examples of this approach. For many existing asset classes, the path to tokenisation is more likely achieved through a gradual shift from a legacy registry to digital tokens via intermediated tokenisation, than it is via a complete overhaul of the underlying registry. Thus, intermediated tokenisation could serve as a practical stepping stone toward the direct title tokenisation of certain asset classes.

However, regulatory certainty is needed to determine if and when a 'digital twin' token is legally equivalent to its underlying asset. Overseas jurisdictions have already introduced regulations to facilitate tokenisation through the intermediated issuance model.[7]

[7] Qatar's legal framework (2024 Digital Asset Regulation, Investment Token Rules 2024, and Token Service Provider Guidelines) restricts tokenisation to digital assets that have been certified by a licenced validator and issued via an authorised generator. This ensures that only intermediary tokenised assets are regulated, as ownership of the underlying asset must be formally verified and recorded in a traditional registry before the token is issued.

The second issue here is that for some cases the transformation of the legal status is well justified by a difference in risk or properties of the digital asset compared to a different representation of the asset. But in others, the digital token may provide to its holder effectively the same rights and exposure as the underlying asset, yet receive a different legal status because a structuring arrangement is required to obtain a digital representation of a record that exists in a legacy registry.

Again, a systematic approach to identification of such cases, beyond examples, is to work through a comprehensive taxonomy of asset and structuring combinations.

We therefore encourage ASIC to consider outlining their legal interpretation of the different tokenisation structures, when/how those structures change the legal status of the tokenised asset, and assess the appropriateness of the changes. Doing so systematically for a taxonomy of digital assets would provide more far-reaching clarity than the interpretation of selected digital asset examples.

Recommendation 3: Regulatory reforms to address barriers to RWA tokens and unintended classifications identified in Recommendation 2.

For example, if a token intended to represent an equity security is classified as a derivative or interest in a managed investment scheme, it can trigger unintended regulatory consequences and obligations for issuers and investors. Further, there are barriers to some RWA token types, such as tokenised bearer securities. Resolving these issues may in some cases require involvement of lawmakers.

1.4 Digital financial market infrastructure

Unlike traditional financial markets, where the trading cycle consists of separate processes for trading, clearing, and settlement, digital tokens on DLT fundamentally change how these functions are performed.

The changes in the transaction flows are not a mere coincidence or side effect of the tokenisation process. Rather, they are a core reason for tokenising assets – to enable lower risk, more efficient transaction mechanisms.

The new mechanisms for trading, ownership recording, and settlement do not fit neatly within existing FMI licensing models due to the structural differences. Moreover, the dFMI fundamentally changes the nature of risk in the processes.

To illustrate, consider the typical trading process using traditional FMI. When a market matches a buyer and seller to form a trade, which will be settled at a future point in time (e.g., T+2 days), several risks emerge. There is the risk that either party may not settle the transaction, creating a replacement risk[8] for the counterparties because the asset value can change between the trade and the scheduled settlement. There is the risk of

[8] For example, consider a trade in which party X agrees to buy an asset from party Y at $1. If at the time of settlement, the value of the asset is $2 then a fail to settle the trade by party Y can impose a loss on party X of approximately $1, referred to as the replacement cost.

downstream contractual breaches or cash flow problems if a settlement is delayed by a counterparty (liquidity risk). There is the risk of one leg of the transaction (e.g., the asset or the cash) being exchanged and the other leg not being delivered, leaving one party with a loss approximately equal to the value of the trades, which could be difficult to recover (credit risk).

In many asset classes, these transaction counterparty risks are managed through centralised clearing and the novation. Central counterparties do not magically cause the transactional risks to disappear. Instead, they centralise those risks, absorb them on behalf of trade counterparties, manage those risks through counterparty monitoring and holding reserves such as margin from clearing participants and a loss recovery fund. The central counterparties also price those risks charge market participants accordingly. See Figure 2 below.

This process of central clearing simplifies the market from a user perspective – in well-functioning, centrally cleared markets, participants face minimal trade counterparty risks, because they are handled by central clearing and settlement facilities. But the (i) the costs of managing those risks are still borne by market participants through the costs of clearing and settlement, and (ii) perhaps even more importantly, the trade counterparty risks are transformed into systemic risks.

This second point is worth elaboration. If a single trade were to fail, the consequences for the trade counterparties are likely to be limited. However, when the risks involved in a large number of trades are aggregated together and taken on by a single entity (the central clearinghouse), the aggregation of counterparty risk becomes substantial and creates systemic risk – if the central counterparty were to default, the consequences would be widespread and severe.

For this reason, traditional clearing and settlement facilities are critical points of failure for the entire financial system and therefore subject to considerable oversight (by ASIC and RBA) and rigorous licensing requirements (e.g., Clearing and Settlement Facility Licence).

From a markets perspective, the attraction of digital assets is being able to remove these trade counterparty risks, not just shift them to a central entity. This is achieved by exchanging digital assets directly one for another using cryptographic protocols. Settlement of a transaction of one asset for another occurs concurrently and immediately, and either both legs of the transaction complete, or the whole transaction fails. This can be implemented using DLT and smart contracts as illustrated in Figure 2 below.

This process is sometimes referred to as “atomic settlement” and is similar to “Delivery vs Payment” (DvP) done in real-time.[9] Smart contracts solve the problem of ensuring

9 Unlike real-time atomic settlement, DvP is not necessarily riskless. For example, DvP, which is implemented in different ways in different markets, can involve deferred settlement, which creates “replacement cost risk” when asset prices change between the time of the trade and the time of settlement and the settlement fails to complete. The possibility that DvP settlements can fail to compete also creates “liquidity risk” to counterparties counting on cleared funds at a particular time. Achieving real-time DvP is

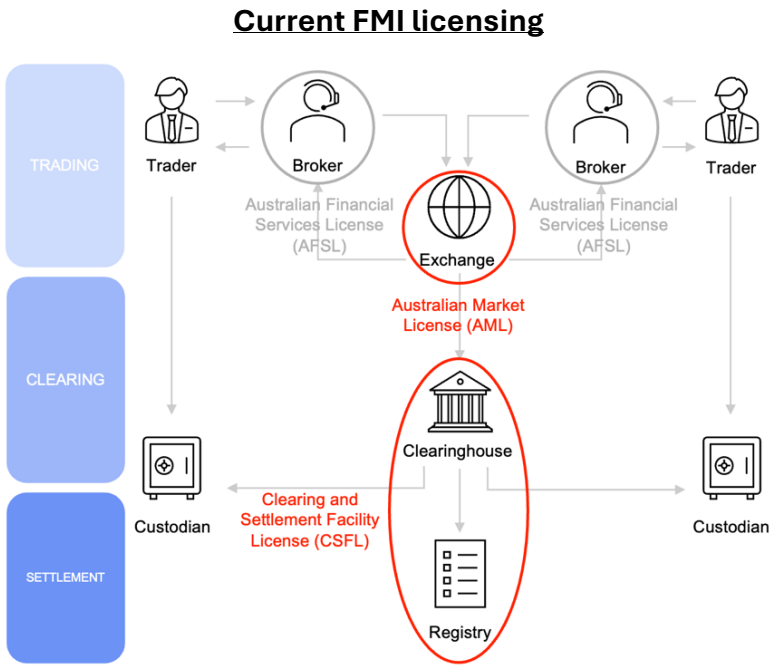
simultaneous conditional exchange. Settlement occurs in real-time, so trades cannot occur without being fully backed/funded at the time of the trade.

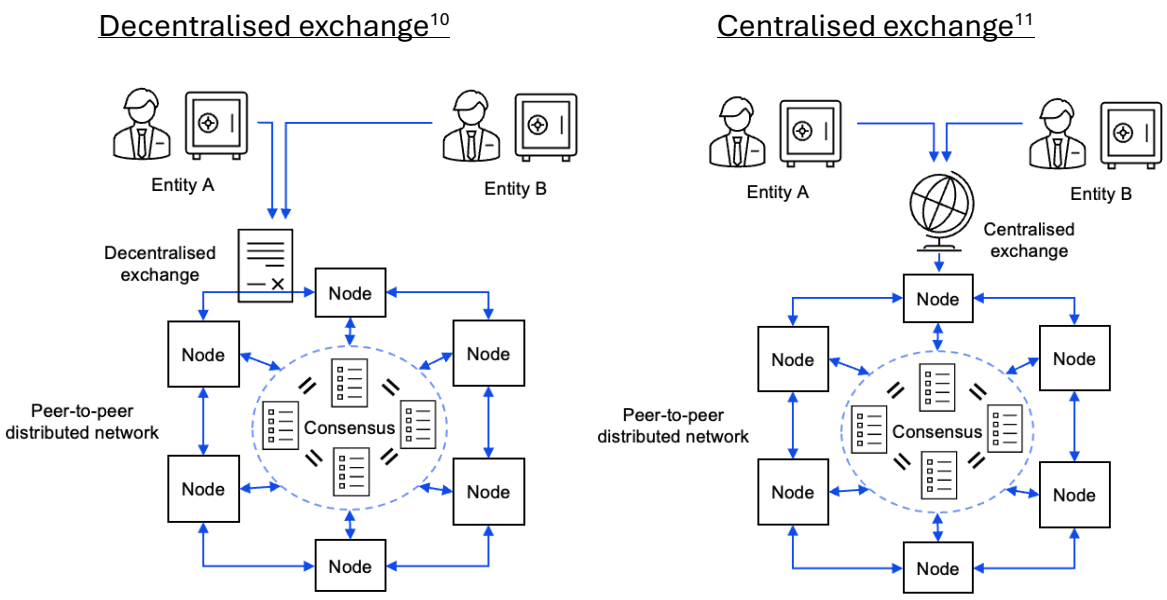
A further difference is that with digital assets, this outcome of simultaneous, conditional, real-time exchange can be achieved without the need for a custodian or intermediary to hold the counterparty assets in preparation for exchange. Instead, individuals can maintain custody of their assets and exchange them directly with their trade counterparty.

impractical in many settings involving traditional registries because of the operational challenges of getting different registries to synchronously and conditionally update records at the time of a trade.

Figure 2: Structural differences between traditional FMI and digital FMI

Using simplified cash-equities market examples, we highlight two types of digital asset financial market infrastructures, contrasting them with traditional markets:





[10] In the decentralised trading model, trading takes place via a smart contract on the distributed ledger infrastructure. Since the trade matching and the final exchange of assets takes place on the same infrastructure, both functions are irrevocably linked in real time. In this scenario, there is no time delay between trading and settlement.

[11] In the centralised trade model, trading happens through an off-chain trading mechanism (similar to a traditional exchange). Once trade credentials are verified, the information will be forwarded to the distributed ledger infrastructure. Ultimately, the exchange of the two liked assets will happen on the distributed ledger. This scenario might introduce a time delay between trade and settlement, but it can be considerably shorter than in current financial markets.

There are several implications of these fundamentally different transaction capabilities for digital assets:

(i) The ability to remove (not shift) the counterparty risks, and thereby remove the costs of managing these risks, is a core source of economic gains and the foundation of the more efficient, next generation or marketplaces for many different assets. From the perspective of maximising economic benefits of innovations, it is therefore crucial to develop regulatory frameworks that will enable these new transactional flows.

(ii) Digital FMI is structurally different to traditional FMI for which the current licensing regime was developed. For example, the trade and settlement functions that are typically separate in traditional FMI and thus have two different licences, become one inseparable function (and there is no clearing or novation) in digital asset markets that implement real-time atomic settlement. There is, therefore, a structural misalignment between current FMI licences (Australian Market Licence, AML, and Clearing & Settlement Facility Licence, CSFL) and the type of digital asset markets described here. It is worth recognising that in practice, market infrastructure could be set up to trade digital assets in a manner more akin to traditional FMI, with deferred settlement and other risks re-introduced. It is therefore not true that all digital asset markets differ structurally from traditional FMI. Only those that eliminate counterparty risk will have fundamental structural differences.

(iii) Digital asset markets, of the type described here, remove counterparty risk from the trade process, including the aggregate form of this risk – the systemic risks of central clearinghouses that engage in novation. Therefore, the rigorous licensing and oversight requirements that are imposed on Clearing and Settlement Facilities under the current licensing regime are neither necessary, nor appropriate under IOSCO's regulatory principle of "same activity, same risks, same regulatory outcomes"[12] or ASIC's version of that principle "similar activity, similar risk, same regulatory outcome."

(iv) While trade counterparty risk can be removed in digital asset transactions, other forms of risk may arise. For example, asset theft, new forms of money laundering, or exploits of smart contract logic. These risks may warrant additional controls or regulatory requirements. Many of these, however, occur in different parts of the digital asset system, such as with custodians or issuers, or have different controls such as smart contract audits or pre-trade counterparty verification.

These issues underpin our next two key recommendations, the first being an interim measure and the second being the longer-term solution:

[12] International Organization of Securities Commissions (IOSCO), *Policy Recommendations for Crypto and Digital Asset Markets Consultation Report*. May 2023.

Recommendation 4: Targeted regulatory relief to bridge the misalignment between existing FMI licences and the unique structure of digital FMI.

Digital asset trading differs structurally from traditional FMI. For example, it compresses trading and settlement into one inseparable function, eliminating clearing, novation, and counterparty risk. In fact, this simplification and derisking of the trade process is a core driver of the shift toward tokenising RWAs. While the ultimate solution may require a new or modified FMI licence, a key interim step is targeted regulatory relief based on the unique risks and functions of digital FMI. This could include conditional exemptions for low-risk digital asset markets or a digital FMI sandbox, allowing regulators to observe and assess these marketplaces to inform future licensing frameworks.

Recommendation 5: Develop a fit-for-purpose licensing regime for digital FMI.

Existing FMI licences, despite their flexibility and principles-based approach, are structurally misaligned with digital FMI and fail to address its distinct risk profile. This underscores the need for a tailored dFMI licence. While legislative changes may ultimately be required, a practical, data-driven approach would be most effective. A dFMI sandbox, for instance, could allow digital markets to operate in a controlled environment, generating real-world insights to inform the development of an appropriate licensing framework.

The rationale for structuring our recommendations as a two-step process, with an interim form of relief and longer-term reform of the FMI licensing regime, has two components:

(i) First: the timeframes. Licensing reform is likely to be relatively slow, yet the need to enable digital asset markets in Australia is much more urgent, given the strong competition to capture slices of the global market share. Relief within ASIC's powers is likely to be a faster approach to allowing digital asset markets in Australia to develop and compete globally while an appropriate licensing regime is being carefully developed.

(ii) An appropriate dFMI licensing regime should be grounded in how industry will implement dFMI, which in turn requires enabling industry to implement such markets in a controlled environment, such as with conditional relief or within a dFMI sandbox. Thus, targeted regulatory relief for dFMI is a means to obtain the observations and learnings needed to design a well-informed and robust licensing regime for dFMI.

Interim, targeted regulatory relief based on the unique risks and functions of digital FMI could take several forms. One is conditional exemptions for low-risk digital asset markets, such as those implementing real-time atomic settlement to avoid giving rise to counterparty risk and that remain within activity thresholds.

Another is class-wide relief for dFMI falling within well-defined criteria and complying with guard rails. A very positive initiative by ASIC, for which the ASIC staff involved deserve credit, is the way ASIC used such an approach to enable the pilot marketplaces to run in Project Acacia for applied research purposes. This forward-looking, innovation-

encouraging, action to support applied research, for the benefit of the Australian regulatory framework and financial market infrastructure, is to be commended. It is the type of initiative seen in the jurisdictions that are leading globally in developing digital finance industries.

A third, perhaps not too dissimilar to the previous mechanism, is a production sandbox, or 'launchpad', for dFMI including digital asset marketplaces. It is widely understood that the existing enhanced regulatory sandbox is not set up to support dFMI development. Class-wide relief may be a mechanism to enable a production sandbox for dFMI that meet the entry and selection criteria. The relief, rather than being a single time-bound period, could have stage gates: small-scale, early-stage experimentation may have simple requirements while risks and activity remain low. Upon reaching certain activity or risk thresholds, requirements and controls increase. A review of the FMI licensing is conducted in parallel, with the objective that dFMI operators would "graduate" out of the production sandbox onto a fit-for-purpose dFMI licence or licences. This approach combines the two key recommendations and co-develops a dFMI licensing regime alongside operational digital asset markets.

International precedent exists for dFMI sandboxes, which is very helpful for developing and applying such a mechanism in Australia. We have the benefit of learning from overseas experience in this area to design a safe and effective mechanism. For example, the UK digital securities sandbox.

More detailed design recommendations, including a review and comparison of the overseas models, can be found in a separate DFCRC research paper.[13]

In summary, to foster innovation in digital assets within the regulatory perimeter, it is essential to address the FMI licensing regime misalignments and work towards regulatory solutions that support trading of tokenised RWAs. While we recognize that INFO 225 focuses on the regulatory treatment of digital assets that qualify as financial instruments, the next step must be to ensure that the FMI for these assets is also adapted. Without this alignment, regulatory clarity alone will not be sufficient to unlock the full benefits of RWA tokenisation. We elaborate in our answer to B2Q1.

2 Responses to specific questions in the Consultation Paper

A1Q1 Are there any topics or guidance that have not been included in draft updated INFO 225 that you think should be? Please provide details.

As outlined above, our view is that insufficient guidance is given across the variety of tokenisation structures and distribution mechanisms that can in practice be used to create tokenised RWAs.

[13] See *Proposal for a financial market infrastructure (FMI) regulatory sandbox in Australia*, Digital Finance Co-operative Research Centre, 2024.

At a minimum, we recommend including further examples covering the tokenisation structures that have been omitted, particularly for RWAs, which are underrepresented in INFO 225. The guide is still very much grounded in its Initial Coin Offering (ICO) and crypto-asset origins. This stands in contrast to the actual distribution of asset value in the economy, where RWA value is an order of magnitude larger (e.g., by DFCRC estimates, 1,000 times larger).

However, the more comprehensive approach that we recommend is to develop a digital asset taxonomy and use it as the basis of more comprehensive guidance. This systematic approach would leave fewer gaps and areas of ambiguity than the current example-driven approach. A systematic outline of criteria/principles on which ASIC undertakes their regulatory interpretation of digital assets would be helpful and is not in contrast with the "principle-based guidance" AISC is intended to provide.

Next, there is the whole area of FMI licensing for digital asset markets, which is a critically important topic, but that receives minimal guidance in INFO 225. The key issues and our recommendations are summarised above in section 1.4 so we will not repeat them here. It may be that ASIC intends to keep the scope of INFO 225 tightly focused on the digital *assets* themselves and their regulatory classification. However, as highlighted by the Consultation Paper, the asset classification has substantial implications for the FMI licensing regime because the trading of digital assets that are classified as financial products requires FMI licences. Therefore, the issues of FMI licensing need urgent attention.

Finally, additional clarity about the regulation of decentralised financial services (DeFi) applied to digital assets would be beneficial. For example, decentralised exchanges, decentralised asset lending protocols, and decentralised repo facilities.

A2Q1 Do you have comments on any of the proposed worked examples? Please give details, including whether you consider the product discussed may/may not be a financial product.

Example 11:

The blockchain-native issuance of bonds through "Direct title tokenisation" (see section 1.1 of this submission), implies that in ASIC's view DLT can be a valid and legally acceptable method for recording and tracking ownership of financial securities. This is a strong confirmation of the technology-agnostic principles rooted within the Corporations Act.

Given this example, it is now important to clarify whether the same principles extend to other securities, such as shares. If DLT can be used to issue and track bonds in compliance with regulatory requirements, the logical extension is that it should also be applicable to other securities.

To ensure regulatory clarity, we strongly urge ASIC to discuss in INFO 225 how much one can generalise the provided Example 11 – where the same rationale and regulatory

classification would apply and where such extrapolation may not be automatic and other considerations arise.

Example 2 and Example 7:

The difference between the blockchain fee token in Example 2 and the lawnmower token in Example 7 appears more closely based on the intuitive classification of the token's utility rather than on clear principles. The blockchain fee token is considered a financial instrument because its utility is within the blockchain network, whereas the lawnmower token is not regarded as a financial product because it relates to a real-world service utility.

What is the fundamental difference between the utility of the two tokens and how is the distinction made? In a blockchain ecosystem, fee tokens are utility tokens that are used to pay for transactions, similar to the lawnmower token, which is used to pay for a square metre of mowed lawn. The difference may be in the fundraising and potential future expectations for the price of the blockchain fee token, but who is to stop someone from speculating with the lawnmower token and driving up the token price to generate future returns?

Put simply, these examples appear to lack a robust, principles-based rationale for classifying one as a financial product and not the other.

A2Q2 Are there any additional examples you would like to see included? Please give details of the suggested example(s), and why you consider the digital asset discussed may/may not be a financial product.

It would be beneficial to include examples of "Intermediated issuance" of digital assets (see Section 1.1 of this submission) that require a custodial model, creating a 'digital twin' on a (distributed) ledger.

For example, the asset class securities: shares are issued through a conventional IPO and traded on a stock exchange, with ownership records managed by third parties in centralised registries. Designated issuing intermediaries then create 'digital twin' tokens backed on a one-to-one basis by the shares in the traditional registry, giving token holders rights as a shareholder. Token holders have claims against the issuing entity to redeem tokens either for the underlying shares or for an equivalent amount of fiat currency (effectively a sale of the shares).

For intermediated tokenisation, it is important to consider how the underlying registry is updated in the event of a token transfer and the obligations of the parties in the token structuring, such as the need for an AFSL.

A2Q3 For any of these examples, are there any unintended consequences? If so, what are these and what do you propose in response?

Example 9:

Meme coins may not be considered to have a fundamental value in the traditional financial sense (e.g., discount cash flow valuation), yet they can trigger market hypes that influence digital asset prices and even spill over into regulated markets. While the example illustrates ASIC's view that the particular meme coin given in the example is unlikely to be a financial product, it is worth noting that research indicates that much of the consumer harm in digital asset markets stems from meme coins, altcoins, and scam tokens.[14]

Excluding these assets from regulatory oversight by classifying them as non-financial products weakens consumer protections in Australia. This guidance appears to sideline the very segment where the highest consumer risks occur.

A3Q1 Do you think it would be helpful to include an example of a wrapped token and/or a 'stablecoin' in INFO 225? If so, do you have any suggestions on the features of the potential examples in paragraphs 20–21?

Yes, it is helpful to give an example of a non-interest bearing stablecoin, as over 85% of the global US dollar pegged stablecoin market is currently made up of stablecoins that do not earn interest for the holder.[15] Given the importance and growing use of value-stable digital assets, categorising them for regulatory purposes is essential as other jurisdictions have already created regulations for stablecoins.[16]

Further, it would be helpful contrast them with the yield-bearing stablecoin in Example 5 – would a non-interest bearing stablecoin also be regarded as an interest in a managed investment scheme?

Additionally, it would be beneficial to explicitly emphasise in the features the type of issuer, as the legitimacy of the issuer might have impact on the regulatory treatment of the digital asset. 'Stablecoins' are usually issued by private companies but must be distinguished from 'tokenised deposits' or 'reserve-backed digital currencies' issued by authorised financial institutions.

---

[14] See e.g. Dhawan, A., & Putniņš, T. J. (2023). A new wolf in town? Pump-and-dump manipulation in cryptocurrency markets. *Review of Finance*, *27*(3), 935-975.;
Aliyev, N., Allahverdiyeva, I., & Putniņš, T. J. (2023). Scam Alert: Can Cryptocurrency Scams Be Detected Early?. *Available at SSRN 4490180*.

[15] Market capitalisation of USDT $141,079.16M (63.74%) and USDC $55,247.44M (24.96%). Accessed on 17 February 2025 via https://app.rwa.xyz/stablecoins

[16] See the EU Markets in Crypto-Asset Regulation, regulating non-interest bearing stablecoins ("E-Money Tokens") as new asset class.

B2Q1 Do you agree that the same regulatory obligations should apply to digital asset and traditional financial products of the same category (e.g. securities, derivatives)? Please explain your response and provide specific examples.

It is a misassumption that the same regulatory obligations that are in place for traditional representations of assets are appropriate for the respective tokenised versions of the same category in general. They might be in some cases/activities, but not in others. The reason is that digital assets create different risks.

A clear example is in how digital assets are traded compared to traditional representations of those assets (see Section 1.4 of this submission). By removing trade counterparty risk and systemic clearinghouse risk, yet potentially introducing other types of risk, the regulatory obligations for digital asset marketplaces should be different to those imposed on tradition al FMI. The rationale for doing so is a material difference in risks. Similarly, there are likely to be differences in the risks associated with custody of digital assets compared to traditional asset representations of the asset, and other financial services, all of which need to be worked through.

Thus, the same regulatory category of asset (e.g., a share in a company, or a bond) when represented using a different technology (e.g., tokens on a DLT vs records in a centralised registry) can present different risks, particularly in its transactional flows. Returning to the regulatory principle of "same activity, same risks, same regulatory outcomes" would imply different regulation or regulatory outcomes would be warranted for certain services provided for digital assets compared to traditional representations.

This suggests it may be difficult to adhere to the principles of 'technology neutrality' or 'technology agnosticism' unconditionally because of cases *where the technology itself changes the risks*. This is indeed the case with digital assets, given they have been designed to eliminate key risks that are the source of much of the remaining inefficiency in markets.

Our recommendation to reconcile this tension between the two principles is to adopt a conditional version of "technology neutral" that respects the principle of "same activity, same risks, same regulatory outcomes". Namely, that *conditional* on a technology not materially altering the risks or functions, regulation should be neutral or agnostic toward that technology, but where the technology alters the risks or functions, regulation should be based on the risks and functions. This can mean different regulation for different technological implementations of certain functions such as trading assets.

Appendix A: Characteristics and design choices in RWA tokenisation approaches

Nature of record	Digital native assets are recorded solely on a (distributed) ledger, whereas digital twin assets are documented both on the (distributed) ledger and in a traditional registry.
Pegging mechanism	This refers to the reference of the token's value. It can be pegged (linked) to a single asset, a basket of assets, or any other reference (such as an index), or it may remain unpegged, letting market forces determine its value.
Backing mechanism	This refers to how the token's value is maintained. It can be directly backed by the underlying asset, collateralized by other assets (in over-, exact-, or under-collateralized structures), or it can operate without direct backing (maintained by algorithms).
Custody arrangements	Indicates whether physical or legal custody of the underlying asset is necessary for the token to represent it accurately as a tokenised RWA.
Rights conferral	Specifies whether holding the token automatically includes ownership rights of the underlying asset, or if holding the token only represents a claim on its value without any additional entitlements.
Claims against the token issuer	Refers to any rights the token holder has against the entity issuing the token (e.g. right for redemption at par value).

About the DFCRC

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 bring together stakeholders in the finance industry, academia, and regulators to develop and harness the opportunities arising from the next transformation of financial markets – the digitisation of 'real world assets' that can be traded and exchanged directly and in real-time on digital platforms.

Fundamental to the DFCRC's work is the belief that markets are the most powerful mechanisms in modern economies and their continued evolution through the application of new technologies will improve the efficiency of existing markets, enable new markets, and create market mechanisms to drive specific outcomes.

DFCRC receives grant funding from the Australian Government through the CRC Program