FOI 3215
Document 1

Australian Government
The Treasury

FOR ACTION - Regulating the crypto asset ecosystem

TO: Treasurer - The Hon Dr Jim Chalmers MP
CC: Assistant Treasurer and Minister for Financial Services – The Hon Stephen Jones MP

TIMING

Decision by Tuesday, 2 August 2022 to allow for policy development and preparation of a consultation paper on the foundational 'token mapping' exercise by end of 2022.

Recommendation

1. That the **'token mapping' exercise** be prioritised to assist in demarcating the perimeter between financial and non-financial product crypto assets.

Agreed / Not agreed

2. That you agree to the **following program of crypto work** to be guided by (and undertaken concurrently where possible with) the 'token mapping' exercise:

   - **Licensing crypto asset service providers:** create a licensing framework for crypto asset service providers dealing in non-financial product crypto assets;
   - **Custody of crypto assets:** identify obligations on third party holders of crypto asset private keys;
   - **Regulatory gaps:** work with regulators to identify and address gaps in the regulatory framework where crypto assets or related services are used to circumvent existing protections in legislation; and
   - **Innovative organisational structures:** review innovative organisational structures (such as 'decentralised autonomous organisations') and explore options to integrate them into the regulatory framework as appropriate.

Agreed / Not agreed

3. That you sign the attached letter to the Prime Minister seeking his agreement to announce the Government's commitment to implement the proposed program of work and reform to regulate the crypto asset ecosystem (see Attachment D).

Agreed / Not agreed

Signature:	**Date:**

KEY POINTS

- The crypto asset ecosystem is a global, complex network of interconnected businesses and individuals who develop, use, or provide services around crypto assets.
  - While crypto assets are overwhelmingly considered to be an instrument for speculative trading and associated with scams, there is valuable innovation from the technology within the crypto asset ecosystem (see Attachment A – Overview of the crypto asset ecosystem).
  - The technological innovations have potential to open sizeable new opportunities for Australia such as improving efficiency in the financial sector and competition in the technology sector (see Attachment A for more detail).
- There is considerable interest from the crypto industry, consumers, banks, and regulators in the Government pursuing crypto asset reforms.
- In March 2021, the Select Committee on Australia as a Technology and Financial Centre (the Bragg Inquiry) considered '*opportunities and risks in the digital asset and cryptocurrency sector*'. In October 2021, the Bragg Inquiry released its final report (Final Report), which relevantly included recommendations for the Australian Government to:
  - establish a market licensing regime for Digital Currency Exchanges (i.e. providers of crypto asset exchange services) including capital adequacy, auditing, and responsible person tests under the Treasury portfolio;
  - establish a custody or depository regime with minimum standards for businesses that hold crypto assets on behalf of consumers under the Treasury portfolio;
  - conduct a 'token mapping' exercise to determine the best way to characterise the various types of digital asset tokens in Australia; and

  - establish a new company structure for 'decentralised autonomous organisations' (DAOs).

- The Australian crypto industry supported the Final Report's recommendations.
- An ambitious timeline was set to deliver the recommendations. In March 2022, a Treasury consultation paper was released seeking views on potential licensing and custody frameworks, and early views on token mapping. Over 100 submissions were received.
- Treasury agrees in-principle with the Final Report's recommendations. However, the Final Report did not provide a complete picture of the opportunities and risks in the crypto ecosystem – including the complexities in integrating crypto assets and services into a regulatory framework. For example, the Final Report:
  - showed the Bragg Inquiry had negligible engagement with creators and issuers of crypto assets;
  - gave no consideration of how crypto assets may need to be regulated to provide safeguards for consumers (outside statements about licensing and custody); and
  - gave limited consideration to the complex innovations that were occurring in the crypto asset ecosystem.
- In addition, there has been some significant developments in the crypto asset ecosystem since the release of the Final Report. For example:
  - the growth and subsequent collapse of 'UST' – a crypto asset with a USD $20 billion market capitalisation that failed to maintain its algorithmic peg to USD;
  - a decline of approximately USD $1.2 trillion in the total market capitalisation of crypto assets;
  - the insolvency of at least one of the crypto asset 'lending and borrowing' service providers (and the uncertain solvency of several more);
  - the recent announcement by the EU to introduce significant regulation on crypto assets (known as MiCA - the 'markets in the crypto asset' law); and
  - the broad engagement and focus of international standard setting bodies to tackle crypto policy issues with a desire for international regulatory consistency.[1]

[1] For example, the Financial Stability Board (FSB) issued a statement on the international regulation and supervision of crypto asset activities on 11 July 2022, highlighting the importance of progressing ongoing work.

- The recent global market downturn has had a significant impact on the crypto industry. The rise in interest rates has drawn investor interest away from risk assets as government bonds offer more attractive returns. While much of the innovative development continues, the demand from consumers and investors for crypto assets has weakened significantly for now.

- While recognising the need for action, Treasury sees the opportunity to take more time to better understand the emerging innovations and risks, especially in the context of how it relates to the financial sector.

  – A public announcement by Government about its commitment on crypto reform could also flag the inherent risk of these and other similar assets, encourage caution by consumers and link it to your work on fighting scams.

  – Any statements to that end will need to be crafted carefully to ensure we maintain our constructive working relationship with all stakeholders, including the local crypto industry.

Recommended program of crypto work and reform

- Treasury recommends the following program of crypto work and reform. It is intended to provide clarity and certainty to ecosystem participants; introduce safeguards for consumers; and explore opportunities to influence future financial innovation.

- Treasury's **first recommendation** is to prioritise the 'token mapping' exercise – with consultations by the end of 2022 and advice to Government in the first half of 2023.

  – Australia is the only jurisdiction (as far as we are aware) that is attempting a token mapping exercise. While Treasury has the necessary technical expertise, the token mapping exercise will be a complex, time consuming, and resource intensive task to undertake.

    : For example, unlike financial products, there is usually no 'one document or place' that explains how a crypto asset operates. Multiple sources need to be accessed including a crypto asset's code. The code may also be written in uncommon or obscure computing languages that needs to be deciphered to understand how they function and fit into the various regulatory frameworks.

  – Despite these challenges, the token mapping exercise is an important foundational piece of work to implement any crypto reforms. Its purpose is to:

    : help identify how crypto assets (and related services) ought to be regulated and inform the philosophical basis for regulating crypto assets differently to financial products; and

: assist in demarcating the perimeter between 'financial product crypto assets' (already the subject of financial services laws) and 'non-financial product crypto assets' (that may warrant a separate crypto asset regulatory framework).

– Also, while high-level categories of crypto assets have been identified overseas, we understand they are not as helpful in practice for consumers, industry, or regulators to determine which crypto assets are subject to financial regulation.

- Treasury's **second recommendation** is to adopt a program of crypto work and reform that is guided by the 'token mapping' work, ecosystem developments, and international regulatory bodies. Subject to resources and where possible, this program would involve the following items being undertaken concurrently with the token mapping work:

  – **Licensing crypto asset service providers**: create a licensing framework for crypto asset service providers dealing in non-financial product crypto assets;

  – **Custody of crypto assets**: identify obligations on third party holders of crypto asset private keys;

  – **Regulatory gaps:** identify and address gaps in the regulatory framework where crypto assets or related services are used to circumvent existing protections in legislation (for example, where crypto assets are used as consideration in place of money or a financial product); and

  – **Innovative organisational structure review:** review innovative organisational structures (such as 'decentralised autonomous organisations' (DAOs)) and explore options to integrate them into the regulatory framework as appropriate.

- More details on Treasury's recommendations can be found at Attachment B.

- Foreach item of work above, Treasury will consider additional safeguards for consumers to form part of the reform package. Safeguards being explored include prohibiting the use of certain terminology such as 'stablecoin' and measures to fight scams.

- While stakeholders indicated a clear interest in progressing a licensing regime for crypto asset service providers, there was no clear agreement on the best regulatory approach.

  – Treasury expects some stakeholders to be disappointed with the perceived delay in implementing a licensing regime. For example, consumer groups seeking immediate protections and businesses seeking regulatory legitimacy.

  – Treasury considers these concerns are somewhat mitigated by the current market conditions resulting in less consumer demand for crypto assets; and the need to complete the complex token mapping exercise to provide clarity on how any new licensing framework would operate in practice.

  - The technology will remain and continue to evolve; so it is important to establish a sound foundation from which to consider future consumer safeguards and innovation.

- **Review of the taxation treatment of crypto assets and transactions:** Treasury will also continue its work with the Board of Taxation (the Board). The Board is undertaking a review into the appropriate policy framework for the taxation of crypto assets and transactions in Australia. The Board is in the process of finalising its brief for you and the Assistant Treasurer, setting out their future work program, including seeking confirmation to continue the review of the taxation of crypto assets.

NEXT STEPS

- If you agree, we recommend you write to the Prime Minister to seek policy approval (see Attachment D). We will return with a detailed plan for the token mapping exercise (including a summary of submissions).

Clearance Officer
Nghi Luu
Assistant Secretary
Financial System Division – Capital Markets, Payments, and Financial Innovation Branch
19 July 2022

Contact Officer
s 22

CONSULTATION

Board of Taxation; Revenue Group; Law Division.

ATTACHMENTS

A: Overview of the crypto ecosystem
B: Rationale for Treasury's recommendations
C: Table - Crypto asset regulation: International comparison
D: Letter to the Prime Minister seeking policy approval (see separate attachment)

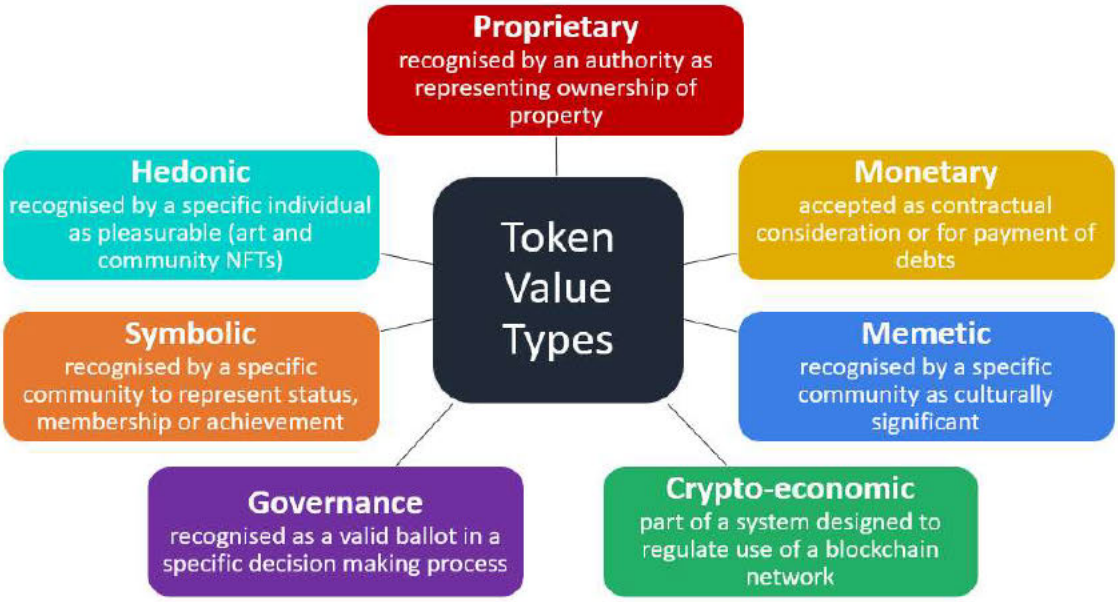
Australian Government
The Treasury

ATTACHMENT A – OVERVIEOVERVIEW OF THE CRYPTO ECOSYSTEM

CRYPTO ASSETS

- Crypto assets are digital 'tokens' that form part of a system for maintaining records – much like entries in a database. The terms crypto assets and tokens are used interchangeably below. Most crypto assets are on public, distributed ledger 'blockchains' that anyone can use, build, or contribute to, without needing permission to do so. Crypto assets of this type are unique from other record keeping mediums because of two properties:
  - they are mathematically simple to authenticate and impossible to counterfeit; and
  - each 'database entry' is replicated across multiple identical databases that are individually maintained by a global network of independent actors.
- ***Crypto assets are increasingly being used to manage valuable records***. Historically, only well-regulated financial institutions have been entrusted with the management of valuable records. Blockchain platforms are now being used as a legitimate alternative.
  - For example, there are currently 55 billion USDC tokens in circulation – each of which Circle (the issuer) promises to redeem for 1 USD. However, Circle does not manage any accounts or process any transactions. It delegates the entire process to software being run by thousands of independent actors operating various blockchain platforms.
- ***A crypto asset can represent anything.*** As with any database-like entry, a token can represent any right to any 'thing'. Examples include:
  - money – tokens redeemable for an amount of a specific currency such as an asset-backed stablecoins);
  - membership – tokens authorising access to a group, physical location, or digital system;
  - equity – tokens representing an entitlement to govern a company and share in its profits such as the shares in US company Quadrant Biosciences Inc; and
  - game pieces – tokens authorising a feature or function within a specific computer game such as a digital horse.
- **Figure 1** sets out broad categories of value that have been tokenised as crypto assets.
  - If the 'thing' is valuable, and the ability for any token holder to obtain that value is enforceable, the token will most likely have a price on the secondary market.

***Figure 1** - Examples of value types represented in the modern crypto asset ecosystem*



CRYPTO ASSET ECOSYSTEM

Crypto asset market

- Crypto assets continue to represent a substantial amount of value – notwithstanding the recent market declines.
  - The market capitalisation of crypto assets is **USD $903 billion** (as of 29 June 2022) – a significant decline from its all-time high in November 2021 of around USD $3 trillion.
  - The market capitalisation of asset backed stablecoins is **USD $155 billion** (as of 29 June 2022). This represents 17.2 per cent of the total crypto asset market.

Access to crypto assets

- Australians can access the crypto asset markets in three ways:
  - regulated financial market intermediaries (for example, price exposure provided through exchange traded funds (ETFs) on licensed financial market Chicago Board Options Exchange (CBOE) Australia);
  - unregulated, custodial crypto market intermediaries (for example, services provided by BTC Markets, CoinSpot, and Finder); and
  - direct interaction with non-custodial software hosted on a blockchain platform (for example, a 'decentralised finance' marketplace 'protocol' like Uniswap and Compound).

- Blockchain analytics firm 'Chainalysis' estimates that Australians realised at least USD $2.1 billion in capital gains in 2021. It also estimates that since January 2019, crypto assets with a value of at least USD $200 billion and USD $190 billion have been sent and received by Australians, respectively.

Ecosystem development

- The current crypto ecosystem is markedly different today than just two years ago. Prior to 2020, there were few reasons to interact with crypto assets except speculation. Since early 2020, the ecosystem has been used by a variety of participants for a broad range of functions and purposes.
  - This is not unusual. The enduring use case of new technology platforms often extend beyond their original purpose or function. Like Apple's iPhone, third party innovators in the crypto ecosystem are experimenting with use cases to find a product-market fit for crypto assets outside those originally contemplated by the designers of the platform.
- The critical driver of all recent developments in the crypto asset ecosystem are 'smart contract platforms'.
  - '***Smart contract platforms***' are blockchain-based computer systems. A typical smart contract platform involves a large network of consumer-grade computers acting in concert as a single operating system.
    - : In most cases, they can be used by any person to host and run any mathematical viable computer program for any purpose.
  - '***Smart contracts***' are the platform's computer programs. They are blocks of static computer code published to the platform's ledger.
    - : Any person can publish any smart contract program to perform any computer function. Any person can use any published block of smart contract code to perform one of its pre-defined functions. The code is executed by platform 'miners' or 'validators'.
    - : Examples of a smart contract being used in practice, include:
      (1) major stablecoin issuers being able to freeze a person's stablecoin holdings at the request of law enforcement.
      (2) payments being made to contractual counter parties on a 'per minute' basis (i.e. 'streaming' payments) or released automatically upon pre-coded conditions (i.e. 'milestone' payments);
      (3) redirection of a portion of a non-fungible token's (NFT's) secondary market sale price to the NFT's creator (i.e. 'royalty' payments).

- '***Smart contract applications***' are systems of smart contracts that operate together to replicate complex 'services' using only code. These smart contract systems are accompanied by a web-based user interface (often with a look and feel of the service they are replicating).

CRYPTO ASSETS: TYPES, PURPOSES AND FUNCTIONS

- Broadly, there are two primary types of crypto assets: those that are native to a blockchain platform, and those that are not.

Native tokens

- All blockchain platforms rely on one 'native' token. The native token has two purposes within a blockchain system. It regulates the supply and demand of a **'digital product'**, and it forms part of the platform's '**security system**'.
- ***Digital products:*** Blockchain platforms are marketplaces for a specific 'digital product'. For example:
  - Ethereum is a marketplace for buying 'distributed computing power'. It relies on its native token (ETH) to regulate the finite supply of its computational and data storage capacity against the demand of its 300,000 plus daily active users.
  - Brave is a web browser with an inbuilt marketplace for buying targeted adverting space. It relies on a native token (BAT) to regulate its supply of 50 million daily active users who agree to targeted advertising against the demand from advertisers to display ads to those users.
  - Filecoin is a marketplace for buying permanent data storage. It relies on its native token (FIL) to regulate the supply of available data storage (provided by its 3,000 data storage operators) against the demand for that storage space. It currently stores over 1.1 billion GB of data.
- Each platform uses its native token as a unit of account within its own marketplace. However, each marketplace is entirely isolated. The purchasing power of a native token within its marketplace varies with the supply and demand for the platform's product – it is unrelated to any secondary market price.
- ***Security system:*** Prior to Bitcoin, computer scientists thought it was impossible to create a peer-to-peer network capable of securing valuable data in an adversarial environment.[2]

[2] The early research was funded by NASA and the US Military. The 'adversarial environment' component of that research arose in the context of securing sensitive digital infrastructure (not 'money') – but the same conclusions about the unviability of such a network plagued all pre-Bitcoin attempts at creating a 'digital cash'.

Bitcoin's innovation was in making this network type possible by introducing an economic component.

- ***'Cryptoeconomics'*** is the term given by researchers and academics to the application of cryptography and economics to achieve information security. Blockchains rely on the concept by using:
  - cryptography to place hard limits on the actions of network participants (by making it simple to prove (and impossible to hide) a violation of platform rules); and
  - economics to coordinate independent actors with a system of incentives and penalties (where cryptography has no way of controlling their actions).
- The primary cryptoeconomic system of any blockchain platform is its 'consensus mechanisms'.
  - The two most widely used mechanisms are 'proof of work' (which is linked to excessive energy use through the required computational effort) and 'proof of stake'. They rely on a native token to ensure it will always be more profitable to be an honest operator than a dishonest one.
    - : Proof of work platforms require operators (miners) to expend computational effort in finding an answer to an arbitrary puzzle. The first miner to meet the requirements constructs the next 'block' of transactions. If that miner's block is accepted by network participants, the miner creates a set number of native tokens for itself as a reward. If its block is rejected, it will go unrewarded and incur a loss in the form of the energy spent finding the answer.[3]
    - : Proof of stake platforms require operators (validators) to 'stake' capital (in the form of crypto assets) as a security bond. A platform may require a bond of tens of thousands or tens of millions of dollars. If a validator proposes a 'block' of transactions that is accepted by other network participants, it is rewarded with newly issued native tokens. If it proposes a block that is rejected, its stake is usually forfeit and destroyed by the network.

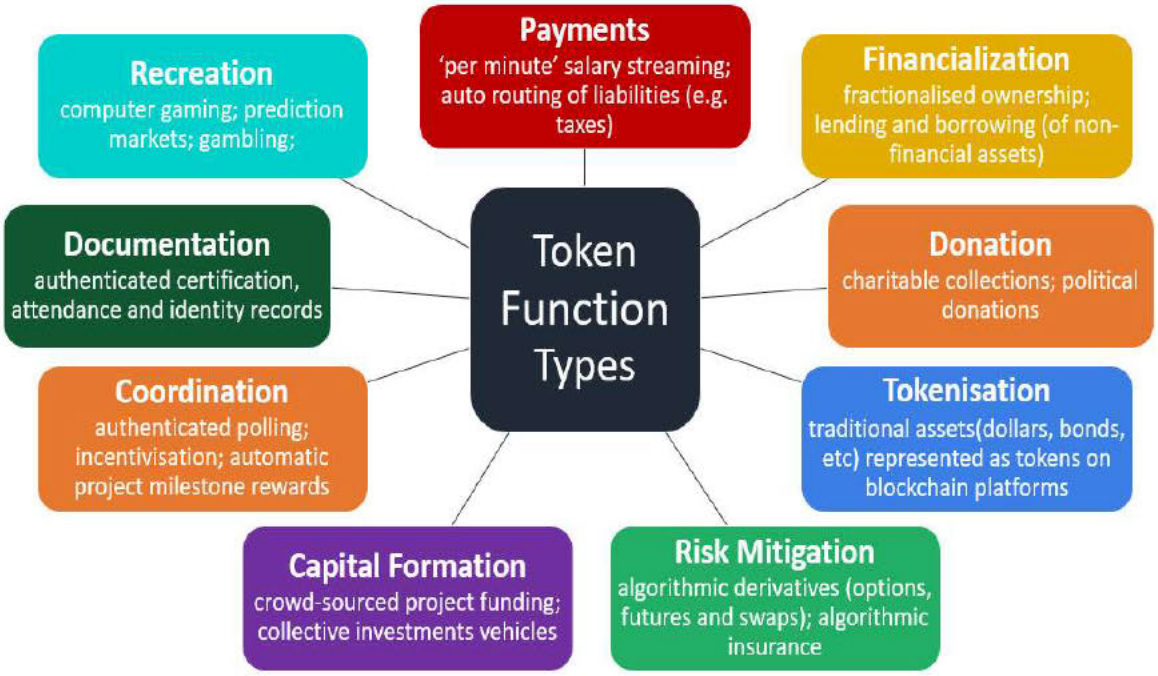
Non-native tokens

- ***Non-native tokens are created by third parties on top of a smart contract platform***. They exist as data records stored inside smart contract applications. Most crypto assets, by number, are created this way. There are now 'one-click' solutions that enable any person so inclined to create a crypto asset using a smart contract.

[3] Proof of work is controversial for environmental reasons. The total energy expended by all miners attempting to find the puzzle answers on the Bitcoin platform has at times cost hundreds of thousands of dollars per block. However, this can also incentivise the use of renewable energy. Concluding that proof of work is inherently harmful to the environment is not straight forward.

- ***Non-native tokens are customisable and programmable.*** As explained above, a token's value is derived from the 'thing' it represents. However, many tokens represent things that are already transferable (e.g. cash and stablecoins). The reason these (and other valuable things) are 'tokenised' is that non-native tokens are fully programmable and can interact with fully programmable smart contract applications (see **Figure 2** for examples of the key functions that can be programmed into non-native tokens).

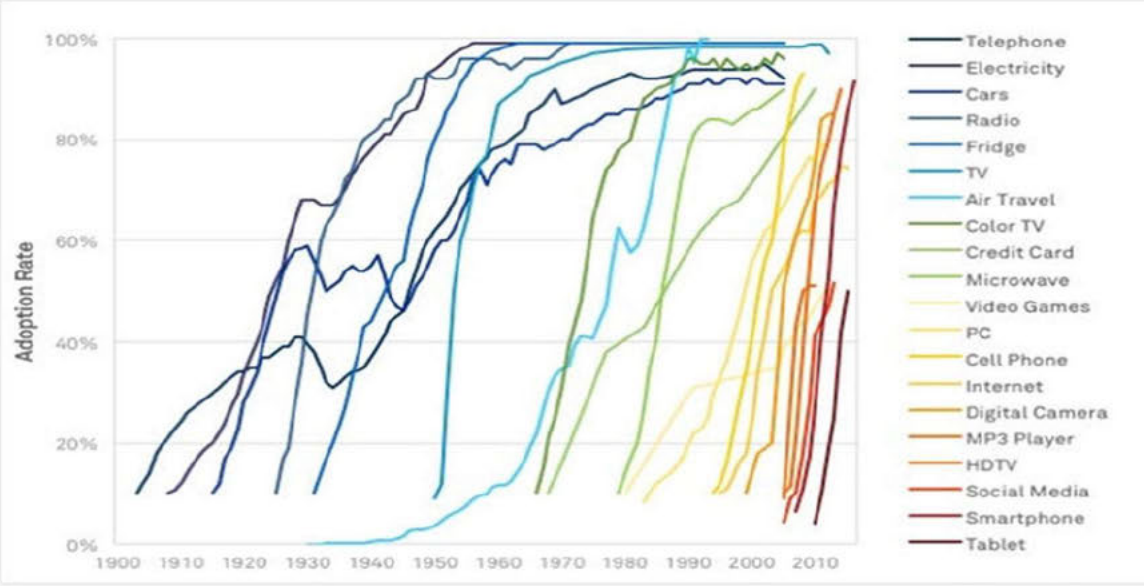
Figure 2 *– Key functions and use cases now commonly programmed in and around non-native tokens.*



CRYPTO ECOSYSTEM POLICY: OPPORTUNITIES

- As with any emerging technology, it is hard to predict which technological innovations will be adopted and how quickly it will go mainstream: see **Chart 1**.

Chart 1 *- Historical adoption of technology*



Source: Asymco

BLACKROCK

- The most valuable and meaningful applications for tokens and distributed computing platforms in future cannot be reliably predicted. However, existing applications provides some insight on its potential.
  - A typical blockchain aims to maintain a system of data records that does not rely on any person (or groups of persons) to maintain the integrity of its records. This absence of a need to trust has been termed 'trustlessness'.
  - So far, this technology has been applied in attempts to create: a trustless system of 'money' (i.e. bitcoin); a trustless system of financial-like 'services' (i.e. decentralised finance); and a trustless system of general 'commerce' (e.g. NFTs, DAOs and gaming).
- Listed below are examples of potentially valuable opportunities. There is no certainty that the technology will be developed further past its current embryonic state and no guarantee that a use case will drive mainstream adoption.

Disintermediating financial services

- ***Smart contract applications can mimic or improve on some services offered by traditional financial market intermediaries***. Some possible benefits include 'asset tokenisation', 'cross-border payments', 'smart contract registry services' and 'confidential KYC'.

- ***'Asset tokenisation'*** refers to the act of creating tokens to represent real world assets. The purpose is to make the assets programmable.
  - Programmable 'real-world assets' could, for example, be represented by smart contract applications to achieve instant settlement.
    - : A version of this has been implemented by crypto asset exchange FTX in some markets. FTX issues tokens representing a right to redeem one token for one share in a range of listed US companies (with the shares held by a custodian). FTX then creates a secondary market for those tokens on its internal order book platform – where they trade with instant settlement like any other crypto asset. All voting rights and dividends are passed through FTX to the token holders. The UK Treasury is exploring this concept as a method to improve 'user experience' of interacting with the financial system.
  - A proof of concept for the actual trading of tokenised financial products to occur on automated smart contract-based applications already exists.
    - : A fully automated smart contract application called 'Uniswap' has facilitated over USD $1 trillion in token trading volume since 2020.
- '***Cross border payments***' in the context of the crypto asset ecosystem refers to the transfer of crypto assets between accounts controlled by individuals in different jurisdictions.
  - As crypto assets are not truly 'transferred' anywhere (the blockchain's ledger is updated everywhere), there are few costs, frictions, and delays associated with exchanging value across borders.
  - Incumbent remittance services can require physical attendance and involves an average cost of 6.09 per cent of the funds transferred.[4] A stablecoin transaction can be sent instantly from any mobile phone for a flat transaction fee (of less than a few cents, depending on platform).
- ***'Confidential KYC'*** refers to compliance systems that use the advanced cryptographic concept of 'zero knowledge proof' to meet 'know your customer' compliance requirements on anonymous counterparties.

Increasing the efficiency of financial market infrastructure

- ***ASX CHESS replacement:*** The ASX is currently replacing its core clearing and settlement system, CHESS, with a distributed ledger technology (DLT) based system.
  - The replacement system will allow for significantly increased trade volumes, as well as new functionality and benefits, such as system resilience.

[4] World Bank, 'Remittance Prices Worldwide' <https://remittanceprices.worldbank.org/>.

  - However, ASX will continue to be the only entity that will 'write' to the ledger, though participants will have real-time 'read' access. More functionalities may be rolled out in future.

- ***'Smart Contract Registry Services'*** are smart contract applications used to manage asset registries.
  - Industry participants have suggested a smart contract registry system could lead to potential cost savings for managers of managed investment schemes of more than 30 per cent.
  - The Norwegian government recently announced that their shareholder register would be managed by a smart contract application secured by the Ethereum platform.

Disintermediating technology services

- ***Smart contract platforms and applications can replicate some of the services provided by the large technology intermediaries***. Often referred to as 'Web 3.0', blockchain-based web architecture uses open protocols in place of centrally owned servers. It has the potential to disrupt online marketplaces and content sharing platforms.
- ***Disrupting the business models of proprietary online marketplaces***. Digital marketplaces such as Uber, Amazon, and eBay traditionally charge 'take rates' of between 10 and 20 per cent to businesses using their platforms.
  - Smart contracts have been used to create marketplaces that already compete with some of the services provided by large technology companies. For example, the cost of data storage on the Filecoin platform is approximately 5 times cheaper than the similar service offered by Amazon Web Services.
- ***Disrupting business models of proprietary content platforms***. YouTube, Twitter, and Spotify have propriety ownership of data generated using their platforms. They derive revenue from advertisers with little or no revenue paid to content creators.
  - Smart contract protocols are emerging competitors to these business models. A 'social media' protocol already exists providing an 'open' version of Twitter's architecture. It provides users with full control of all their own data (represented as tokens inside the system) and allows developers to create competing applications that tap into the data.

Contributing to advanced research and development

- The crypto asset industry has been responsible for a significant portion of academic and commercial research in the fields of advanced cryptography, economics, and computer science.

- The Massachusetts Institute of Technology and the University of Vienna have launched cryptoeconomic research institutes to study the creation of applications that combine cryptography with economics principles.
- A search of the leading e-print database in the field of cryptography returns 895 blockchain-related academic papers. In 2021, three commercial research entities competing to apply advanced cryptography to blockchain platforms raised a combined USD $335 million in funding.

Protecting human rights

- The Human Rights Foundation (HRF) – chaired by the now exiled Russian opposition political activist Garry Kasparov – is a vocal proponent of the importance of bitcoin and stablecoins in the protection of human rights.
  - The HRF considers the cash-like features of crypto assets to be a valuable tool – referring to their real-world use by millions of individuals transporting wealth away from wars and authoritarian regimes or storing wealth to protect against economic repression.
- Twenty-one prominent human rights activists and humanitarian organisation leaders delivered a letter to the US Congress about bitcoin and stablecoins earlier this year.[5] The letter urged Congress to:
  - *"[take] an open-minded, empathetic approach toward monetary tools that are increasingly playing a role in the lives of people facing political repression and economic hardship"*; and
  - *"...not craft or implement policy that hurts our ability to use these new technologies in our human rights and humanitarian work."*

CRYPTO ECOSYSTEM POLICY: RISKS

- ***Disintermediation of the financial system:*** A recent G20 forum raised several macro-financial concerns about frictionless payment systems. These included, currency substitution, runs on domestic currencies commenced by foreigners, increase capital flows leading to increased volatility, and increased velocity of bank runs. They also raised concerns about the potential decrease in the use of commercial banks reducing funding sources for loan origination.
- ***Encouraging further speculation by retail participants:*** Speculation remains the primary reason individuals are interacting with the crypto asset ecosystem today. Any policy should be crafted to ensure it is not perceived as being supportive of these practices.

[5] https://www.financialinclusion.tech/

- ***Associating the Government with undesirable ecosystem participants:*** The crypto asset ecosystem is often associated with scams, criminal activity, and environmentally unfriendly practices. Policy should seek to support the value-adding elements of the crypto asset ecosystem while simultaneously not condoning the harmful participants.

- ***Regulatory efficacy:*** Innovation will seek to circumvent any disproportionate or inflexible regulatory interventions via technology solutions. The nature of the crypto asset ecosystem is such that it would be difficult or impossible to restrict Australians accessing crypto asset service providers in other jurisdictions. A regulatory framework that drives service providers from Australia would be counterproductive to Government's ability to influence the ecosystem's development and regulate gatekeepers.

- ***Reforms may result in gaps or overlaps between regulatory regimes in Australia***. Treasury considers that overlaps between regulatory regimes be preferred over regulatory gaps to promote consumer protection and prevent entities from exploiting legal loopholes.

- ***Relying on the current capabilities and capacity of existing regulators***. The crypto asset ecosystem is complex. Australian regulators are currently in the process of growing their capabilities for dealing with crypto assets and blockchain platforms. A crypto asset policy should consider the resources needed to support training, recruitment and consider new policy tools.

- ***Regulation that benefits well-established incumbents***. The crypto asset ecosystem is comprised of many smaller operators in Australia, together with a small number of large, established incumbents that are based internationally. Similarly, the Australian financial system comprises a handful of large entities with the ability to absorb compliance burden at a lower cost.

- ***Erosion of financial privacy***. Blockchain platforms are inherently transparent. Once an account is linked to an individual, that individuals' entire transaction history is known. Technical solutions are needed before a blockchain platform would make a suitable replacement for the privacy of traditional banking.

CRYPTO ASSET REGULATORY FRAMEWORK: AUSTRALIA

Existing regulatory framework

- AUSTRAC is currently the only regulator with specific jurisdiction over the crypto asset ecosystem. It manages the registration of crypto asset exchanges under the AML/CTF Act and Rules.
  - However, AUSTRAC has limited oversight. AUSTRAC oversees a framework for licensing businesses involved in providing services for converting between crypto assets and AUD. The registration is predominantly an administrative process only.

- The ATO provides general guidance on its view of the treatment of crypto asset transactions. However, as noted in the Final Report of the Bragg Inquiry, there are some unique aspects of crypto assets and crypto asset transactions that can result in complexities for the ATO and taxpayers. A separate workstream is considering the tax treatment of crypto assets to address these complexities.
- Crypto assets are not excluded from the Australian financial services, corporate or consumer law frameworks.
  - An entity that provides services in relation to a crypto asset that meets the definition of a financial product will be subject to the Australian financial services law and to oversight by ASIC.
  - An entity that provides services in relation to crypto assets that are not a financial product are subject to the Australian consumer law and to oversight by the ACCC.
- ***However, the crypto asset ecosystem presents several unique challenges to the existing regulatory framework***. These unique challenges raise several gaps in the regulatory framework and difficulties in defining the regulatory perimeter.
- ***Reforms may result in some overlap between regulatory regimes***. Nonetheless, overlap may be preferred over regulatory gaps to promote consumer protection and prevent entities from exploiting legal loopholes.

Regulatory challenges

- ***Crypto assets are not a distinct or homogenous asset class.*** They are 'entries' on a digital ledger that can represent anything, including financial products, consumer goods, or commodities.
- ***Lack of clarity around the regulatory perimeter used as a reason to avoid regulatory compliance.*** Issuers of crypto assets and crypto service providers point to the complexity in categorising crypto assets as a financial product as a reason to avoid regulatory compliance.
- ***Industry participants can operate outside of any regulatory framework***. Any person with an internet connection can participate in the crypto asset ecosystem without the assistance of an intermediary or counterparty.
- ***In some cases, industry participants can effectively operate out of reach of any legal framework***. Courts around the world are grappling with these issues in the context of private litigation.
  - As of May 2022, there were over 200 crypto asset-related class actions ongoing across the US Court system.

- Many of these cases involve complex circumstances that are unfamiliar to common law. Some of these cases have raised deep legal-philosophical questions about the nature of commerce in a system where there may be no counterparties.

- ***Technology has minimised the roles of centralised entities who have traditionally been held accountable***. In some cases, software has been able to replicate services that have traditionally been the target of regulatory intervention.
  - However, an intermediary (or at least a counterparty) is needed to convert between AUD and crypto assets. At present, the entities that provide these services are the primary link between the crypto asset ecosystem and the traditional financial sector.
  - In future, these intermediaries may have some responsibility tokenising real world assets and for holding the underlying asset in custody.

CRYPTO ASSET REGULATORY FRAMEWORK: INTERNATIONAL DEVELOPMENTS

Governments and central banks

- Across the globe, regulatory and supervisory entities are working on approaches to address regulatory gaps and arbitrage opportunities in the crypto ecosystem.
  - **Attachment A (Table 1)** sets out a summary of the regulatory developments across comparable jurisdictions.
  - The key areas of international development are:
    - regulatory frameworks for payment stablecoins (UK FCA, US);
    - advertising requirements for crypto assets (UK, Singapore);
    - licensing frameworks for crypto assets and services (as distinct from financial products and services) (EU); and
    - CBDC (many countries are considering CBDCs).

- Most international regulatory frameworks are in the early stages of design and consultation. The European Union's 'Markets in crypto assets' (MiCA) is the most progressed regulatory framework from an analogous jurisdiction to Australia.
  - MiCA has been in development since 2018 and will likely come into effect in 2024. It does not address more recent developments in the crypto asset ecosystem. The EU has announced it will consider a 'MiCA 2.0' to address newer aspects of the ecosystem.
  - MiCA establishes a discrete set of uniform rules that will apply in relation to crypto asset that fall outside the EU's financial services legislation called 'Markets in financial

instruments Directive' (MiFID). It addresses stablecoins and non-financial crypto assets. It does not bring additional crypto assets within MiFID.

International standard setting bodies

- Various international standard setting bodies are also considering aspects of the crypto asset ecosystem.
  - The Financial Stability Board (FSB) is progressing work on:
    - the regulatory gaps in stablecoins and unbacked crypto assets. The FSB is scheduled to report to the G20 Finance Ministers and Central Bank Governors in October 2022 on regulatory and supervisory approaches to stablecoins and other crypto assets.
    - monitoring crypto asset developments and analysing the financial implications of decentralised finance (DeFi) – a subset of the crypto asset ecosystem that uses blockchain technology to replicate some functions of the existing financial markets.
  - The Basel Committee at the Bank of International Settlements (BIS) is progressing the prudential treatment of crypto assets. It is in the process of starting a second round of consultation to finalise the minimum prudential framework for crypto assets by the end of 2022. Following that, APRA expects to consult on its framework for the prudential treatment of crypto assets in 2023.
  - The Financial Action Task Force (FATF) released several updates to its guidance for countries to minimise the risk of crypto assets being used for illicit activities. The most recent update in June 2022 concluded that "*the vast majority of jurisdictions have not yet fully implemented [the FATF standards directed at the crypto asset ecosystem]*".
  - The International Organisation of Securities Commissions (IOSCO) has been considering the regulatory implications of the crypto asset ecosystem.
    - In March 2022, it released a report on DeFi. In July 2022, it announced the establishment of a Board-level 'Fintech Task Force' (FTF) to analyse and respond to market integrity and investor protection concerns within the crypto asset ecosystem. The FTF has divided its work into two workstreams: (1) Crypto and digital assets; and (2) DeFi.

ATTACHMENT B – RATIONALE FOR TREASURY RECOMMENDATIONS

Token mapping

- As noted in Attachment A, crypto assets are not a distinct or homogenous asset class. They are 'entries' on a digital ledger that can represent anything, including financial products, consumer goods, or commodities. The token mapping exercise is an important foundational piece of work to implement any crypto reforms. The intention of this exercise is to:
  - help identify how crypto assets and related services ought to be regulated;
  - inform the philosophical basis for regulating crypto assets differently to financial products; and
  - assist in demarcating the perimeter between financial product crypto assets (already the subject of financial services laws) and non-financial product crypto assets (that may warrant a separate crypto asset regulatory framework).
- Treasury considers it appropriate to prioritise the token mapping exercise to assist with the above outcomes.

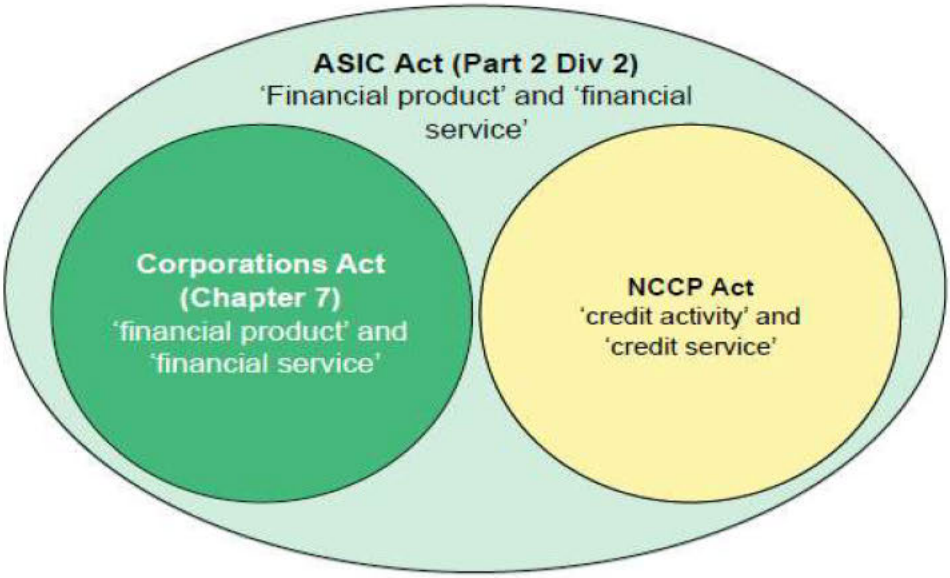
Stakeholder views

- In general, key stakeholders expressed the need for the 'token mapping' exercise to be undertaken as a foundational piece of work.

Further background: Financial services regulatory framework

- The financial services and credit regulatory frameworks in Australia are contained in the Corporations Act, the National Consumer Credit Protection Act (NCCP Act), and the ASIC Act.
- The boundaries of financial product regulation in Australia are established using broad and overlapping definitions within the financial services regulatory framework (see **Figure 3**).

***Figure 3** - Products and services regulated by Australian financial services legislation*



Source: ALRC Interim Report on Australian Financial Services Regulation

- If a product or service does not meet the legal definition of a 'financial product' or 'financial service', it is not subject to the range of important financial services provisions. Relevantly, in the Corporations Act:
  - the term 'financial product' is used to determine the application of product disclosure obligations, design and distribution obligations, and product intervention orders (Product Regulation);
  - the term 'financial product' is also used to define the term 'financial service'; and
  - the term 'financial service' is used to determine the application of licensing, disclosure and provisions regulating the conduct of industry participants (Services Regulation).
- The crypto asset ecosystem presents several unique challenges to the existing financial services framework. These issues are broadly captured by roughly characterising the existing universe of crypto assets into one of three categories.
  - First, crypto assets that already meet the existing definition of financial products. These are already captured by the existing Australian financial services frameworks. The token mapping work aims to provide clarity between financial product and non-financial product crypto assets.
    - : For example, in 2018 US based company Quadrant Biosciences Inc. converted the 'entries' on its existing shareholder register into standard, transferrable 'tokens' on the public Ethereum blockchain. The token *became* the shares in the company (c.f. a tokenised *representation* of shares issued by a third-party custodian). The tokens can be self-custodied and traded freely by shareholders.

- Second, crypto assets that do not clearly meet the existing definition of financial products but have features traditionally associated with financial products. These may require amendments to the definitions in the financial services framework.
    - For example, the global crypto asset exchange Binance raised funds by selling its BNB 'utility' token in 2017. While it is not equity in Binance, BNB accrues value based on the company's profits. Until recently, Binance applied 20 per cent of its quarterly profits to buying BNB on the open market to 'burn' and remove it from circulation – accruing value to token holders much like a share buyback.
- Third, crypto assets that do not meet the existing definition of financial products and do not have features traditionally associated with financial products. These raise questions around the need to define the regulatory responsibilities between ASIC and ACCC.
    - For example, a 'Bored Apes Yacht Club' NFT. These tokens provide a holder with an enforceable licence to freely use the intellectual property in a unique image linked to the token. They were originally sold for approximately USD $240. They now sell for between USD $100,000 and $1 million.

Licensing crypto asset service providers

- The licensing framework being considered for the crypto asset ecosystem revolves around the regulation of crypto asset service providers dealing in non-financial product crypto assets. These are centralised intermediaries providing consumers access to the crypto asset ecosystem.
- Consumers are exposed to financial and operational risks, including custody risks, when engaging with these entities. For example, a consumer's crypto assets and money may be at risk in insolvency proceedings if their service provider becomes insolvent.
    - ACX.io was an Australia-based digital currency exchange, registered with AUSTRAC. The exchange suspended withdrawals and deposits in early 2020 and fell into administration in 2021. Investors lost access to crypto assets and cash held at the exchange.
- Treasury considers it appropriate to consider obligations to minimise consumers' exposure to these risks. There are outstanding issues to resolve in doing so including those to be considered by the token mapping exercise.

Stakeholder views

- While stakeholders indicated a clear interest in progressing the crypto licensing regime, there was no clear agreement on the best approach to realise the regulation. Nevertheless, some stakeholders may view additional time taken to undertake the foundational token mapping exercise *prior* to implementing a licensing framework as unnecessary delay.

- Most domestic Australian crypto asset exchanges agree on the need for regulation to implement minimum standards of practice, security, custody, and protections to ensure that all crypto exchanges are operating to the same standard.
  - International crypto asset exchanges prefer a light touch regulatory regime that is not overly burdensome for their international operations.
- The Consumer Action Law Centre (CALC) and CHOICE consider crypto assets should be regulated as financial products and services under the financial services framework to provide appropriate consumer protections.
- Banks and existing Australian financial services (AFS) licence holders are of the view they should not be penalised for having an existing AFS licence, and that there should not be a less burdensome regime that allows opportunity for regulatory arbitrage by other market participants.

Custody obligations

- Consumers who access crypto assets through a service provider often rely on that service provider to maintain custody of their crypto assets (i.e. safeguard their private keys). This exposes consumers to the custody risks facing their service providers. Consumers do not have control over the day-to-day actions of these service providers and are not well-placed to assess the security and resilience of their service providers' custody arrangements.
- The security of private keys to prevent unauthorised access (both online and offline) of crypto assets is of critical importance. Private keys are necessary to sign transactions that assign crypto assets to new addresses. If private keys are compromised, unauthorised parties can use them to transfer the crypto assets to addresses (and parties) that are outside the control of the owner of the crypto assets.
- Minimum custody standards can ensure that service providers manage the custody risks facing their clients' holdings, which could support consumer confidence.
- There have been many failures of crypto asset service providers globally with an estimated US$2.4billion worth of crypto assets stolen since the Mt. Gox cyber security breach in 2014.
- Treasury considers it appropriate to consider obligations to safeguard crypto asset private keys held by third party custodians on behalf of consumers.

Stakeholder views

- Over 50 responses to Treasury's consultation paper provided substantive feedback on the proposed custody obligations. There was a wide range of submissions about the practicalities in implementing the obligations and their effectiveness.

- Stakeholders highlighted a key challenge in designing these minimum standards, is allowing for technological change and neutrality, while being specific enough that there is certainty for certifications, training, and demonstration of compliance with regulation.

- Consumer groups have highlighted the increasing amount of retail market participants engaging with crypto asset purchases and investment. As adoption becomes more mainstream, there are also examples of more vulnerable groups purchasing crypto assets.

  – The safekeeping of crypto assets and protection of consumers will likely be a focus of consumer groups in the future.

Regulatory gaps

- There appears to be gaps in Australia's regulatory framework where the use of crypto assets in transactions or as collateral has allowed participants to circumvent protections intended by legislation. These instances have not all been deliberate.

- There are instances where crypto assets or related services may be used in a way identical to money, financial products, or financial services but appear not to trigger the protections in existing legislation. For example:

  – Crypto assets may be accepted as consideration (in place of 'money') for shares in an initial public offering (IPO). Money received as consideration for shares in an IPO must be held in trust for the subscriber under the Corporations Act. However, these same obligations are not triggered if crypto assets are used in place of money for the same purpose.

  – If a loan to buy a financial product is collateralised by 'marketable securities', it would be considered a 'margin loan' and subject to regulation under the Corporations Act. If a loan to buy a financial product is collateralised by crypto assets instead, the loan is not considered a 'margin loan' or regulated under the Corporations Act.

- Treasury considers it prudent to consult with regulators on whether there are any regulatory gaps such as those identified above that could be addressed to ensure that existing protections in legislation are not circumvented by the mere substitution of crypto assets for money or financial products for example. Informal consultation has commenced with regulators and will continue alongside the 'token mapping' process with advice to Government in 2023.

Stakeholder views

- ASIC has informed Treasury of instances where the above examples have occurred in the Australian system and are concerned about further circumventions. However, ASIC's view is that the final design of any crypto asset regulation should only be settled after the 'token mapping' exercise is completed – in order for the full range of risks to be examined.

Innovative organisational structures

- One unique aspect of the modern crypto asset ecosystem has been the development of 'digital-native' organisational structures (i.e. organisational structures that have organically grown in the digital space). These are often referred to as 'decentralised autonomous organisations' DAOs.
  - This submission adopts the term DAO for convenience. However, there are many different types of blockchain related organisations – including some that are neither 'decentralised' nor 'autonomous'.
- There is no commonly agreed definition of a DAO. However, they can be broadly described as communities of self-organising individuals using 'blockchain-based coordination frameworks'. A simple example would be a group of unrelated, geographically separated individuals using smart contracts programmed to:
  - accept capital contributions from each of the individuals in return for a 'governance' token';
  - custody pooled funds to be released only under pre-programmed conditions; and
  - facilitate the recognition of the governance tokens as valid ballots in 'votes' to authorise the release of funds.
- DAOs attempt to address well-known human coordination difficulties. Many of these difficulties are the same as those addressed by existing corporate legal frameworks (e.g. power imbalances, incentive misalignment and organisational biases).
  - They have generally been formed by cross-jurisdictional communities of loosely associated individuals – to whom corporate legal framework may be:
    - out of reach (e.g. if the community is small, unsophisticated, or poorly resourced)
    - jurisdictionally unsuitable or unfair (e.g. if the community is dispersed globally);
    - inflexible (e.g. if the community does not wish to hand any control to directors).
- DAOs can be used to regulate communities working on any kind of project. DAOs were initially created to regulate communities working on software development. However, the use of DAOs has grown to encompass a range of commercial and non-commercial projects.
  - commercial DAOs that currently exist include those used to manage communities that are focused on: developing 'decentralised finance' protocols, creating media content, and manufacturing physical goods;

  - non-commercial DAOs that currently exist include those used to manage communities that are focused on: raising funds for charity, facilitating social interactions between members, and managing the creation and distribution of educational content.

- DAOs may have a range of benefits and drawbacks when compared with traditional organisational structures. While they may minimise some risks that are the subject of the current organisational legal framework, they also appear to involve the creation of new risks that are not contemplated in existing frameworks.

- Treasury considers it important to review these innovative organisational structures such as DAOs to identify if, and how, they ought to be regulated and integrated into the existing regulatory framework. This work does not need to be prioritised above the other work streams and is consistent with international approaches which are considering the regulation of crypto asset service providers and certain categories of products (such as stablecoins).

Stakeholder views

- Many stakeholders do not appear to have the same sense of urgency to provide certainty on the use of decentralised autonomous organisations (DAOs) as token mapping and licensing.
  - There is a small group of stakeholders who may make known their disappointment that a DAO company structure is not being specifically considered or formalised sooner.
  - The DAO recommendation was the most ambitious made in the Final Report and was not widely expected by industry stakeholders. It was seen as implicit endorsement of DAOs by the previous Government.

- The primary purpose for legal recognition of DAOs is to enable the organisation to enter contracts, such as the ability to lease a premise, purchase a website domain and hire staff. Most DAOs circumvent this by having an agreement with a willing incorporated entity to enter contracts on their behalf in exchange for crypto tokens.

ATTACHMENT B – TABLES

Table 1 - Crypto asset regulation: International comparison

United Kingdom	United States	Singapore	Japan	European Union
Classifications				
'Cryptoasset' is defined for the purposes of AML/CTF and captures all crypto assets. Crypto assets may be classified as financial instruments depending on their characteristics. Otherwise, crypto assets are not classified in legislation.	Classified as security, virtual currency or commodity depending on the crypto asset's characteristics and the regulator's interpretation. No specific classifications proposed for crypto assets.	Regulated as Digital Payment Tokens under the Payment Services Act 2019 (including unbacked and backed crypto assets).	'cryptocurrency' is considered property and not legal tender. 'crypto-asset' includes exchange tokens and utility tokens. Security tokens are 'electronically recorded transferable rights'.	The MiCA framework will apply to all crypto assets that are not already covered by the EU's financial services. law – MiFID – as financial instruments (i.e. investment/ security tokens). MiCA 2.0 flagged to address new aspects of the crypto ecosystem.
Crypto Asset/Stablecoin Regulatory Framework				
No proposed crypto asset legislation. Proposed regulatory framework for payment stablecoins.	No finalised regulatory framework.	Existing crypto asset legislation. Stablecoins are captured as digital payment tokens in most cases.	Combination of crypto asset/stablecoin legislation and self-regulation implemented. Stablecoins can only be issued by licensed banks, registered money transfer agents and trust companies.	Proposed regulatory framework for crypto assets including stablecoins (MiCA). MiCA is proposed to enter into force in 2024.
Regulators				
Financial Conduct Authority	• Securities and Exchange Commission • Commodity Futures Trading Commission • Financial Crimes Enforcement Network	Monetary Authority of Singapore	Financial Services Agency	• European Banking Authority • National competent authorities • European Securities and Markets Authority

United Kingdom	United States	Singapore	Japan	European Union
Ecosystem Regulation				
Under the existing framework, many crypto assets are not regulated (except in relation to AML/CTF). Some crypto assets may fit into existing regulatory framework where they meet the definition of a: • Specific investment • Financial instrument • Electronic money. Crypto exchanges must register with the FCA unless they have applied for an e-money license. Crypto assets are not considered legal tender. The sale of crypto asset derivatives to retail consumers is prohibited. Advertising of crypto assets must clearly state that crypto assets are not regulated by the FCA. AML/CTF – UK has rejected adoption of the travel rule.	It is unclear which regulator has jurisdiction over crypto assets and crypto asset service providers (e.g., exchanges, brokers, and custodians). A recent Executive Order (March 2022) from the US President directs agencies to coordinate to resolve differences in definition and jurisdiction. Crypto asset service providers that offer crypto asset 'securities' must register with the SEC. Several states have introduced their own regulations, including Wyoming, Colorado, and New York. AML/CTF – travel rule not yet adopted.	The Payment Services Act 2019 regulates traditional and crypto asset payments and exchanges. Regulation imposes licensing, governance, and capital requirements. The Securities and Futures Act is also applicable to public offerings and issuance of digital tokens. Crypto assets may fit into the existing securities framework where they meet the definition of a Capital Market Product. Dealing in these products requires a licence. The Monetary Authority of Singapore (MAS) issued guidelines (Feb 2022) to discourage crypto asset trading by the public. Digital payment token service providers should not engage in marketing or advertising to the public in Singapore. AML/CTF – travel rule implemented.	Legislation defines the regulatory perimeter for crypto assets: • Crypto assets that are issued with the expectation of profit require registration and a prospectus. • Businesses that offer the sale, purchase, exchange, intermediating, brokering or management of crypto-assets must register with the Financial Services Agency (FSA) and meet certain capital and governance requirements. AML/CTF – travel rule not yet adopted.	If legislated, MiCA will regulate all issuers and service providers dealing in crypto assets across all 27 member countries. MiCA's main points are: • Requires issuers to apply for authorisation and publish a whitepaper (which must incl. general information on technology, the offer, issuer, rights, and risks). • General obligations on crypto asset service providers (e.g., exchanges and brokers) such as the obligation to act honestly, fairly and in the best interest of the client as well as prudential and organisational requirements. • Specific obligations on crypto asset services such as custodians, trading platforms, fit-to-crypto exchanges and brokers. AML/CTF – travel rule not yet adopted.

FOI 3215
Document 2

THE HON JIM CHALMERS MP
TREASURER

Ref: MS22-000838

The Hon Anthony Albanese MP
Prime Minister
Parliament House
CANBERRA ACT 2600

Dear Prime Minister

I write seeking your agreement to announce a reform agenda on the appropriate regulatory settings in the crypto asset ecosystem, including public consultation. There is considerable interest from the crypto industry, consumers, banks, and regulators in the Government pursuing crypto asset regulatory reforms and it is essential that we take the time to understand market developments, the complexities of the crypto sector, and the emerging innovations and risks.

The current crypto asset ecosystem is markedly different today than just two years ago. Prior to 2020, there were few reasons to interact with crypto assets except speculation. Since early 2020, the ecosystem has been used by a variety of participants for a broad range of functions and purposes. For example, distributed computing, document authentication, algorithmic insurance, and micro payments. The ATO estimates that more than one million taxpayers have interacted with the ecosystem since 2018.

However, the crypto asset ecosystem presents unique challenges to the existing regulatory framework. In particular, it is difficult to identify the relevant regulatory framework that may, or may not apply to different crypto assets and related services. This causes confusion for various stakeholders including consumers, industry, and regulators.

The Select Committee on Australia as a Technology and Financial Centre's Final Report was released in October 2021 and considered the regulation of the crypto sector. The Final Report found that the sector lacked regulatory certainty to ensure safeguards for investors while lending credibility and certainty to the industry. In response, on 21 March 2022, Treasury released a consultation paper on *Crypto asset secondary service providers: Licensing and custody requirements* seeking views on proposed options for licensing and custody frameworks as well as preliminary views on token mapping. Treasury received substantial feedback from a range of stakeholders with industry-wide support for clarity on the regulatory settings for crypto assets. In particular, key stakeholders flagged the need to prioritise the 'token mapping' work, which involves reviewing a range of crypto assets to identify how they fit within the existing regulatory framework.

Accordingly, to commence the reform agenda, I will prioritise the complex 'token mapping' work in 2022. Token mapping is a foundational piece of work to support Government to identify how crypto assets and related services ought to be regulated. It will also importantly aid the development of a licensing framework by assisting in demarcating the perimeter between financial product crypto assets (already the subject of financial services laws) and non-financial product crypto assets (that may warrant a separate crypto asset regulatory framework).

Subject to your agreement, I propose to announce the reform agenda, commence stakeholder consultations and release a public consultation paper on token mapping in 2022 (as indicated in Treasury's earlier consultation paper on crypto licensing and custody requirements).

Following this, I propose to progress work on the following areas and will seek your approval, as required, throughout the process:

- a licensing framework for crypto asset service providers;
- custody obligations for third party custodians of crypto assets;
- identifying with regulators notable gaps in the regulatory framework where crypto assets or related services are used to circumvent protections enshrined in legislation (for example, where crypto assets are substituted in place of money or a financial product);
- a review of innovative organisational structures (such as 'decentralised autonomous organisations') and how they ought to fit into the broader regulatory framework; and
- additional consumer safeguards identified as appropriate as part of developing options in the above work streams.

I have copied this letter to the Assistant Treasurer and Minister for Financial Services, the Hon Stephen Jones MP, for his information.

Yours sincerely

The Hon Jim Chalmers MP

CC: Assistant Treasurer and Minister for Financial Services

FOI 3215
Document 3

s 22

Subject: Tsy Deep-dive: Crypto [~~SEC=OFFICIAL~~]
Location: APH - M1.27

Start: Wed 16/11/2022 10:30 AM
End: Wed 16/11/2022 11:30 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Jones, SP (Assistant Treasurer)
Required Attendees Luu, Nghi; s 22
Optional Attendees: s 22 Robertson, Belinda

Teams link for those attending remotely

Microsoft Teams meeting

Join on your computer, mobile app or room device
Click here to join the meeting

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Learn More | Meeting options

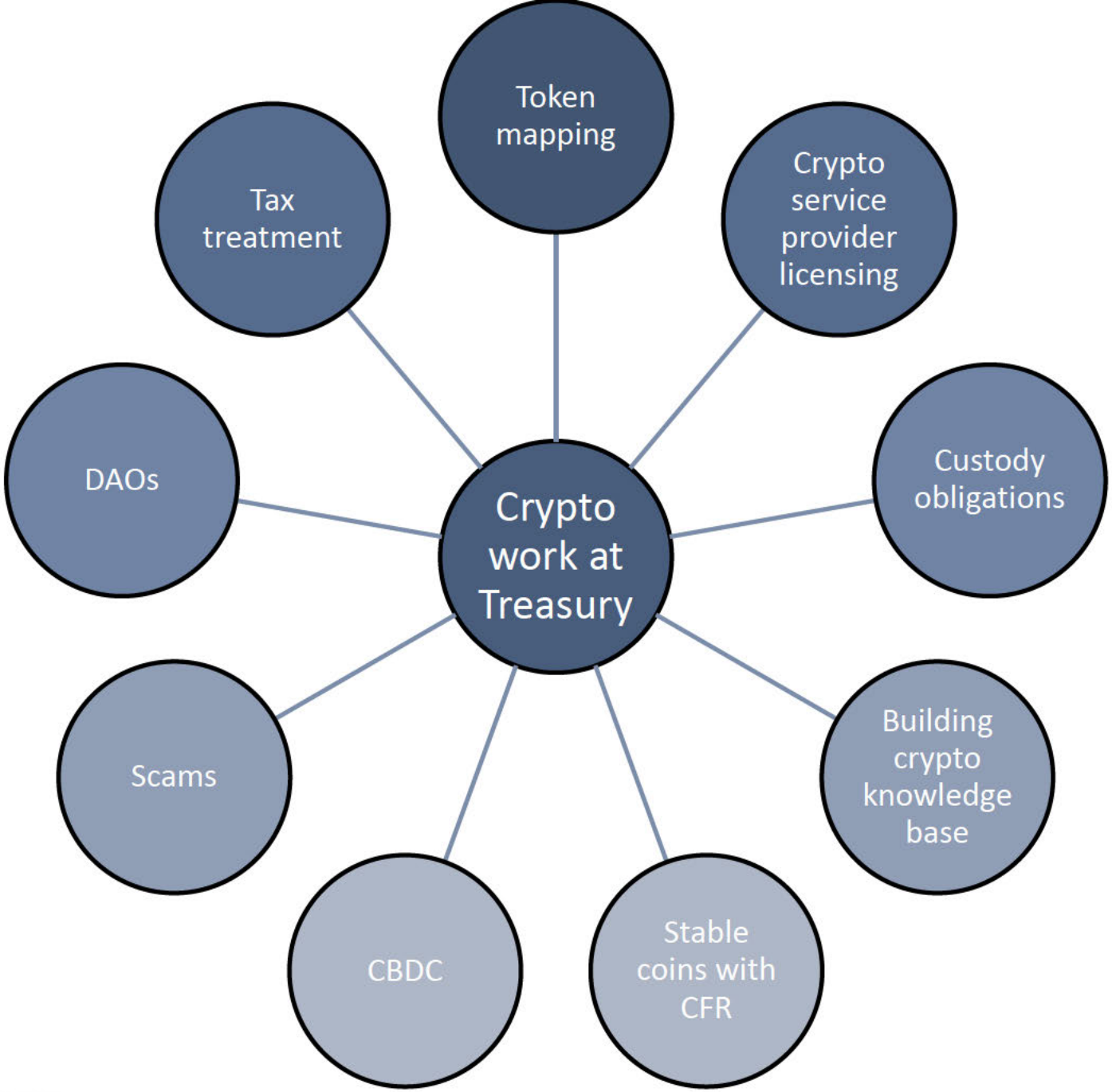
FOI 3215
Document 4

Australian Government
The Treasury

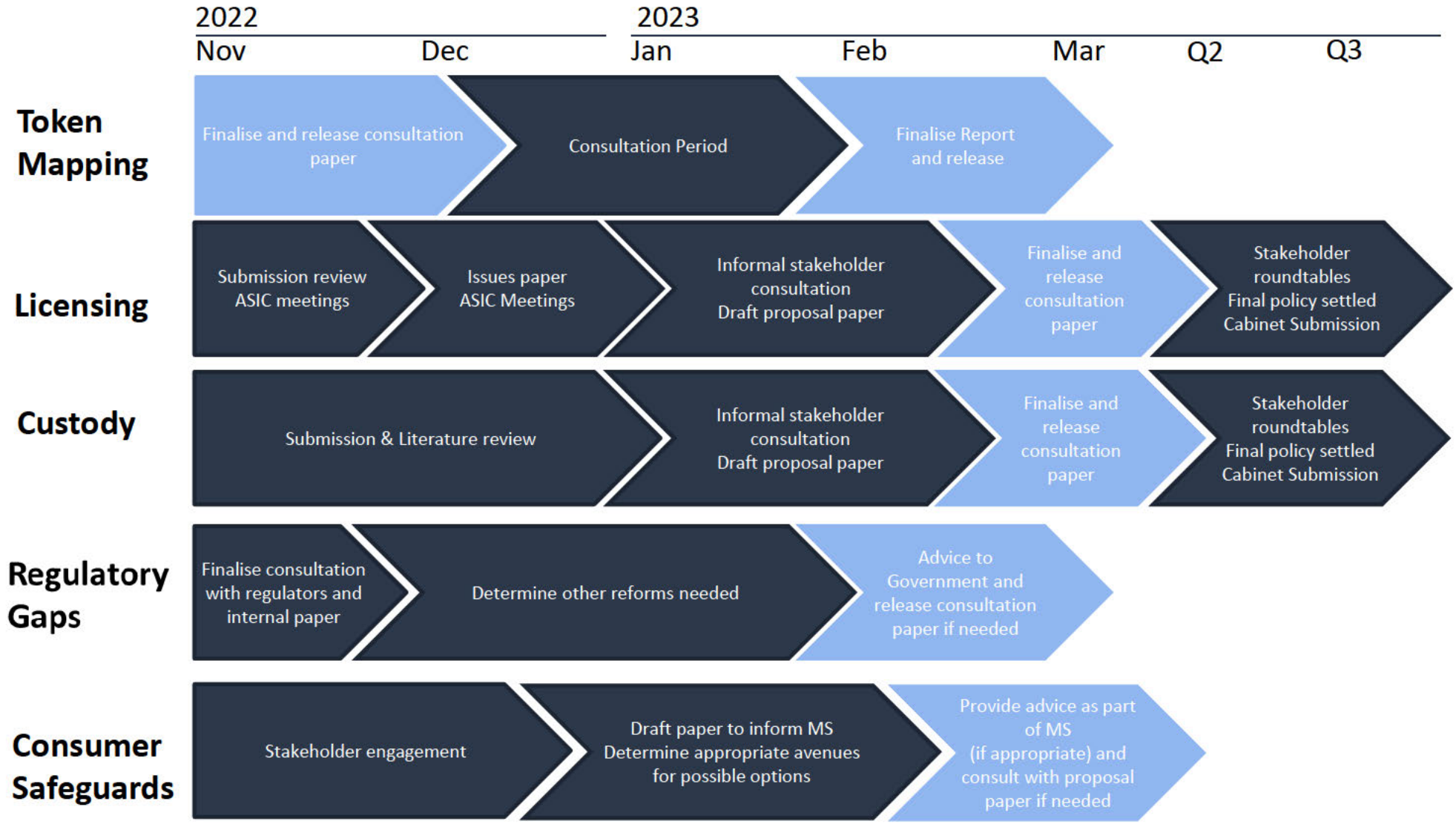
Crypto Deep Dive

Nov 2022

Crypto Policy Unit


Token mapping
Tax treatment
Crypto service provider licensing
DAOs
Crypto work at Treasury
Custody obligations
Scams
Building crypto knowledge base
CBDC
Stable coins with CFR

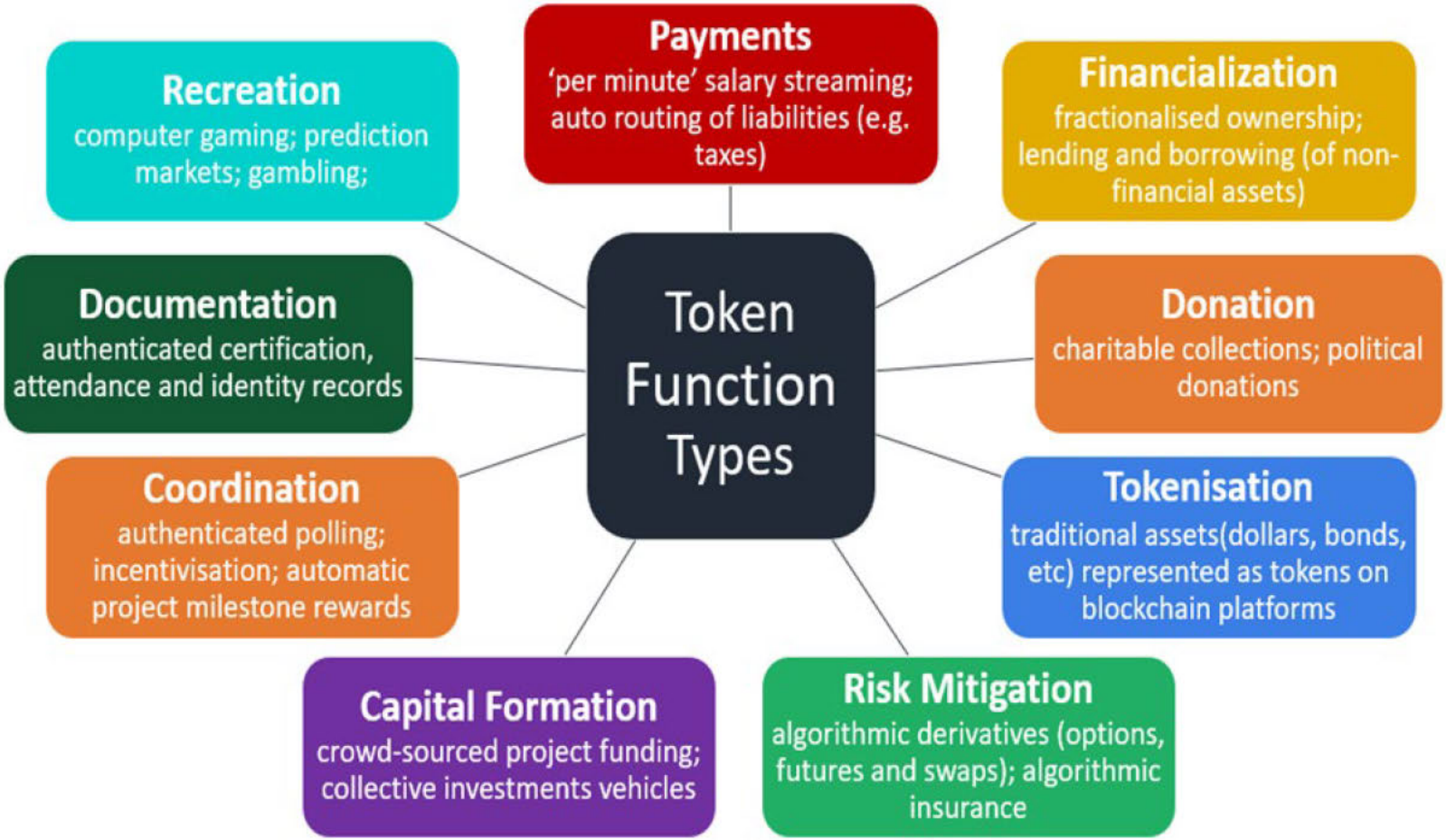
Forward work



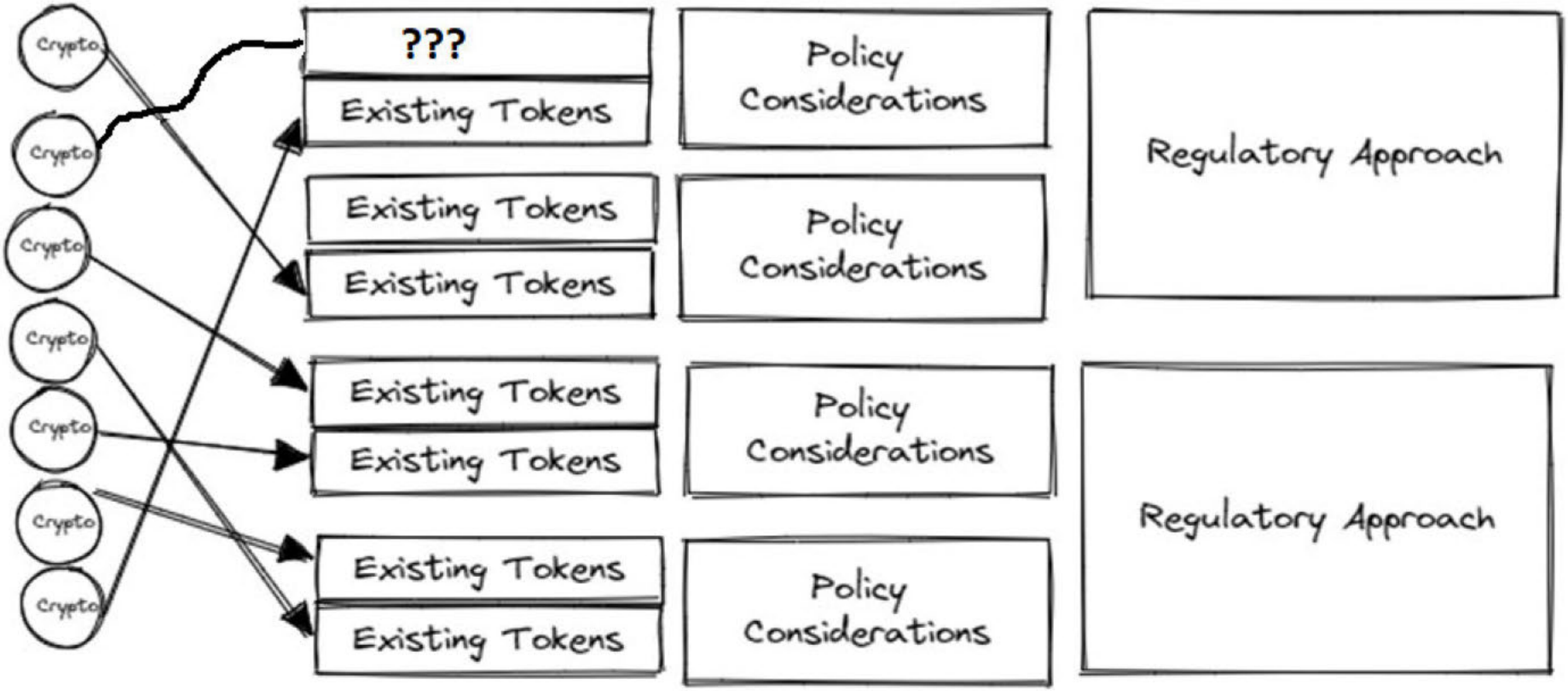
Token mapping

- What is token mapping?
- How?
  - Intrinsic approach. We are looking at where does the token get its value.
  - What is the underlying? Does this look like something that already exists?
  - Tech neutral
- Reception so far:
  - Presented at Intersekt Festival
  - Strong agreeance after explaining other possible approaches and their flaws
- Expected sensitivities
- Stakeholders

Use cases and opportunities



Approach to token mapping



Licensing and custody

- Licensing
  - Licence requirements for different types of crypto asset service providers (CASPs)
  - Regulatory framework, regulator funding and role of AUSTRAC
  - Possibilities include
    - Operational
    - Fit and proper person requirements
    - Capital adequacy
    - Industry compensation scheme
    - Technological resilience (cyber)
    - BCP
    - Market integrity requirements
    - Obligations to weed out/interrupt scams
- Custody
  - Minimum standards for holding customers crypto assets (private key access)
  - Possibilities include
    - Operational
    - Professional competencies
    - Capital adequacy
    - Technological resilience (cyber)
    - BCP

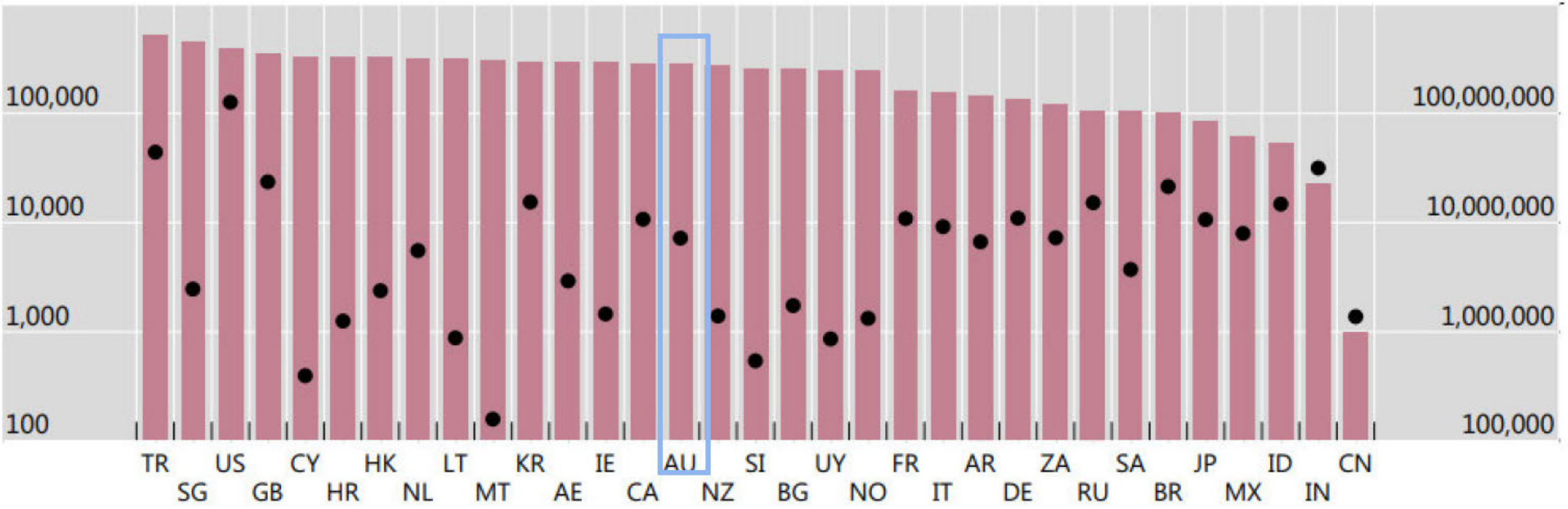
Straightforward regulatory gaps and consumer safeguards

- Straightforward reg gaps
  - Identify straightforward gaps in consultation with regulators where the substitution of crypto assets in place of another financial asset results in existing regulatory protections not applying
  - Aim is to identify where simple fixes could be made
  - Possible examples
    - Fundraising - assets held in trust
    - Margin loans
    - Debentures
- Consumer safe guards
  - Identify options to increase consumer safeguards outside of scam, licensing and custody projects
  - Possible Example
    - Advertising
    - Regulating the use of terms such as ‘stable’ coin, interest

Crypto app adoption is highest in Turkey, Singapore, the US and UK

Number of downloads, logarithmic scale[1]

Graph 2

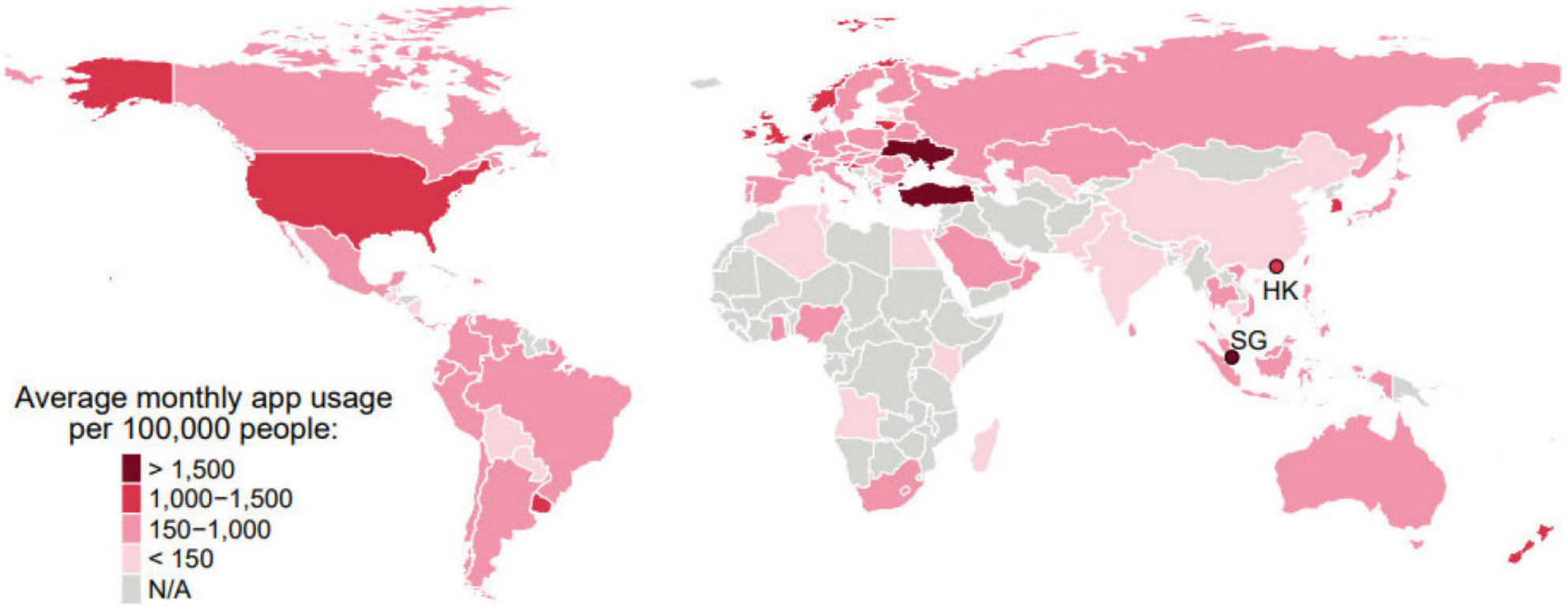


AE = United Arab Emirates, AR = Argentina, AU = Australia, BG = Bulgaria, BR = Brazil, CA = Canada, CN = China, CY = Cyprus, DE = Germany, FR = France, GB = United Kingdom, HK = Hong Kong SAR, HR = Croatia, ID = Indonesia, IE = Ireland, IN = India, IT = Italy, JP = Japan, KR = Korea, LT = Lithuania, MT = Malta, MX = Mexico, NL = Netherlands, NO = Norway, NZ = New Zealand, RU = Russia, SA = Saudi Arabia, SG = Singapore, SI = Slovenia, TR = Turkey, US = United States, UY = Uruguay and ZA = South Africa"

Source: World Bank; Sensor Tower; BIS Working Paper Calculations

World map of crypto trading app adoption

Graph 3



Source: World Bank; Sensor Tower; BIS Working Paper Calculations

SPARE SLIDES

Regulatory gaps – examples identified by regulators

Issue and definitions	… if money is used?	…if crypto assets are used?
Money **held on trust** for securities *Section 722 – Application money to be held on trust* *Corporations Act*	If a person offers securities for issue or sale under a disclosure document, **the person must hold money paid in connection with the securities on trust**, until the securities are issued or transferred. In the event that the **issuer or seller becomes insolvent before the securities are transferred, the money which is held on trust** for the purchaser does not become part of the property of the company and **remains the property of the purchaser**.	**There is no requirement for payments made in crypto assets to be held in trust.** This is because a person is generally not required to hold other types of property received or paid on trust for the purchaser.
Meaning of **debentures** *Section 9 – Definitions Corporation Act*	A debenture is a **medium-term investment issued by a company where investors lend them money in exchange for a regular and fixed interest amount for the term of the investment**. The invested funds (principal) are repaid at the end of the term (maturity) and are usually secured by tangible property. **This falls under the definition of a 'security'** in the Corporations Act (s 92(1)(a)) and makes it **subject to a series of obligations**, including: • the obligations around issuing financial products (Chapter 7); or • fundraising by bodies (Chapter 6D).	Where the undertaking is to lend something other than money, such as crypto assets, then the **obligation does not qualify as a debenture.** This means it is **not a 'security'** and subsequent obligations don't apply.

International Bodies and Crypto Asset Work

International Organisations

- **World Bank** — *United Nations*
- **IMF** — *United Nations*
- **OECD** — *Common Reporting Standard*
- **WTO**

G20

Comprises governments of 19 nations and the EU

International Financial Architecture Working Group (IFAWG)

Focused on the resilience and stability of the international financial system

Financial Stability Board (FSB)

Coordinates national financial authorities and international standard-setting bodies

- Australia represented by RBA and Treasury.

Bank for International Settlements (BIS)

Supports central banks' pursuit of monetary and financial stability through international cooperation, and to act as a bank for central banks.

Basel Committee on Banking Supervision (BCBS)

Prudential regulation remit

- Australia is represented on BCBS by APRA and RBA

Committee on Payments and Market Infrastructures (CPMI)

International standard setter on payment systems

Committee on the Global Financial System (CGFS)

Monitors developments in global financial markets for central bank Governors

Financial Action Task Force (FATF)

AML/CTF remit

- Established by G7 initiative with mandate to combat money laundering and terrorism financing.
- Australia is represented by the *Attorney-General's Department* and AUSTRAC

International forums with related mandates

Joint Chiefs of Global Tax Enforcement (J5 Group)

Comprised of 5 nations (inc. Aus) formed to combat transnational tax crime and money laundering.

- Australia is represented by the ATO

International Organisation of Securities Commissions (IOSCO)

Securities regulation remit

- Australia is represented by ASIC

International Association of Insurance Supervisors (IAIS)

International Accounting Standards Board (IASB)

Policy questions to answer

- What is the role of Government in regulating the crypto ecosystem?
- To what degree do we allow consumers to take risks and face the consequences?
- How do we protect consumers while facilitating innovation and preventing undue regulatory burden?
- How can we evolve our existing policy and regulatory tools to regulate technology that operates without borders?

Token Classification

Possible Approaches

- **Pseudo-archetype**
  - which ‘pre-determined’ category does the token fit within?
- **Technical**
  - how does the token work?
- **Co-ordination**
  - who and what is the token incentivising?
- **Behavioural**
  - what is the token used/useful for?
- **Intrinsic Value**
  - where does the token get its value?

Token Classification

Governance

How would you treat the following tokens? Why?

- An ordinary share issued as a token by a software development company.
- A token that is recognised for:
  - one vote in any poll to upgrade the smart contracts running a DEX (*promised* control, manual execution by controller)
  - one vote in any poll to upgrade the smart contracts running a DEX (informal control, manual execution by controller)
  - one vote in any poll to upgrade the smart contracts running a DEX (direct control, automatic execution)
  - one vote in any poll to upgrade the smart contracts running an NFT art collection (e.g. to change the URI for the linked .jpg image)

Token Classification

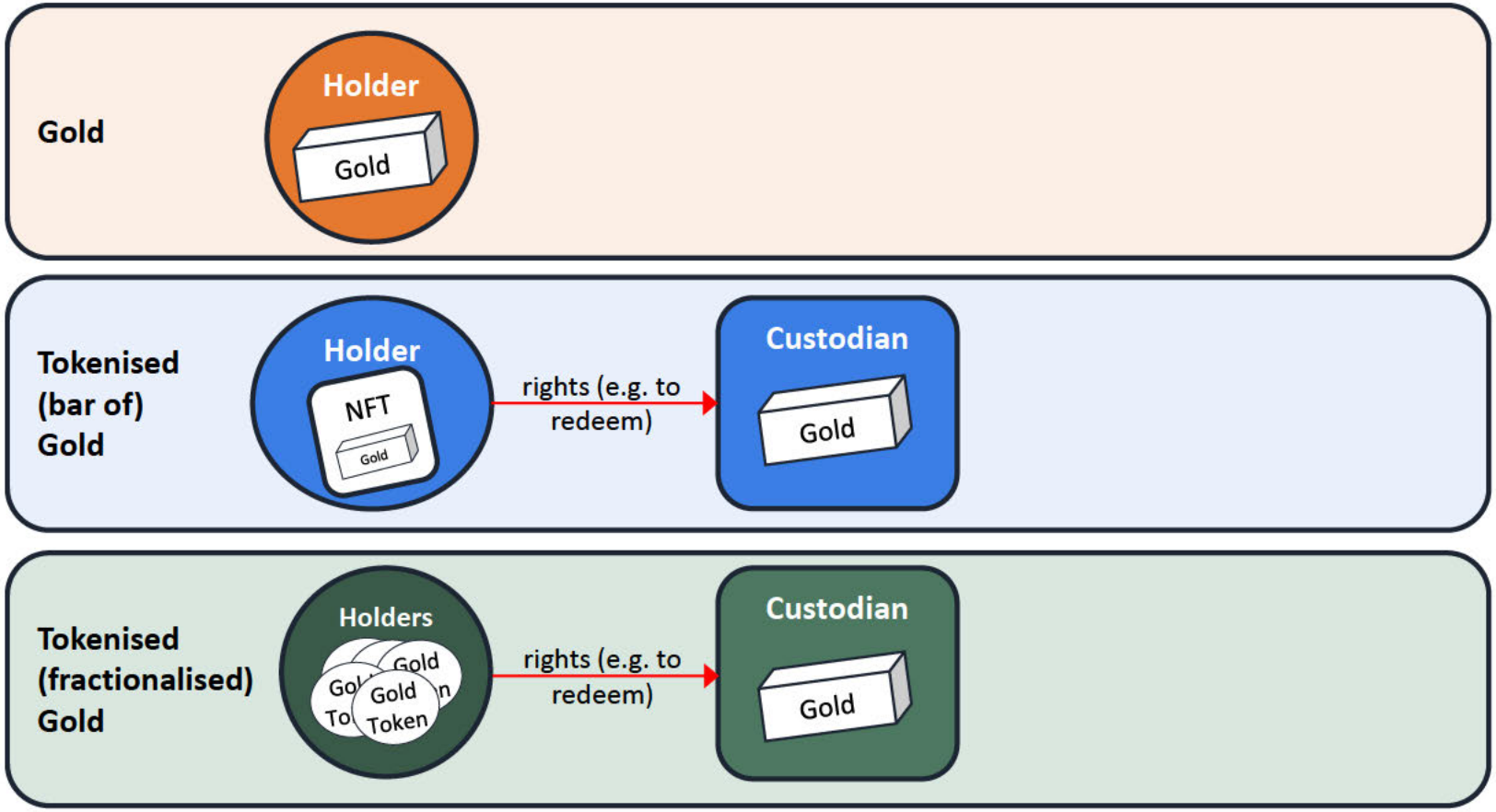
Rights and ‘assets worth a (stable) dollar’

How should the following tokens be treated? Why?

- A one dollar bearer bond issued as a token.
- A token representing a legal right for a holder to redeem it for:
  - a bearer bond *worth* one dollar
  - one physical dollar
  - one dollar *worth* of ice cream
- A token redeemable for:
  - one dollar *worth* of another token (via DAO-controlled smart contract)
  - one dollar *worth* of another token (via an immutable smart contract)
  - a one dollar bearer bond issued as a token

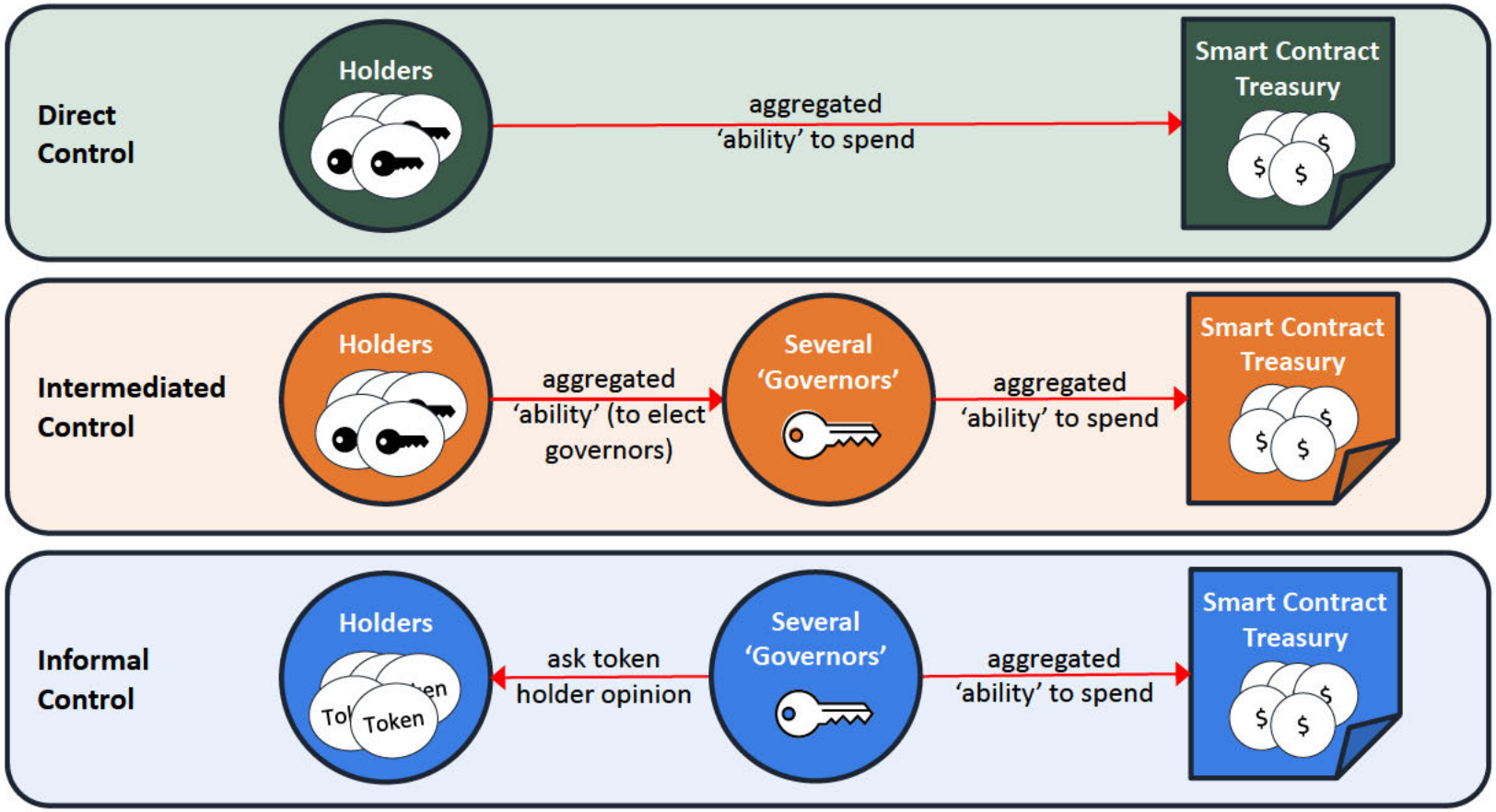
Token Classification

Non-Financial Rights?



Token Classification

No Rights?



Local stakeholders

- Associations
  - Blockchain Australia
  - FinTech Australia
  - Australian Bankers Association
  - Financial Services Council
- Consumer groups:
  - CHOICE
  - Consumer Action Law Centre (CALC)
- Government
  - ASIC
  - AUSTRAC
  - ACCC
  - CFR+ working group
- Organisations
  - Exchanges
    - Independent Reserve ($6.3m daily)
    - BTC Markets ($6.5m daily)
    - Swyftx (broker)
  - Big 4 banks
  - Payment providers (Visa)

Initial views from consultation paper

- Consultation paper focussed on market licensing, custody and token mapping
- Divergent views among many issues
- Most agree that self-regulation is not appropriate
- Differing views about creating bespoke regime or using the Corps Act
  - Sophisticated or larger stakeholders prefer more rigorous regulation (Corps Act).
- Stakeholders noted the complexity of introducing new regulation
- Most stakeholders agreed that there is a need for custody regulation
  - Hard to implement detailed standards as each custodian operates differently
  - Capital requirements, insurance and liability for loss needs to be quite specific
  - No meaningful support for a domestic location requirement.

Risks of harm – consumers

- Gambling like behaviours
  - Synergies with sports betting
  - Advertised at most sport events
  - Limited awareness of downside
- Advertising
  - May not appropriately communicate the level of risk (e.g. s 47G(1)(b))
  - May encourage purchase of individual tokens
  - May insinuate levels of return that are unlikely to be obtained
  - May target vulnerable people
- Provision of financial advice
  - Hawking and pressure selling unclear
- Regulatory perimeter unclear
  - Hard to tell what protections exist
  - Blending of equity market platforms (eToro, Superhero)
  - Mainstream adoption (CBA, ANZ)

s 47G(1)(b)

- Is it a financial product?
  - If yes = ASIC
  - If no = ACCC
- What protections do consumers expect?

Risks of harm – Systemic Risk

- Asset-backed stablecoins like Tether and USDC are linked to the traditional financial system.
  - The underlying assets are often government bonds, corporate bonds, money market funds, commercial paper, etc.
- Stablecoin issuers could face a mass redemption event, causing sales of the underlying assets and a disruption in the functioning of those markets.
- Financial stability risks are small for now. Linkages exist, but exposures are small.

Weekly USDC reserves breakdown[1]

Balances

	JULY 8TH,2022	JULY 15TH, 2022
USDC in circulation	$55.4B	$55.2B
USDC reserves[2]	$55.5B	$55.4B
Cash	$13.1B	$12.9B
Short-duration U.S. Treasuries	$42.5B	$42.4B

USDC issuance and redemption, July 8th – July 15th 2022[1]

USDC issued	$1.8B
USDC redeemed	$2.0B
Weekly change in circulation	**-$0.2B**

Key terms and concepts

- Blockchain
  - A digital ledger comprised of unchangeable, digitally recorded data in packages called blocks.
  - Each block is ‘chained’ to the next block using a cryptographic signature.
  - Ethereum is a public blockchain, open to the world; its digital ledger is distributed, or synced, between many nodes; these nodes arrive at consensus regarding whether a transaction is valid before encrypting a number of transactions into a block
- Crypto assets
  - A useful blanket term that covers on-chain assets: cryptocurrencies, NFTs, and other, still emerging, products.
- Web3 / Web 3.0
  - Web3, or Web 3.0, are terms used synonymously with “the decentralized web” and are often used to refer, broadly, to the blockchain and decentralized technology ecosystems as a whole.

Key terms and concepts

- Decentralised Autonomous Organisation (DAO)
  - A Digital Decentralized Autonomous Organization (DAO, pronounced like the Chinese concept) is a powerful and very flexible organizational structure built on a blockchain.
- TradFi
  - Traditional Finance, is our mainstream financial system and institutions operate. Includes banks, hedge funds, brokers, etc.
- Decentralised Finance (DeFi)
  - An umbrella term for financial services on public blockchains, primarily Ethereum.
  - Can do most of the things that banks support — earn interest, borrow, lend, buy insurance, trade derivatives, trade asset.
  - Faster and doesn't require paperwork or a third party.
  - As with crypto generally, DeFi is global, peer-to-peer, pseudonymous, and open to all.

FOI 3215
Document 5

Straightforward regulatory gaps and consumer safeguards

s 22

- Straightforward reg gaps
  - Identify straightforward gaps in consultation with regulators where the substitution of crypto assets in place of another financial asset results in existing regulatory protections not applying
  - Aim is to identify where simple fixes could be made
  - Possible examples
    - Fundraising - assets held in trust
    - Margin loans
    - Debentures

- Consumer safe guards
  - Identify options to increase consumer safeguards outside of scam, licensing and custody projects
  - Possible Example
    - Advertising
    - Regulating the use of terms such as 'stable' coin, interest

FOI 3215
Document 6

From: s 22
To: s 22
Cc: Luu, Nghi; MG FSD Crypto Policy Unit; Zaheed, Mohita; Jeremenko, Robert
Subject: List of respondents to CASSPr consultation paper [SEC=OFFICIAL:Sensitive]
Date: Wednesday, 17 August 2022 9:47:53 AM
Attachments: 220817 List of Crypto Consult Summissions.pdf
image001.png

~~OFFICIAL:Sensitive~~

Hi s 22

Please find attached, as requested, a list of respondents to the CASSPr consultation paper. We have also flagged whether the submission was confidential or not for your information.

My thanks to s 22 for pulling this up so quickly!

Kind regards,

s 22

treasury.gov.au
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Twitter | LinkedIn | Facebook

The Treasury acknowledges the traditional owners of country throughout Australia, and their continuing connection to land, water and community. We pay our respects to them and their cultures and to elders both past and present.

~~OFFICIAL:Sensitive~~

Number	Name	Confidential? (Y/N)
1	Jeremy Britto	N
2	Marli Technology Solutions	N
3	Syamantak Saha	N
4	Harry Hoang	N
5	Chris Reilly	N
6	Clanz	N
7	Dr Weiping He - Monash University	N
8	Dr Gayan Benedict	N
9	Tezos Australia	N
10	Blockchain Assets Pty Ltd	N
11	CFD and FX Association	N
12	ODMOB Lawyers	N
13	Dr Michael Duffy	N
14	Australian Bitcoin Industry Body	N
15	Hex Trust	N
16	Centre Consortium	N
17	Holon Investments	N
18	Amber Group	N
19	**AUSTRAC**	N
20	ACNC	N
21	s 45	Y
22	Labrys	N
23	Consumer Action Law Centre (CALC)	N
24	Victoria University	N
25	Elastic Ventures	N
26	McGrathNicol	N
27	**CHOICE**	N
28	Easy Crypto	N
29	Zip.co	N
30	Fireblocks Ltd	N
31	Australian Institute for Digital Transformation	N
32	Australian Payments Network	N
33	Volt Bank	N
34	PriceWaterhouseCoopers Australia	N
35	AqualisDAO	N
36	Indian Australian Technology Forum	N
37	s 45	Y
38	s 45	Y
39	CoinSpot	N
40	The Fold Legal	N
41	Gilbert and Tobin	N
42	Australian Custodial Services Association	N
43	s 45	Y
44	Mycelium	N
45	(AFMA)Australian Financial Markets Association	N
46	Caleb & Brown	N
47	**Professor Kevin Davis**	N
48	King Irving	N

49	Warwick Consultancy	N
50	Craig Cameron and Joshua Murchie	N
51	APRA	Y
52	s 45	Y
53	Holley Nethercote	N
54	MSC Group	N
55	**Independent Reserve**	N
56	TradeFlows	N
57	AusDeFi	N
58	Digital Law Association	N
59	CPA Australia	N
60	Dexah Advisory Pty Ltd	N
61	Swyftx	N
62	Luno	N
63	Amex	N
64	Novatti	N
65	Fred Pucci	N
66	Zubin Pratap	N
67	s 47F	N
68	BC Group	N
69	MinterEllison	N
70	Coinbase	N
71	Scott Chamberlain	N
72	Chartered Accountants ANZ	N
73	Cboe Australia	N
74	FTX	N
75	National Australia Bank	N
76	Zerocap	N
77	PiperAlderman	N
78	Blockchain and Digital Assets Pty Ltd	N
79	**Financial Services Council**	N
80	Revolut	N
81	Binance Australia	N
82	Australian Finance Industry Association	N
83	Emerging Payments Asia	N
84	Cointstash	N
85	Finder	N
86	s 45	Y
87	ACCC	N
88	Tech Council of Australia	N
89	Block	N
90	s 45	Y
91	RMIT Blockchain Innovation Hub	N
92	KPMG	N
93	Justice Connect	N
94	Commonwealth Bank of Australia	N
95	**FinTech Australia**	N
96	Allens	N
97	Association of Financial Advisers	N
98	Australian Banking Association	N

99	Crypto.com	N
100	Stirling and Rose	N
101	Australian Small Business and Family Enterprise Ombudsman	N
102	Herbert Smith Freehills	N
103	**Law Council of Australia**	N
104	Alt Law	N
105	ANZ	N
106	**Blockchain Australia**	N
107	**ASIC**	N
108	AFCA	N
109	s 47B(b)	Y
110	Fireblocks	N
111	Financial Planning Association	N