



To:

Crypto Policy Unit
Financial System Division
Treasury
Langton Cres
Parkes ACT 2600

Date:

March 2023

Re: Token mapping consultation paper

Coinbase Global, Inc. and its subsidiary Coinbase Australia Pty Ltd (together, **Coinbase**) welcomes the opportunity to comment on the Australian Treasury's token mapping consultation (**Consultation**).

Coinbase started in 2012 with the idea that anyone, anywhere, should be able to send and receive Bitcoin easily and securely. Today, Coinbase is a publicly listed company in the United States that provides a trusted, easy-to-use platform that millions of users in over 100 countries rely upon to access the broader digital economy.

Blockchain and digital assets are ushering in a major wave of technological innovation. Countries that put themselves at the forefront of this wave stand to gain the most from it. We appreciate the opportunity to share our perspective on how Australia can best position itself competitively.

We applaud the Australian Government and Treasury for proceeding thoughtfully and soliciting public input on the proposed token mapping framework. We share Treasury's goal of promoting responsible innovation in Australia by creating a regulatory framework that both safeguards consumers and cultivates a vibrant and competitive crypto ecosystem. We look forward to helping Treasury achieve that goal.

Sincerely,

A handwritten signature in black ink, appearing to read "Faryar Shirzad".

Faryar Shirzad
Chief Policy Officer
Coinbase Global, Inc.

Coinbase Response to Australian Treasury Token Mapping Consultation

Introduction

Coinbase is committed to the Australian market and strives to be the most trusted platform here. We are proud that Coinbase has established a local entity (Coinbase Australia Pty Ltd) and obtained registration and enrollment as a digital currency exchange with the Australian Transaction Reports and Analysis Centre. We are also a board member of Blockchain Australia and have partnered with many web3 ecosystem players in Australia, including Zepto, CryptoTaxCalculator and multiple university blockchain departments and web3 innovation centres. To fully embrace our commitment to the Australian market and maintain a local perspective, we also employ a significant number of Australians, including in key leadership positions.

We stand ready to support the work of Treasury in developing an Australian regulatory framework. A thoughtful approach will play an important role in securing the continued and future vitality, competitiveness, and resilience of Australia's financial services and technology sectors.

Blockchain Technology and Digital Assets

The transformative potential of blockchain technology is now widely recognised across many industries and governments.¹ Global spending on blockchain technology is forecast to reach nearly AUD 28bn by 2024, with a wide range of potential use cases currently in development.²

Blockchain technology is the backbone of a new financial architecture. While nascent, it is already bringing more efficiency, transparency, and resiliency to the financial system. Current payments solutions often require users to pay high transaction costs, especially for cross-border transactions. Blockchain technology can reduce the number of intermediaries necessary to complete each transaction and thus enable people to transfer value more quickly and at lower cost. Stablecoins in particular will drive more competition in the payments space. Decentralised finance (**DeFi**), smart contracts, and other new technologies will drive further innovation and exponentially expand opportunities for the financial system.

¹ For example, Industry, Science and Technology Minister Ed Husic has stated that blockchain technology has “the potential to make all sorts of services and transactions more affordable, and bring together individuals who have been at the margins into the global economy. I am optimistic about the potential of Blockchain particularly in Australia and especially if there are a diverse number of people and organisations involved.” Ed Husic, [Address to the APAC Blockchain Conference](#) (13 March 2018).

² See Business Wire, [Global Spending on Blockchain Solutions Forecast to be Nearly \\$19 Billion in 2024, According to New IDC Spending Guide](#) (19 April 2021).

A research paper published in September 2022 by the Coinbase Institute and RMIT University Blockchain Innovation Hub, [Australia's Digital Economy: Why Web3 Innovation Requires Institutional Reform](#), highlights the potential benefits for the Australian economy from broader adoption of digital assets and tokenisation.³ These innovations will increase efficiency and productivity across trade, capital, and financial infrastructure at the convergence of fintech, tradetech, and regtech. Australia is well positioned to improve its competitiveness in primary goods and education and to develop a new export industry in digital trade infrastructure. Australia has the potential to win in web3, which would bring substantial benefits to its real economy.

The digital asset industry is still in its infancy and the benefits of blockchain technology have yet to be fully realised at economy-wide scale. To achieve its potential, Australia will need a well-designed regulatory framework for digital assets that strikes the right balance across a range of critical regulatory objectives, such as preserving financial stability, market integrity, and consumer protection, while creating the right conditions to spur responsible innovation and growth.

Key Principles for a Regulatory Framework for Digital Assets

Coinbase believes that a well-designed regulatory framework for digital assets should reflect the following principles.

Focus on regulatory outcomes

The Consultation sets out a functional approach to the regulation of the crypto ecosystem, similar to Australia's regulation of traditional financial assets. In developing this approach, Australia should recognise that blockchain technology differs in meaningful ways from the technological infrastructure underlying the traditional financial system.

Given the constantly evolving nature of digital assets and blockchain technology, a fit-for-purpose regulatory regime must focus on **outcomes**.⁴ In our view, the Australian Government and Treasury should pursue the following outcomes:

- Fair, efficient, and orderly markets, centred on transparency and free of manipulation
- Clear, workable rules that foster compliance, incentivise good behaviour, and root out bad actors
- Consumer protection from fraud and other improper conduct
- Disclosure and reporting frameworks that provide market participants and regulators with accurate, verifiable, and decision-useful information

³ Coinbase Institute and RMIT University, [Australia's Digital Economy: Why Web3 Innovation Requires Institutional Reform](#) (Sept. 2022).

⁴ IOSCO Secretary General has advocated for a similar approach. See [Regulatory Insights Session - Interview with Martin Moloney, IOSCO Secretary General](#) (13 June 2022).

- Prevention of financial crimes, with appropriate protections for privacy
- Safeguards for financial stability and public confidence in the financial system

A fit-for-purpose regulatory framework will need to recognize and accommodate specific features of blockchain technology. We commend the Australian Government and Treasury for taking a leading role in promoting a framework for digital assets that achieves these outcomes.

Balance regulatory priorities while supporting innovation for new technology

We share Treasury's objective of promoting responsible innovation in Australia, while both safeguarding consumers and cultivating a vibrant and competitive web3 ecosystem. We believe that the key regulatory priorities for this framework to achieve the regulatory outcomes described above should consist of:

- A licensing regime that signals to consumers which platforms meet minimum standards
- Risk management and governance rules that draw on well-established practices from traditional finance, while accommodating specific features of blockchain technology
- Prudential requirements that are proportionate and do not try to replicate rules for large banking organisations
- A proportionate approach to asset listing that focuses on supervision of firms' processes and procedures for assessing and reviewing tokens
- Rules on trading and custody that recognise and enable digital asset intermediaries to take advantage of the benefits and efficiencies of blockchain technology

Promote trusted intermediaries

To fully unlock the benefits of blockchain technology and digital assets, most people will need to be able to interact with this technology through centralised platforms. It is important that these platforms provide appropriate consumer protections to earn the trust of customers and regulators. The regulatory environment should reward, not penalise, trusted intermediaries that seek to do business with integrity and high standards of compliance.

Empower law enforcement to counter illicit finance

We note that the Consultation discusses the risk of illicit finance from digital assets. However, numerous studies show that digital assets create no greater risk of illicit finance than fiat currency.⁵ The transparency and immutability of the blockchain gives

⁵ According to Chainalysis, illicit activity accounted for 0.24% of digital asset transactions in 2022. In contrast, the UN estimates that between \$800 billion and \$2 trillion of fiat currency is laundered each year, which amounts to 0.8 – 2.1% of global GDP." Chainalysis, [The 2023 Crypto Crime Report](#) (Feb. 2023); United Nations, [Money Laundering](#).

law enforcement much greater informational and investigative advantages, especially when compared to transactions using cash. Indeed, illicit digital assets must pass through a centralised exchange to be converted into fiat currency, and centralised exchanges such as Coinbase employ strong AML and CFT controls to prevent these illicit activities and report suspicious activity to regulators and law enforcement.⁶

Create onshore incentives

Regulatory frameworks should encourage digital asset intermediaries to provide their services from onshore or from a jurisdiction with a well-developed regulatory regime. The failure of FTX in particular highlights the risks of opaque corporate structures and companies in one jurisdiction servicing customers from another jurisdiction with higher risk and lower compliance standards. Effective cross-border, home-host supervisory cooperation is more important today than ever.

⁶ Chainalysis, [The 2023 Crypto Crime Report](#) (Feb. 2023) (noting that centralised exchanges have compliance measures in place to report illicit activity and take action against the users in question).

Responses to Consultation Questions

1. What do you think the role of the Government should be in the regulation of the crypto ecosystem?

Coordinated Government action is key to ensuring the competitiveness of Australia as a centre for financial technology. To realise the opportunity afforded by blockchain technology, Australia needs the political will to adapt its regulatory environment and economic institutions in response to deep technological change.⁷

Blockchain technology has the potential to transform economies and financial systems. The Government should send a strong signal to the industry that it wants to position Australia as a global strategic hub for digital assets. To that end, it should promote a cross-Government blockchain and web3 strategy to capitalise on the coming wave of technological innovation, which would help give businesses the confidence to invest and innovate in Australia, both domestically and through foreign direct investment.

The role of the Government is also to deliver greater certainty to the market by establishing the regulatory framework and defining its perimeter, within which the regulatory authorities can be mandated to deliver more detailed rules. The Government should ensure that all regulatory authorities take into consideration, in the rule-making process, the importance of innovation and the competitiveness of Australia as a location for firms to do business.

We share Treasury's goal of creating a regulatory framework that promotes responsible innovation and drives the development of a legitimate and trusted digital asset industry. Treasury appears to be prioritising issues of licensing and custody. Coinbase welcomes a thoughtful approach to regulation of its trading platform, custody, and other businesses in Australia. We believe a well-designed regulatory framework will raise standards across the sector, to the benefit of the public and the cryptoeconomy.

2. What are your views on potential safeguards for consumers and investors?

We share Treasury's desire to promote a safe and healthy digital asset ecosystem accessible to all. Healthy digital asset markets – like all financial markets – thrive when consumers are permitted to take on responsible risks in informed and deliberate ways. But consumers should not be subject to risks they do not understand or anticipate – for example, the risk of an intermediary losing their assets through malfeasance or incompetence. This requires a robust regulatory framework addressing, among other important areas, the safekeeping of customers' assets.

⁷ Coinbase Institute and RMIT University, [Australia's Digital Economy: Why Web3 Innovation Requires Institutional Reform](#) (Sept. 2022).

We recognise that some consumers have less experience with financial markets and digital assets than others. Important safeguards should include information for consumers regarding the risks they take on when participating in the digital ecosystem. Education and disclosure are paramount for consumers to make informed decisions. Coinbase is committed to educating customers about different digital assets, use cases, and their underlying technology. Coinbase also supports safeguards to ensure financial promotions are fair and not misleading.

Blockchain technology has brought something fundamentally new into the world. An individual can now own and control data that exists on an open, decentralised network through use of a private key, without having to reveal the private key itself. The digital asset ecosystem which has risen up around this technological innovation is early in its adoption curve. It is unsurprising that the first wave of innovation in this nascent sector has also involved some speculative behaviours. Many innovative new technologies, including the Internet, followed a similar trend. Speculation is also present in the markets for many traditional asset classes, like crude oil and technology stocks, and is not in itself a cause for concern. Governments and regulators should focus instead on understanding the new incentive structures made possible by blockchain technology and tokenisation and on promoting their development towards economically productive use cases.

3. Scams can be difficult for some consumers to identify.

a. Are there solutions (e.g. disclosure, code auditing or other requirements) that could be applied to safeguard consumers that choose to use crypto assets?

b. What policy or regulatory levers could be used to ensure crypto token exchanges do not offer scam tokens or more broadly, prevent consumers from being exposed to scams involving crypto assets?

We believe that disclosure and education are powerful ways to ensure consumers are informed about risks they may be taking.

Consumers will be best informed if these disclosure requirements are tailored for digital assets rather than imported wholesale from traditional financial regulatory regimes. For digital assets that have an identifiable central team, that team should be primarily responsible for disclosing the key features and risks of the digital asset. While trading platforms could supplement this disclosure, they should not be held liable for information that is outside of their means to obtain or verify.

In addition to disclosures, crypto intermediaries that operate token trading platforms should also develop robust token review standards, including policies and procedures for reviewing digital assets and determining which ones can be admitted to trading. Supervisors should assess these policies and procedures – rather than the tokens themselves – to ensure they are fit-for-purpose.

Finally, Coinbase takes extensive security measures to ensure our customer accounts remain safe. We provide educational resources to our customers on how to avoid scams, we regularly report known scams to appropriate law enforcement authorities, and we strongly encourage all of our customers to thoroughly research information they come across online.⁸ We have invested heavily in building customer safety and security teams, as well as a dedicated threat intelligence team that works with industry and public-sector partners to identify bad actors and cybercrime trends.

4. The concept of ‘exclusive use or control’ of public data is a key distinguishing feature between crypto tokens/crypto networks and other data records.

a. How do you think the concepts could be used in a general definition of crypto token and crypto network for the purposes of future legislation?

b. What are the benefits and disadvantages of adopting this approach to define crypto tokens and crypto networks?

The use of public key cryptography in distributed ledger technology (**DLT**) is a key distinguishing feature of crypto tokens and crypto networks.⁹ Insofar as the term “exclusive use or control” is intended to refer to the use of public key cryptography in relation to crypto tokens or crypto networks, we agree it would be appropriate for Treasury to incorporate this concept into relevant definitions of crypto tokens and crypto networks.

That said, we also caution Treasury that the term “exclusive” should not be interpreted in future legislation to mean that only a single person can use or control an asset. Recent technological advances, such as multiparty computation, multisigs, and sharding, permit and sometimes may require multiple parties to exercise use or control of a private key.¹⁰ These technologies enable new capabilities, such as facilitating the governance of decentralised autonomous organisations.¹¹ They also provide important consumer safeguards, such as protecting against lost or forgotten private keys. The rapid pace of these technological advancements is one example of why definitions for the crypto ecosystem must be flexibly crafted. In general, we support the idea of legislative definitions being crafted in a technology-neutral and principles-based manner, in order to provide regulatory clarity without precluding future innovation.

⁸ See, e.g., Coinbase Learn, [Crypto questions, answered](#).

⁹ Coinbase, [What is cryptography?](#)

¹⁰ Coinbase, [How Smart Cryptography Makes Coinbase More Secure](#) (31 Oct. 2022) (describing how Coinbase’s use of secure multiparty computation protects customers).

¹¹ CoinDesk, [What Is a Multisig Wallet?](#) (14 Dec. 2022) (describing the functionality and benefits of multisig wallets).

5. This paper sets out some reasons for why a bespoke 'crypto asset' taxonomy may have minimal regulatory value.

a. What are additional supporting reasons or alternative views on the value of a bespoke taxonomy?

The regulatory framework for digital assets should identify and provide clear definitions for the categories of digital assets to which it may apply. These classifications are important for providing market participants clarity and certainty as to which digital assets are in scope of the regulatory framework and for calibrating the regulatory treatment of each category. In particular, the boundary between traditional financial instruments and digital assets must be clear.

While the specific terms used in each jurisdiction may vary, many jurisdictions have begun to establish regulatory taxonomies of digital assets. The borderless nature of the crypto ecosystem will require careful coordination between regulatory bodies in various jurisdictions. A common taxonomy and language across jurisdictions will allow market participants to comply with regulations across borders with minimal friction. The use of non-standard terminology, even if well defined in isolation, raises the prospect of miscommunication and confusion.

We appreciate that the Consultation avoids overly technical terminology, but we note that some of the proposed terms may cause confusion. For example, the term "crypto asset" is used in the Consultation to convey both (1) its commonly understood meaning (e.g. a token such as ETH) and (2) "an umbrella term for a crypto token and each of the benefits provided by its token systems." Using the term only for its commonly understood meaning could help reduce the potential for miscommunication between market participants and regulators.

b. What are your views on the creation of a standalone regulatory framework that relies on a bespoke taxonomy?

Coinbase supports a standalone framework for digital assets that focuses on outcomes. This should draw on established practices in traditional finance as appropriate, while also recognising the specific characteristics of digital assets, in particular where the application of traditional financial rules is not possible or does not make sense. Furthermore, given the rapid pace of technological developments, a bespoke taxonomy could become obsolete quickly. By contrast, a technology-neutral and principles-based approach is more likely to provide regulatory clarity without precluding future innovation.

c. In the absence of a bespoke taxonomy, what are your views on how to provide regulatory certainty to individuals and businesses using crypto networks and crypto assets in a non-financial manner?

We commend Treasury's appreciation of the importance of providing regulatory certainty. As noted above, the boundary between traditional financial instruments and digital assets must be clear. One way to provide greater regulatory certainty on what is non-financial would be to supplement general digital asset definitions with a list of

specific inclusions and exclusions, similar to Corporations Act, s 764A and 765A. For example, a specific exclusion may be appropriate for certain digital assets such as a non fungible token (**NFT**) representing a digital work of art. Given the rapid pace of technological advances in the crypto ecosystem, however, such a list can provide helpful clarity for specific types of assets but ultimately cannot obviate the broader need for flexible definitions.

6. Some intermediated crypto assets are 'backed' by existing items, goods, or assets. These crypto assets can be broadly described as 'wrapped' real world assets.

a. Are reforms necessary to ensure a wrapped real world asset gets the same regulatory treatment as that of the asset backing it? Why? What reforms are needed?

b. Are reforms necessary to ensure issuers of wrapped real world assets can meet their obligations to redeem the relevant crypto tokens for the underlying good, product, or asset?

The regulatory treatment of wrapped real world assets should focus on achieving the same outcomes as the regulation of the real-world asset backing it. In principle, they should be subject to the same rules as the real world asset. However, there may be instances where clarifications are required on how existing rules apply, and in other instances the rules may need to be changed or adapted to reflect the specific characteristics and benefits of blockchain technology.

Wrapped real world assets offer many benefits relative to their unwrapped, traditional counterparts. For example, traditional securities markets rely on centralised securities depositories, including ASX Clear and ASX Settlement in Australia, and DTCC, Euroclear, and Clearstream overseas, as the golden sources of records. Reliance on these entities can create single points of failure and thus present risks to financial stability – some of the key risks that regulators have worked very hard to mitigate. These pain points in the traditional financial system could effectively be mitigated when securities and other real world assets are wrapped and traded on blockchains. In that case, the blockchain serves as the golden source, single points of failure are eliminated, and real-time settlement effectively removes counterparty credit exposure.

We note that other jurisdictions (such as the EU and UK) are moving forward with pilot regimes and regulatory sandboxes, whereby firms can request exemptions to rules, in instances where it is challenging to apply them in a DLT context, or where applying them undermines the benefits and efficiencies derived from blockchain technology. We recognise that this is a helpful way to test the application of existing rules to new technologies, but also note that this may not be the optimal pathway for providing longer term legal and regulatory certainty to the market.

More broadly, the market for wrapped real world assets is still developing. We recommend that Treasury continue to monitor this market, in collaboration with market

participants, academics, and other stakeholders, to identify issues as they emerge and determine when reforms to the structure or operation of these markets may be necessary in the future.

7. It can be difficult to identify the arrangements that constitute an intermediated token system.

a. Should crypto asset service providers be required to ensure their users are able to access information that allows them to identify arrangements underpinning crypto tokens? How might this be achieved?

b. What are some other initiatives that crypto asset service providers could take to promote good consumer outcomes?

We believe that appropriately detailed, easy-to-understand disclosures are the bedrock of consumer protection. As discussed in our response to question 3 above, disclosure requirements should be tailored for digital assets rather than imported wholesale from traditional financial regulatory regimes. For digital assets that have an identifiable central team, that team should be primarily responsible for disclosing the key features and risks of the digital asset. It may otherwise be appropriate for crypto asset service providers to provide disclosures based on publicly available information. Regulators should be mindful not to hold trading platforms responsible for the actions of token issuers that are outside of the platform's control. Doing so may unduly chill responsible innovation by making regulated trading platforms reluctant to provide consumers with access to new digital assets, which could lead customers to use unregulated, off-shore platforms instead.

The specific content, level of detail, and form of digital asset disclosures should be carefully considered. From experience with our customer base, we have found that risk warnings are best comprehended and internalised where there are fewer of them, and when they are highlighted in the logged-in experience just before a product or service is accessed for the first time. A lengthy disclosure statement shown to a user during onboarding has a risk of not being properly read and understood (or accurately remembered at the appropriate time).

Collaboration on best practices through industry groups could also promote good consumer outcomes. Coinbase is a proud member of Blockchain Australia and is committed to working with the industry and Government to develop additional measures to better protect consumers and promote healthy markets.

8. In addition to the functional perimeter, the Corporations Act lists specific products that are financial products. The inclusion of specific financial products is intended to both: (i) provide guidance on the functional perimeter; (ii) add products that do not fall within the general financial functions.

a. Are there any kinds of intermediated crypto assets that ought to be specifically defined as financial products? Why?

b. Are there any kinds of crypto asset services that ought to be specifically defined as financial products? Why?

To provide clarity to market participants, it would be helpful to specifically exclude certain intermediated digital assets and digital asset services from the definition of financial products. For example, several of the digital assets noted by Treasury in the Consultation are non-financial and thus could be specifically excluded, e.g. rights or licences in relation to event access or subscriptions, intellectual property, rewards programs, and consumer goods and services. Another example of a non-financial digital asset is NFT-based art. Services related to these digital assets should also be excluded from the definition of financial services.

Continued innovation in the sector will lead to the creation of new categories of non-financial digital assets and services, so we recommend that the Government should take a flexible approach. It would be prudent to have mechanisms in place to assess the market on an ongoing basis and continue providing amendments to the definition of financial product as appropriate.

9. Some regulatory frameworks in other jurisdictions have placed restrictions on the issuance of intermediated crypto assets to specific public crypto networks. What (if any) are appropriate measures for assessing the suitability of a specific public crypto network to host wrapped real world assets?

In these early days of the crypto ecosystem, we believe that digital asset intermediaries are best positioned to assess the suitability of public crypto networks. A regulatory framework could direct crypto intermediaries to apply a risk-based approach for assessing suitability that considers key characteristics of a public crypto network, such as its operational resilience and historical track record. We do not believe it would be appropriate at this stage of public crypto networks' technological development for one of them to be deemed *per se* unsuitable by a regulatory framework for hosting wrapped real world assets. A flexible approach would help avoid overly stringent regulations that stifle responsible innovation.

10. Intermediated crypto assets involve crypto tokens linked to intangible property or other arrangements. Should there be limits, restrictions or frictions on the investment by consumers in relation to any arrangements not covered already by the financial services framework? Why?

As the Consultation notes, crypto tokens may be linked to financial or non-financial arrangements. We believe that crypto tokens linked to non-financial arrangements fall outside of Australia's financial services regulatory perimeter. These uses – such as NFT-based art and digital reward programs – should be allowed to develop in a responsible manner and generally free from limits, restrictions, and frictions.

For crypto tokens that are financial in nature, we similarly believe that limits, restrictions, and frictions should affect consumers' experience as little as strictly

necessary. We hold this general view subject to the principle that constraints may be appropriate pursuant to carefully calibrated regulation designed to promote thoughtful, responsible access to crypto markets, especially for consumers with more limited knowledge and experience of financial markets. In particular, we believe limited frictions may be appropriate to the extent necessary to ensure that consumers' understanding of the risks of crypto tokens is informed by reliable information in accessible language.

One idea that is being tested in the Canadian market is through a question in the onboarding process which asks about a consumer's risk appetite. Those consumers who answer that they are "not prepared to lose any of their funds while trading crypto" are blocked from opening an account and are directed to an explanation of the risks associated with crypto trading. Such mechanisms could help maintain alignment between these users' risk appetite and their actual risk exposures. They could also help counteract potential misalignment that may arise from false or unreliable information on social media or elsewhere.

11. Some jurisdictions have implemented regulatory frameworks that address the marketing and promotion of products within the crypto ecosystem (including network tokens and public smart contracts). Would a similar solution be suitable for Australia? If so, how might this be implemented?

While some standards related to marketing and promotion may be appropriate, we caution that an overly paternalistic approach could stifle innovation in this rapidly developing ecosystem. We support a regulatory framework that defines what qualifies as a promotion and requires promotions to be fair and not misleading, without unduly restricting access to the digital asset ecosystem.

12. Smart contracts are commonly developed as 'free open-source software'. They are often published and republished by entities other than their original authors.

a. What are the regulatory and policy levers available to encourage the development of smart contracts that comply with existing regulatory frameworks?

b. What are the regulatory and policy levers available to ensure smart contract applications comply with existing regulatory frameworks?

Centralised actors within the digital asset ecosystem should be regulated. As the Consultation acknowledges, however, the regulation of public token systems, including DeFi, raises a number of novel and complex policy issues. Regulators have historically overseen financial markets by imposing and enforcing rules on market intermediaries. No such intermediaries exist in the DeFi ecosystem. Governments and regulators should proceed carefully to understand the specific features and benefits of open, decentralised networks, as well as the potential impact – and any unintended consequences – of regulatory measures affecting DeFi protocols.

Regulation should encourage responsible innovation while maintaining appropriate consumer protections. Regulators could achieve these outcomes through an optional accreditation system for smart contract applications that satisfy relevant operational, implementation, and design standards. Accreditation would serve as a virtuous signal but would neither be required for lawful operation nor reflect a guarantee from the regulator. This would provide consumers a decision-useful signal that the team behind a particular smart contract, application or digital asset has voluntarily undertaken to be subject to appropriate standards of technical scrutiny and validation. Over time, as in securities markets, regulatory expectations and market practices can develop, and the market's confidence in voluntary accreditation can grow. This path would also leave room for developers to continue to improve smart contracts and smart contract applications, including those that have not yet received accreditation.

We believe that a voluntary accreditation system of this kind would promote an environment where digital asset businesses are rewarded, rather than penalised, for maintaining exceptionally high standards of regulatory integrity.

13. Some smart contract applications assist users to connect to smart contracts that implement a pawn broker style of collateralised lending (i.e. only recourse in the event of default is the collateral).

a. What are the key risk differences between smart contract and conventional pawn broker lending?

b. Is there quantifiable data on the consumer outcomes in conventional pawn broker lending compared with user outcomes for analogous services provided through smart contract applications?

We urge Treasury not to use the term “pawn broker” to refer to limited recourse lending. That term has a negative connotation that is not appropriate to apply to the activities of crypto lending protocols.

Borrowing and lending protocols built on public token systems are one type of DeFi application and represent a transformational development made possible by blockchain technology. DeFi removes financial intermediaries from financial transactions, replacing banks, brokers, and other traditional financial institutions with open-source code operating on public, permissionless blockchain networks. It has the potential to create financial markets that are open, free, fair, and accessible to anyone with an internet connection.

The functioning of a typical borrowing and lending protocol is as follows. First, market participants deposit digital assets into the protocol's smart contracts. These participants earn interest from other users who borrow the digital assets from the smart contracts. These borrowers are required by the smart contracts to post collateral and pay interest. The smart contracts used in these protocols eliminate the need for borrowers and lenders to individually negotiate terms of a contract or rely on counterparties to hold funds or collateral. Instead, both sides interact directly with the

protocol, which determines collateral levels and interest rates and handles the storage and management of the protocol's digital assets in smart contracts called liquidity pools. When a borrower becomes under-collateralised, for example due to a decrease in the value of the collateral or increase in the value of the borrowed digital asset, the smart contract enables other protocol users to liquidate the collateral (at a discount), thereby avoiding credit losses to the lenders in the pool.

While the technology is still nascent, DeFi protocols – including borrowing and lending protocols in particular – have already proven their resiliency through periods of market stress, and Australian legislators have already begun to recognise the benefits.¹²

14. Some smart contract applications assist users to connect to automated market makers (AMM).

a. What are the key differences in risk between using an AMM and using the services of a crypto asset exchange?

b. Is there quantifiable data on consumer outcomes in trading on conventional crypto asset exchanges compared with user outcomes in trading on AMMs?

AMMs are an innovative application of blockchain technology. They enable trading of crypto tokens on a decentralised exchange, or “DEX.” Unlike on centralised digital asset exchanges, there is no central intermediary on a DEX that controls the exchange, maintains an order book with standing orders to purchase or sell, or determines when transactions clear. Instead, self-executing, blockchain-based smart contracts on a public crypto network enable crypto token trading to occur directly between market participants.

The functioning of a typical AMM is as follows. First, to establish a liquidity pool, market participants known as “liquidity providers” deposit a pair of crypto tokens into a smart contract. The smart contract seeks to balance the supply of both tokens in the liquidity pool in a manner reflecting the respective demand, and therefore the market price, of each token in relation to the other. Consider, for example, a liquidity pool that matches supply and demand for Token A and Token B. The smart contract governing the liquidity pool would manage the ratio of Token A to Token B within the pool to a fixed constant according to a formula such as $a \cdot b = k$. In other words, if the supply of Token A in the pool increases, the supply of Token B in the pool must proportionally decrease to maintain a constant ratio. A user can then instantly trade by sending Token A (or Token B) into the smart contract, which automatically returns Token B (or Token A) at the market price, subject to a transaction fee. Rather than earning a

¹² For example, Senator Jane Hume has stated that DeFi “presents huge opportunities” for Australia to cement its place as a “frontrunner for innovation and economic progress.” Jane Hume, [Address to the Australian Financial Review Super & Wealth Summit, Sydney](#) (22 November 2021).

spread between a bid and offer, liquidity providers are compensated by sharing in the transaction fees paid to that trading pair's liquidity pool.

AMMs have similar risk trade-offs as smart contract-based borrowing and lending protocols: they remove intermediary credit risk while potentially introducing technology-based risk. AMMs and DEXs represent a novel way of matching supply and demand and merit continued exploration.